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ABSTRACT

LIVING WITH THE PAST: SCIENCE, EXTINCTION,
AND THE LITERATURE OF THE VICTORIAN AND MODERNIST
ANTHROPOCENE

by

Tyler R. Groff

My dissertation reads key works of Victorian and modernist literature by Alfred Tennyson, Elizabeth Gaskell, H. Rider Haggard, David Jones, T. S. Eliot, and Virginia Woolf alongside contemporaneous scientific texts to illustrate how mass anthropogenic extinction became increasingly recognizable. By bridging periods, my dissertation examines the multiple and sometimes conflicting registers of meaning that extinction accrued throughout Britain's industrial and imperial history as the notion of anthropogenic mass extinction gained traction within the cultural imaginary. Literary critics who discuss the Anthropocene within the context of the nineteenth and early twentieth centuries tend to focus squarely on the question of climate, using the geohistorical moment of Britain's industrialization to trace the ideological, material, and scientific developments that gave rise to the notion of anthropogenic climate change within the public imagination, especially through representations of pollution and compromised atmospheres. My project attempts to reframe this conversation by considering the extent to which the Anthropocene became increasingly knowable to both Victorians and modernists through biological registers: as in the observable impacts of imperialist processes and technological modernity on biodiversity and global animal populations. These impacts were recognized in, for example, African species and subspecies that became critically endangered or extinct due to British hunting culture as well as avian species that sharply declined due to British consumer practices.

I argue that mid-nineteenth-century authors from Tennyson to Gaskell were beginning to explore the degree to which geological frameworks called into question long-standing beliefs regarding humankind's placement within the natural world as well as the precarity of species within the context of deep time. I consider how such lines of inquiry continued throughout the century in adventure fiction invested in Britain's imperial project, particularly the work of H. Rider Haggard, which illuminates the rhetorical techniques Britons used to excuse the extinctions produced through the excesses of British hunting culture.

My dissertation traces this conceptual throughline within literary modernism to consider the ways that a sense of humankind's geological force partially arose out of a clear decline in nonhuman life in a geologically-abridged span of time. The apocalypticism of authors such as David Jones, T.S. Eliot, and Virginia Woolf positions both human and nonhuman populations as eventual co-casualties of technological modernity and draws upon the imagery of deep time to frame humankind as a geological agent. I argue that works of modernism engage with humankind's increased capacity to erase species within geologically brief spans of time.

LIVING WITH THE PAST: SCIENCE, EXTINCTION, AND THE LITERATURE OF THE VICTORIAN AND MODERNIST ANTHROPOCENE

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DEDICATION

To my grandparents

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Introduction

'And Let the Ape and Tiger Die':

Victorian Science and Extinction in Nineteenth- and Twentieth-Century Literature

Species Loss and Shifting Worldviews

At the beginning of the twentieth century, Edmund Gosse lamented the rapid decline in England's local species throughout the previous decades, in particular the marine life in England's rock pools that faced extirpation. The threat was largely attributable to the rise of amateur collecting, a hobby popularized in part by the successful writings of Gosse's father, Phillip Henry Gosse, the naturalist who, among other achievements, developed early seawater aquariums. In *Father and Son* (1907), Gosse notes:

> The ring of living beauty drawn about our shores was a very thin and fragile one. It had existed all those centuries solely in consequence of the indifference, the blissful ignorance of man. These rock-basins, fringed by corallines, filled with still water almost as pellucid as the upper air itself, thronged with beautiful sensitive forms of life, they exist no longer, they are all profaned, and emptied, and vulgarized. An army of 'collectors' has passed over them, and ravaged every corner of them. The fairy paradise has been violated, the exquisite product of centuries of natural selection has been crushed under the rough paw of well-meaning, idle-minded curiosity. That my Father, himself so reverent, so conservative, had by the popularity of his books acquired the direct responsibility for a calamity that he had never anticipated became clear enough to himself before many years had passed, and cost him great chagrin. (81)

Even though Gosse's memoir was not published until the early twentieth century, the impact of scientific hobbyists on biodiversity had already been felt in the prior century. By the time of his death in 1888, as *Father and Son* would have it, P.H. Gosse realized the role he played in the decline of species he dedicated his life to studying. The account in *Father and Son* reflects a twentieth-century ambivalence about the practices of amateur science—a British preoccupation that was typically presented by Victorian naturalists as a pastime with both physical and intellectual benefits for its practitioners.

There are a number of noteworthy things about this passage. One is that it is a passage from a memoir, not a work of fiction. Science fiction did of course take up the issue of extinction: one is reminded of Wells' protagonist in *The Time Machine* (1895) who witnesses mass extinction following the heat death of the sun.[1] But *Father and Son* treats extinction not as a matter of speculation, but as something that can be immediately witnessed. Gosse's work discusses how Britons could observe extinction in progress in everyday life without going abroad. Gosse was right. While extinction was taking its toll on megafauna in Britain's imperial outposts, it was also impacting less charismatic creatures—from marine life in tidal pools to plants.[2] Gosse highlights how the ongoing extinctions of the twentieth century find their origins in the Victorian era. Much like how the roots of climate change originate, to a large degree, in the history of nineteenth-century British industry, the present extinction crisis finds similar precedents in British industrial, scientific, and expansionist policies and practices.[3]

Father and Son examines Gosse's youth and his fraught relationship with his father, a naturalist whose important contributions on British marine life would come to be overshadowed by his desperate attempts to reconcile religious orthodoxy with emergent science. The publication of Philip Henry Gosse's *Omphalos: An Attempt to Untie the Geological Knot* (1857) would prove disastrous to his scientific career and reputation. A direct response to popular geological treatises, *Omphalos* offers the curious evangelical argument that the fossil record and certain geological features are not evidence of the earth's antiquity, but rather attributes issued by a divine creator to make the earth appear older than it is, partially for aesthetic purposes.

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[1] It is worth noting that Wells himself published a number of nonfiction pieces dealing with anthropogenic extinction. "On Extinction," published in September 1893 issue of *Chambers Journal*, claims that the erasure of animal forms of life "is the "saddest chapter of biological science" (136). Wells' essay examines modernity's intentional alterations of the ecosphere (such as the transformation of the landscape for colonial infrastructure and transportation technologies) along with inadvertent mediations (such as the extinctions that resulted from the introduction of the black rat into non-native regions of the globe) to trace how humans have permanently erased a range of non-human species. Wells also takes up the indeterminate future for other animals, notably the American bison, which he holds up as "the statuesque type and example of the doomed races" (137). A subsequent essay titled "The Extinction of Man," published in *Pall Mall Gazette* almost exactly a year after "On Extinction," takes up similar thematic concerns.
[2] Maria Zytaruk and David Elliston Allen examine the impacts of the Victorian enthusiasm for plant specimens.
[3] Andreas Malm thoroughly traces the role that Britain's shifting energy regime in the nineteenth century plays in the present climate crisis.

Gosse argues that Adam, who did not have a mother, would have required a navel to be a perfect specimen of a male human, but the navel suggests ancestry that is not existent. Similarly, the earth would have required a fossil record to suggest a past that never actually unfolded. Edmund Gosse's eventual acceptance of Darwinism spelled his estrangement from his father. *Father and Son* offers a focused consideration of how emergent biological and geological thought disrupted even intimate interpersonal bonds and reframed questions of what it means to be human at all. Figures like Gosse, who straddle literary and historical periods, are illustrative of the ways that Victorian science both granted insight into and inadvertently facilitated ecological issues that would last through the twentieth century and into our own time. Thinking about the complicated role of science is part of coming to terms with what the Victorian and modernist Anthropocene meant for writers of the era. Gosse lived from 1849-1928. He holds status as both a Victorian and a modern, a fact that speaks to the continuing impacts of nineteenth-century practices and processes well into a more contemporary moment.

In using the terms Victorian and modernist Anthropocene, I engage with a number of revisionist discourses that interrogate traditional historical and literary periodization. The Anthropocene is an era in which humankind exerts a dominant influence on Earth's geophysical and biological systems—particularly in terms of climate change, biodiversity collapse, and transformations of the biogeochemical cycles of water, carbon, and nitrogen. Paul Crutzen, the chemist who coined the term "Anthropocene," posed it as a new geological epoch that drew the Holocene to a close. Since the Anthropocene marks an intersection of geologic and human time (Crutzen traces its inception to James Watt's development of the steam engine in 1784), it can be thought of as an intersection between social history and natural history that extends to the present. Crutzen's framework reorients traditional historical periodization to focalize a shift in energy regimes—in particular, the point when societies moved from relatively sustainable social systems operating on renewable resources to unsustainable ones dependent on fossil fuels. There is debate regarding the commencement of the Anthropocene, however. Crutzen locates it at the end of the eighteenth century, but alternative starting points include "the start of Industrial Revolution, or 1945 [with the onset of the Great Acceleration], which would fittingly make the beginning of the Anthropocene coincide with the start of the Atomic Age" (Aravamudan 13). Earlier start dates could include 1492, which as Silvia Wynter argues set the stage for global processes of power and domination that set centuries of social and ecological change in motion.

My own temporal parameters start with 1850, marked by the publication of *In Memoriam*, and extend to 1941, the year of publication of Virginia Woolf's *Between the Acts*. I begin with *In Memoriam* because it provides an uncanny blueprint for much of the literature to follow. Its concerns with issues like industry, extinction, and deep time, as well as what they mean in the modern moment, find echoes in all of the literary texts I examine that were published later. Tennyson composed *In Memoriam* in the years when scientific discourses reframed cultural understandings of humankind's standing within the natural world, and it shows how writers were already beginning to articulate what modern readers would recognize as Anthropocene thought even before the publication of *On the Origin of Species*. Tennyson's ideas figure prominently in the literature of the subsequent century and clearly contribute to what Allen MacDuffie terms in his discussion of a mid-century concern with biophysical limits "a nascent environmental consciousness" (66).

I end with 1941 because of its proximity to the Great Acceleration, a time when new factors began to influence the course of the Anthropocene, particularly nuclear 'progress.' One could use histories of industrial capitalism to bridge the mid-nineteenth century with the twentieth. My project takes a different approach by emphasizing deep time, extinction, and the role that they played in shaping concepts of scientific and imperial progress. Histories of the Anthropocene that focalize industrialization and energy, such as Malm's or MacDuffie's, tend to highlight the future-oriented attitudes regarding progress that often accompanied them, which Joseph Bristow refers to as the "profound [Victorian] sense of technological futurity" (83) out of which Victorian literature was "supposedly" produced. As Virginia Zimmerman has persuasively argued, however, there were close cultural associations between the extraction and combustion of fossil fuels and the unearthing and study of fossils (along with the extinctions they suggested). In many cases, the emerging mindset of the Anthropocene prompted what T. S. Eliot refers to in "The Dry Salvages" as the "backward half-look / …towards the primitive terror" (493-4) rather than a triumphant gaze into the future. In many of the writers I examine, the anxiety about non-human extinction often prompts a turning away from futurity to questions of interspecies ties through deep time and what the loss of these ties might signal. These reflections are morally grounded, and they are prompted by the intuition that humankind can indeed impact the history of species, despite the claims of gradualism. The Anthropocene was known through climatic

registers, but it was also known through biological registers. Extinction was an important site through which Victorians and modernists articulated the Anthropocene.

Before I discuss the extent to which Victorian science provided writers with new ways of considering humankind's standing within the natural world, it is important to reiterate what a range of commentators have already argued—the notion that the scientific breakthroughs of the early and middle decades of the nineteenth century dismantled existing national and religious exceptionalism is patently untrue. Edward Said notes the belief that England's others were "lesser, inferior, dependent, subject" was ratified by appeals to the work of scientists like Georges Cuvier, Charles Darwin, and Robert Knox, all of whom employed arguments for an evolutionary hierarchy among races (134). Along similar lines, Peter J. Bowler observes that Darwin's theory actually did not cause "the wholesale collapse of traditional beliefs and moral standards," but was co-opted by progressivism, which mapped a pseudo-teleological framework onto the ideas of speciation and natural selection (241-242). The human, particularly the white Anglo-Saxon male, was not decentered and though some thinkers found in the work of Darwin and Lyell a case for humankind's cosmic insignificance, most were not troubled by it. As Zimmerman argues, some writers used Victorian science's emphasis on slow change—particularly gradualist claims that small agents could enact substantive geophysical transformations over large spans of time—to re-inflect Darwinian and Lyellian science with a sense of "individual significance" and liberal individualism (19).

In many ways, the work of Darwin and Lyell actively challenged developing articulations of the Anthropocene by deemphasizing humankind's potential lasting impacts on natural order, particularly in the form of anthropogenic extinction. Lyell's influential *Principles of Geology: Being an Attempt to Explain the Former Changes of the Earth's Surface, by Reference to Causes Now in Operation* (3 vols; 1830-33) proffered that all of earth's features were formed through slow-moving geological systems still active in the present day. Lyell's uniformitarian model, which emphasized the alteration of earth's features through small, infinitesimal changes across long timespans, provided an unrelenting critique of the catastrophism adopted by scientists like Cuvier. Catastrophism proposed large changes to earth's surface through sudden, sweeping disruptions that ended geological epochs. Uniformitarianism came to dominate scientific thought in part because Lyell's work actively attempted to discredit catastrophists, often claiming,

incorrectly, that his rivals strictly adhered to outmoded biblical models of time.[4] Lyell's gradualism was right on several counts, but it could not provide an adequate explanation for the appearance of rapid mass-extinction events in the fossil record. In fact, Lyell (in keeping with his emphasis on natural cycles) proposed the rather baffling idea that some extinct species from the fossil record, such as the iguanodon and the ichthyosaur, might reappear at a future date if climatic preconditions were met. This assertion was parodied in a much-discussed sketch by Henry De la Beche that depicts a future time where an anthropomorphized ichthyosaurus professor lectures to a class of younger ichthyosauri on the subject of a fossilized human skull.[5] Lyell argued that species went extinct in the way that the earth changed—over timespans much too expansive for humankind to observe. And Lyell's gradualism had a profound impact on shaping Darwin's own arguments regarding the evolution of species. Like Lyell, Darwin is dismissive of the evidence for rapid mass-extinction in the fossil record. Throughout *On the Origin of Species* he argues that extinction happens at a similar rate to speciation itself, gradually across long stretches of time. Darwin's writings fail to account for the rapid extinctions taking place in his own lifetime, and his discussions of human-caused extinction are brief, perhaps tellingly. His resistance to catastrophism equaled Lyell's, and there are clear moments in his writing where he fails to consider what the impacts of humankind mean when placed alongside the geologic record.[6]

In several important ways, then, the Victorian authors who pose the issue of anthropogenic extinction, or express misgiving at the implications of amateur collecting and adjacent practices that impacted biodiversity around the globe, were writing against the grain of leading scientific theories, not with them. The ways in which Victorian science utilized literary stylistics even as it influenced the literary output of the following decades has already been well documented in the work of writers such as Gillian Beer, George Levine, and Ralph O'Connor. There is more to be said, though, about the ways in which writers subtly push back against the

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[4] Stephen Jay Gould offers a careful critique of Lyell's misleading rhetoric in *Principles of Geology*. He also looks at how scientific bias toward gradualism lasted well into the twentieth century and influenced the resistance to the idea that asteroidal impact could be responsible for certain mass extinction events in the deep past (176-178).
[5] Martin J. S. Rudwick discusses this along with a set of other De la Beche cartoons parodying Lyell (324-329). Gould (99-104) and Kolbert (48-50) discuss the sketch as well.
[6] For more on this, see Kolbert (55; 68-69).

ideas of science, particularly claims that the human could not have a lasting impact on Earth's systems and biodiversity. Their work calls to mind the claim made by Heidi C. M. Scott that "the Anthropocene is potentially introspective and moral: it strikes at the core of our culpability" (590). Victorian science certainly provided new avenues for thought in the form of radically expanded historical timescales and biological insights that called for reassessments of what it means to be human at all. However, the Victorian and modernist writers who draw from the science to articulate notions that are recognizable as Anthropocene thought—the spectre of natural limits and the agency of humankind within the natural order—were allowing for possibilities that the gradualism that marked much scientific thought denied. These nascent Anthropocene ideas grew from moral unease with industrial progress and productive uncertainty that human action would indeed not have any impact on natural history.

My dissertation attempts the intervention of emphasizing the importance of the nonhuman in discussions where animals are typically treated as a secondary concern. Many literary studies of the Anthropocene, such as the work of Jesse Oak Taylor and Allen MacDuffie, highlight Britain's industrial advances in the nineteenth century and the question of climate.[7] Even though species death is one of the key symptoms of the Anthropocene, biodiversity loss has, until recently, been treated as a footnote. With some exceptions, many of the most-cited theorists of the Anthropocene (including Rob Nixon and Timothy Morton) only consider the question of extinction in passing, opting instead to foreground the atmospheric and climatic consequences of humankind's violent interventions into natural history. With the exceptions of writers like Zimmerman, critical considerations of the Victorian Anthropocene have likewise avoided discussing extinction at length within the context of British empire and industry, despite the cultural associations between the extraction of natural resources (particularly coal, itself a product of deep time) and the evidence of extinction generated by the unearthing of fossils. While I agree with MacDuffie's argument that British industrialization gave rise to the articulation of key ethical imperatives regarding natural limits and a new ecological worldview that took into account human well-being as well as the well-being of the ecosphere, I also think it

[7] Though the trend is starting to change, many ecocritical surveys of nineteenth- and twentieth-century literature have avoided the term "Anthropocene" altogether, even though they engage with questions like climate change. As it has grown popularized the term is coming into more regular circulation.

is important to recognize that these inter-implications extend to the nonhuman in important ways: writers speculated about the reality of natural limits, but they were also preoccupied with the finitude of species, often due to the evidence of past extinction events literally unearthed by mining and industry. Discussions of nineteenth-century hunting and species loss likewise fail to fully consider the unease that the writers of imperial fiction had with the possibility of species loss and, from a geological standpoint, the accelerated rates of anthropogenic extinction. John Miller notes England's slowness to respond to biodiversity collapse, while Matt Cartmill discusses the central role English thinkers assigned to hunting in prehistoric human development and the formation of the modern male subject (a belief he terms the "hunting hypothesis of human origins"). More remains to be said, however, about the anxieties that were produced by the recognition that humankind could rapidly destroy species when, in the deep past, species death had been produced through natural processes and forces. Even though my project focuses on the science and perspectives found in Victorian and modernist literature, its concerns still bear on the present moment. We are experiencing an acceleration in the biodiversity collapse that preoccupied thinkers of the nineteenth and twentieth centuries. The Anthropocene has initiated what scientists refer to as the Earth's sixth mass extinction event. Anthropogenic extinction is accelerating at an unprecedented rate and, though projections vary, some estimate that "at the current rate" as much as twenty percent of Earth's species will be gone as early as 2030 (Bonneuil and Fressoz 7).

My dissertation argues that the psychological imperatives posed by mid-century conversations surrounding deep history and deep time played an important role in shaping British literature and scientific thought during the nineteenth and twentieth centuries; extinction, in particular, was a key framework for conceptualizing humankind's standing in relation to the nonhuman and the natural world. Moreover, these cultural representations are important to consider in the present moment when extinction remains a central, though undertheorized, feature of the Anthropocene, a topic I return to below. Despite *In Memoriam*'s particular historical location, the sentiments it conveys in its more scientifically-minded passages resonate with a wide range of literature that followed it. One could turn to science fiction, perhaps H. G. Wells' aforementioned protagonist in *The Time Machine*, who is confronted with the impossible task of eulogizing all species after witnessing the heat death of the sun. There are also parallels in works from other genres and even other literary periods. Tennyson's speaker is not dissimilar to

Woolf's Lucy Swithin from *Between the Acts* (1941), who holds an expanded view of history that extends beyond the limited temporal range of human development, partly through her interest in a book titled *Outline of History* (understood by critics to be H. G. Wells' work on deep time and Earth's development). Lucy, like the Tennysonian speaker or Wells' protagonist, reflects on what it means to inherit an Earth that was once occupied by thousands of species that are now extinct. Her vast historic gaze also takes on gendered resonances. It makes her inscrutable to many of the men who surround her, particularly her aging, militaristic brother, the family patriarch, and his son—both of whom inhabit future-oriented mindsets organized around processes of lineage, reproduction, and continuance. The ideas of Victorian science and the fears of extinction provide rich continuities between the Victorian and modernist eras. It is productive to examine them in tandem to see the ways in which Anthropocene thought developed between them.

Elizabeth Carolyn Miller argues that studying the Victorian Anthropocene is a project of "acknowledging the dialectical relationship between past and present: the past makes the present, but the present continually prompts us to reinterpret significant events, words, and ideas of the past, thus changing our sense of how, exactly, the past has created the present" (540). In reevaluating Victorian and modernist works I have attempted to find the sites where writers seem to be speaking disconcertingly to our own moment of mass extinction. These moments help us understand the stakes of our time while also thinking through the implications of the Anthropocene in prior historical and literary moments. I begin with a close analysis of *In Memoriam* because, in addition to its convenient historical placement, it crystallizes many of the anxieties and concerns that coalesced in the middle of the nineteenth century and were echoed and revised through subsequent decades. In one way or another, Tennyson's ideas find correlates in the works I consider in each of the dissertation's chapters. *In Memoriam* also has that striking quality of feeling as though it speaks to the present moment of ecological crisis. As Jesse Oak Taylor has remarked, "*In Memoriam* is perhaps *the* poem of the Anthropocene, not only because it speaks to so many themes characteristic of the era—evolution, extinction, geologic time—but also, paradoxically, because of the very historical gap that makes the Anthropocene something that *In Memoriam* shouldn't, properly speaking, be about" ("Tennyson's" 230).

In Memoriam, *Extinction, and Human Progress*

Near the midway point of *In Memoriam*, a personified Nature, gendered female, remarks on the impermanence of species when their temporal spans are measured against the immensity of geologic time. As the fossil records exposed in England's scarped cliffs and stones attest, "'A thousand types are gone: / [Nature] care[s] for nothing, all shall go'" (56.4-5). The poem's speaker reassumes narrative control of the passage to emphasize the precarity of humankind within such a framework and to ask whether "Man, [Nature's] last work, who seem'd so fair," might likewise find himself fossilized ("seal'd within the iron hills") with the extinct species of the primeval age that preceded him ("[d]ragons of the prime") (56.9; 20; 22). This passage reflects *In Memoriam*'s position within a particularly charged interval in the history of geologic and biological science. Passages like the one above feature the uniformitarian precepts found in Lyell's *Principles of Geology*, which popularized the idea that Earth formed across a timespan comprising millions, as opposed to thousands, of years. Quite remarkably, Tennyson also anticipates many of the ideas explicated by Charles Darwin, as *In Memoriam* appeared in print nine years before *The Origin of Species*. Christopher Ricks even argues that Tennyson composed lyric 56 "some years prior" (372) to Robert Chambers' work of speculative natural history, *Vestiges of the Natural History of Creation* (1844), which served as a precursor to Darwinian thought and prompted discussions regarding humankind's deep history within the context of geologic time. Tennyson was clearly preoccupied with emerging geological and biological discourses that would decenter traditional understandings of the human species and its standing within the natural order. Such theories presented numerous avenues for cultural and scientific interrogation, but the question of extinction—in relation to humans and nonhumans alike—was among the most vexing. In a prior era, Tennyson's work might have been a conventional elegy for his friend, Arthur Hallam. Instead, *In Memoriam* suggests that traditional elegiac sites of comfort, whether religion or nature, have been compromised by emerging science.

Though the arrival of nature "red in tooth and claw" (56.15) marks the point of *In Memoriam* when Lyellian and pre-Darwinian anxieties come perhaps most pointedly to the fore, even the earliest sections of the poem employ alternating temporal scales in an attempt to weigh the importance of a personal grief against micro- and macroscopic spans of time. An instance of this occurs near the poem's onset, when the speaker describes a yew in St. Andrew's Churchyard, Hallam's burial site. The yew, which lives a "thousand years of gloom," wraps its roots around Hallam's remains as the church's clock "[b]eats out the little lives of men" above

(2.12; 8). The speaker, jealous of the tree's longevity, wishes to "grow incorporate" (2.16) and exist as a part of the tree itself. The passage features elements of the elegiac and the pastoral, as well as the traditional religious associations of the yew tree, but the natural elements of the poem do not provide the solace that the natural world provides in traditional elegy. Instead of offering a reassuring permanence against the fleeting timespan of a human life, the yew's long life instead inspires a desire in the speaker for a different ontological experience altogether. Interestingly, the speaker suggests that the tree's existence itself is inflected with a kind of emotional resonance as it lives through its "thousand years of gloom." While the reader could dismiss this passage as an instance of pathetic fallacy, the stanza might instead be recognizing the struggle for life that even plants have to endure—a notion that is in keeping with other portions of the poem that acknowledge a struggle for existence along an ontological continuum.

The Lyellian overtones of *In Memoriam* become increasingly distinct in the second half of the poem. If stanzas such as the ones describing the yew tree in St. Andrew's Churchyard operated within traditional metaphorics of nature, many of the latter stanzas seem to self-consciously unsettle these established sites of meaning. Canto 123 opens with the transformation of a landscape across geologic time: "There rolls the deep where grew the tree" (123.1). The stanza describes a landscape that was once a seascape in ages past: "There where the long street roars, hath been / The stillness of the central sea" (120.3-4). These Lyellian formulations actively displace earlier images in the poem, signaling that what might stand as a temporal counterpoint to the relative transience of human life in earlier poetry, such as a tree's lifespan, is insufficient in the face of emergent scientific knowledge. The poem's supplanting of earlier symbols of time's duration is made even more explicit in canto 76, when the "secular abyss to come" sees the speaker's lyrics forgotten "Before the mouldering of a yew" and "Ere half the lifetime of an oak" (76.8; 12). The pit of deep time, referred to as "the vast" (76.11), renders even the longevity of a yew tree inconsequential.

What "the vast" or the "secular abyss" poses most directly is the question of extinction, defined increasingly broadly as the poem progresses. Cantos 55 and 56 famously juxtapose the theme of prehistoric extinction against the prospect of humankind's future erasure. It is in this portion of the poem that Tennyson weighs the possibility of a loving God against the truth that, within nature, the propagation of species takes precedent over the fate of the individual: "of fifty seeds / [Nature] often brings but one to bear" (55.11-12). Nature is "So careful of the type" yet

"So careless of the single life" (55.7-8). Even the privileging of "the type" is refuted in the next canto when Nature, in the face of the fossil record, declares "all shall go" (56.24). The poem is perhaps even more uneasy at the idea of the extinction of human thought than the prospect of the erasure of the species itself. Often, the question of extinction is abstracted from the bounds of biologic species death to foreground the extinction of human intellectual achievement. Even before the yew tree establishes oppositional temporal scales in the early stanzas of the poem, *In Memoriam*'s prologue discusses how humankind's "little systems"—presumably art, science, philosophy, and other forms of thought and enterprise—will "have their day and cease to be" (17-18).[8] Canto 76 imagines the loss of the speaker's poetry to time along with the possible loss of classical works of poetry—the "matin songs" that first "woke / The darkness of our planet" (76.9-100). During the first of the three Christmases that punctuate the poem, the speaker notes that tradition and creed will also experience a kind of death throughout time (29.16). While *In Memoriam* does engage directly with the notion of biologic species death, it is often more concerned with what traces of humanity will actually be left behind when humankind is gone. The "remains" of human thought seen in artifacts like architecture and print culture will turn into the matter driving geologic processes ("The dust of continents to be") (35.12)—leaving the only trace of Anthropos to be found in the fossil record itself.[9]

Though the poem deals with the decentering of humankind prompted, if not explicitly called for, by the geologic work of figures like Lyell and Cuvier, *In Memoriam* never actually attempts to decenter the human itself. In foregrounding personal grief, the poem largely maintains an anthropocentric gaze despite moments when it pulls attention away from the human to other concerns such as formative geologic processes and the erasure of species. The speaker does not wish to live in a materialist cosmology, preferring to "at once sink to peace" if natural

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[8] This sentiment feels more in keeping with later sections of the poem, where anxieties regarding the impermanence of human endeavor becomes more pronounced. However, the introductory stanzas in the prologue were written in 1849, after the rest of the poem was already composed.

[9] Jeff Nunokawa points out how the poem's dual emphasis on phylogenic and ontogenetic evolution also invite notions of extinction that might be applied to the cycles of an individual lifespan. Nunokawa argues that *In Memoriam* positions homoerotic desire as an early stage of an individual's erotic development that disappears, or "goes extinct," as a person develops "mature" (in the poem's formulation) homosocial bonds and heterosexual attachments: "[I]f the homoerotic disappears within the course of male desire as it is charted by Tennyson, this inexorable early loss is incessantly rewritten in subsequent constructions of the homosexual, rewritten and transliterated" (218).

beauty were accidental, a product "Without a conscience or an aim" (34.13; 8). Canto 120 echoes this sentiment, remarking that if science can prove the human form lacks a soul and is "wholly brain," or that human minds are "Magnetic mockeries" (referring to the electric impulses driving brain functions), then the speaker would prefer to die (120.2-3). The poem's issues with materialist thinking are not limited solely to the way in which they reevaluate the significance of human life when set against the backdrop of deep time, however. The imagined indignity that comes from recognizing humans as one species alongside many others rests at the core of the poem's partial resistance to materialism. Canto 27 likens base humanity to a "beast that takes / His license in the field of time" for "whom a conscience never wakes" (27.5-6; 8), a comparison that attempts to use moral awareness to delineate between humans and nonhumans. The poem takes a similar approach in Canto 46 when it argues that, in a materialist framework, the morality of humankind represents a "discord" within natural history (46.22). The violence of prehistoric species was in closer accord with the workings of the natural world—making humankind the actual "monster" (46.21). The poem largely embraces ideas that are central to evolutionary thought, but there is a marked unease at the idea that humans are merely animals themselves.

Over its course, *In Memoriam* reincorporates evolutionary processes and materialist scientific frameworks into a narrative of progress, reinflecting ideas that could potentially decenter humankind's standing within the natural world with a recognizable sense of human exceptionalism. The speaker suggests a positivistic evolutionary trajectory that will result in an improved human race of the future. One example of this occurs in Canto 118, which puts pressure on the idea of a randomized evolutionary trajectory and posits humankind as a privileged species:

[…] They say,
The solid earth whereon we tread

In tracts of fluent heat began,
And grew to seeming-random forms,
The seeming prey of cyclic storms,
Till at the last arose the man;

Who throve and branch'd from clime to clime,

The herald of a higher race,
And of himself in higher place,
If so he type this work of time

Within himself, from more to more;
Or, crown'd with attributes of woe
Like glories, move his course, and show
That life is not as idle ore, (118.6-20)

The poem moves from a passage rife with nods to various scientific theories (including catastrophism) and the "random" universe they suggest (the "seeming-random forms" and "prey of cyclic storms") to the arrival of humankind, a species that spreads to eventually dominate the earth's surface ("clime to clime") and promises further progression toward a "higher race." The logic of the passage implies that it is the duty of humankind to substantiate a divine present purpose within a geologic history that indicates random development. This image becomes crystallized in the final moments of the poem. The epilogue imagines a child, conceived on the wedding night described in the final passages, that will—through perseverance—help move humanity to "a closer link / Betwixt us and the crowning race" (127-128). Unlike the humankind of the present day, this "crowning race" will, among other things, be "No longer half-akin to brute" and will find nature to be "like an open book" (133; 129). This kind of triumphalism, which finds a teleological trajectory within evolutionary time, would become increasingly familiar within British literature as the century progressed. The arrival of the "crowning race," the logic of these passages holds, would further highlight the distance between human and animal. Canto 118 ends with the speaker prodding the reader toward individual self-improvement that would help the race as a whole: "Move upward, working out the beast, / And let the ape and tiger die" (118.27-28). For the modern reader, these exhortations seem both literal and figurative. The speaker implies that the animal is indeed part of the human and will need some "working out" before humanity assumes its higher place. On a more literal level, however, it suggests that, when it comes to the arrival of the crowning race who will find nature to be "an open book," nonhuman life is expendable.[10] The choice of animals in this particular formulation,

[10] Tennyson's construed future, one wherein humankind has mastered nature through will and perseverance, holds certain resonances with Victorian idea sets that Heidi C. M. Scott labels the

apes and tigers, seems particularly apt. As I discuss in Chapter 2, many of today's ongoing extinctions began with the expansion of Britain's imperial project and its hunting and zoo-keeping practices.

If *In Memoriam* feels like an inaugural work of the Victorian Anthropocene—one that establishes patterns seen in scientifically-minded Victorian literature to follow—because it operates within the problematic outlooks that many such works engendered, it also models the way in which authors engaged in contradictory modes of productive uncertainty. It is safe to say that at times the "honest doubt" (XCVI.11) of *In Memoriam* extends beyond the bounds of religion to questions of scientific and industrial progress. Despite the poem's assertions that humans are advancing toward evolutionary improvement, there are also moments that express clear doubt of any positivist claim. Even the triumphalist rhetoric of Canto 118 begins to buckle when it compares the progress of humankind to processes of ore extraction, paralleling life to "iron dug from central gloom" that is "heated hot with burning fears, / and dipt in baths of hissing tears" (118.21-23). It is difficult to imagine any kind of self-empowering evolutionary narrative attached to a life that is, still keeping with the ore metaphor, "batter'd with the shocks of doom" (118.24). Often it is entropy rather than progress that drives passages within *In Memoriam*. A rather striking example that speaks to the time of the Anthropocene occurs during a dream in which the regular succession of seasons has given way: "I dream'd there would be Spring no more, / That Nature's ancient power was lost" (LXIX.1-2). The speaker does not give any reason for the ending of natural cycles, but the dream does highlight the ways in which human history and natural history intertwine (the streets grow "black with smoke and frost, / They chatter'd trifles at the door") (LXIX.3-4). The uncertain voice in these doubtful passages is not one heralding the arrival of a higher race, but one that seems cautious of limits. There is an underlying fear that changes in the course of natural or human history might preclude human improvement.

In these uncertain moments, the speaker does not seem as callous to the loss of nonhuman life. The voice in Canto 118 that states "let the ape and tiger die" finds its counterpoint in Canto 63—a voice that muses on "love in which my hound has part" and the "pity" felt for "a horse

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"technological Good Anthropocene." The technological Good Anthropocene, which was active in the nineteenth-century cultural imaginary, was "cornucopian, competitive, and promise[d] timely solutions using human capitalist ingenuity" (590).

o'er-driven" despite the fact that a human is "so much more than these" (LXIII.1-2; 5). Similar voices make positive comparisons between a poet molding an idea and a carrier pigeon (a species that would go extinct less than a century after *In Memoriam*'s publication). These passages imagine more inclusive ways of discussing humans and animals alongside each other, instead of imagining nonhumans as lower lifeforms that might be erased in the name of human progress.

In Memoriam presents the reader with multiple avenues for considering the Victorian Anthropocene. It poses the possibilities of aberrant futures and odd climatological patterns signaled by the loss of seasonal time. It considers the acceleration of human advancement against the slow progress of deep time. It goes beyond questions of industry and atmospheric conditions, however, to suggest that the Anthropocene can be known through biological registers, particularly in the loss of species or the alteration of ecosystems. These biological registers are present in much of the literature that follows, and they provide rich possibilities for the reconsideration of works across a range of genres, which has led me to avoid focusing entirely on any particular genre. While the "Climate Fiction" (CliFi) of the nineteenth century—works like Richard Jefferies *After London* (1885), H. G. Wells' *The Time Machine* (1895), or, even earlier, Mary Shelley's *The Last Man* (1826)—provides obvious sites for critical engagement and deals rather explicitly with questions of extinction, writers in other genres were also considering ideas sparked by the insights of Victorian science. The topic of species loss connects Victorian poetry to realist fiction, imperial adventure fiction to modernist epic poetry. Not only science fiction writers were interested in the implications of science. And despite the claims of some of his contemporaries, Tennyson was not the only writer exclusively attuned to scientific developments.[11] My work shows the ways that fears of species decline—whose realization was shaped through the popularization of Victorian science—became an important mode in which writers came to articulate the Anthropocene. It also shows the way that Victorian science maintained a foothold throughout the next century. Sometimes as a nationalist rallying cry and sometimes as cause for productive uncertainty, the insights of thinkers like Darwin and Lyell

[11] Thomas Henry Huxley, whose friendship with Tennyson began in the 1860's, made the ill-founded remark upon Tennyson's death that "He was the *only* modern poet, in fact the only poet since the time of Lucretius, who has *taken the trouble to understand* the work and tendency of the men of science" (qtd. in Purton x).

played a central role in the works of writers thinking through humankind's increasing domination of the natural world.

Chapter Overview

The first chapter, "An 'Every-day Story' and Every-Day Speech: Science, Language, and Power in Gaskell's Wives and Daughters," considers the importance of the amateur and professional naturalists who feature prominently in Elizabeth Gaskell's fiction. Job Legh, the working-class naturalist of *Mary Barton* (1848), stands in stark contrast to figures like John Barton, the novel's Chartist activist whose political intensity drives much of the plot. For Roger Hamley, the rising naturalist of Gaskell's unfinished W*ives and Daughters* (1864-6), a scientific career launched at Cambridge provides clear benefits—as the younger of two sons, his prospects are greatly limited by the rights of succession under primogeniture. Through figures like Roger and Job, Gaskell establishes connections to breakthroughs in deep time, even in *Wives and Daughters*, a novel set in the 1830s. Both novels consider the extent to which the professionalization of science excluded women and working-class men from scientific careers. The formalization of science also alienated those without the means of learning the language and methodology of taxonomic classification. Both books also cast a critical eye on amateur collecting, the act of procuring specimens for personal use, a practice that became increasingly commodified as the century progressed and partially led to the erasure of plant and animal species.

Chapter 2, "'There Must Be Some Poison in a Lion's Teeth': Imperial Hunting, Collecting, and Ecological Decline in Victorian Adventure Fiction," moves beyond mid-century works. I situate the complex interrelation of hunting, landscape, and species loss in the works of H. Rider Haggard within the context of late-Victorian material culture. Haggard's depictions of big-game hunting in Africa alternately imagine hunting as an art, an index of national identity, and a pedagogical avenue through which to acquire and hone imperial male identities and skillsets. *King Solomon's Mines* (1885), *Allan's Wife* (1889), and Haggard's short fiction featuring Allan Quatermain, a professional hunter and ivory trader, posit the sport as a purveyor of martial traits important to imperial development and administration. While Haggard's work often celebrates the exotic hunt, it is not entirely uncritical of it. His fiction frequently references the decline of certain species and subspecies, such as the quagga, due to habitat loss and the popularity of exotic animal commodities within late-Victorian material culture. I argue that

Haggard's anxiety about extinction signals larger concerns both with the 'naturalness' of imperial identity and humankind's capacity to alter biospheres within geologically-short timespans. This portion of my dissertation also considers which anthropogenic extinctions were considered acceptable and which were not. On the one hand, Britons often excused biodiversity loss due to overhunting because the sport was seen as emblematic of British masculinity and imperial power; on the other hand, later in the century, activists touted the extinctions produced by the popularity of feathers and stuffed birds as features of women's clothing as examples of female cruelty and excess. Thus, the rhetoric of extinction was heavily gendered.

My two Victorian chapters explore the range of voices—scientific, cultural, commercial, and imperial—that called for the increased killing of animal bodies throughout the nineteenth century. Some deaths were incidental, such as the deaths that stemmed from habitation loss. However, these chapters focus primarily on the animal deaths driven by profit, scientific research, and imperial ideology. As these chapters demonstrate, shifting views of animals that framed them as specimens or commodities were accompanied by the cultural recodification of science, even amateur science, as a primarily masculine pursuit. This displaced women writers that were commonly the popularizers of science early in the century. It also marked the entry of men into fields of science that were primarily studied by women, such as botany. As science became increasingly exclusionary along lines of gender, popular cultural works, such as imperial adventure fiction, framed the killing of animals as a formative exercise central to imperial male subjectivity. Thus, the extinctions of the nineteenth century arose out of discourses that operated through gendered ideologies and cast the killing of animals as central to a range of British male identities.

The following two chapters consider the persistence of Victorian science and questions of extinction within literary modernism. Chapter 3, "'Wounded Trees and Wounded Men': David Jones' *In Parenthesis* and the Question of Community During the Anthropocene," explores Jones' book-length poem about his experiences as a soldier in World War One. *In Parenthesis* (1937) is as a much a reflection on the ecocidal potential of technological modernity as it is about the experiences of a soldier at the front. I examine how the poem uses moments of emotional connection between soldiers as well as interspecies connection between humans and nonhumans, a literary device that I term interrelational sideshadowing, to pose alternate modes of being that run counter to the deterministic logics typically used by military leaders to frame

the trajectory of the war. I argue that Jones presents emotional connection as an experiential form of knowing that challenges deterministic outlooks on historical progress that prevent imaginative forms of positive intervention. Using historical frameworks that account for geologic and evolutionary time, *In Parenthesis* examines how becoming with other species provides alternative modes of engaging with the world. For readers in the present attempting to articulate the biotic and abiotic effects (and affects) of an anthropogenic climate and the accelerated decline of biomes, Jones' attempts to represent other ways of life in the face of cataclysm provide an interesting counterpoint to deterministic voices that highlight the hopelessness of the Anthropocene.

My final chapter, "Early Time, Late Modernism: Reclaiming Prehistory in Eliot's *Four Quartets* and Woolf's *Between the Acts*," considers the presence of Victorian science in these two pieces. *Between the Acts* (1941) sets the imagery of deep time against the encroachment of fascism. This juxtaposing of prehistory and twentieth-century England indicates that an understanding of the deep past might have some bearing on the present. The prehistoric provides a captivating foil to the future-oriented gaze that typifies early WWII discourse and the fears reflected in writings from the time. Similar scientific strands run through Eliot's poem. Even though *Four Quartets* (1941) stands as his most lauded post-conversion work, one can see strands of his ongoing interest in Darwinism and Lamarckism. Contesting the idea that Woolf and Eliot's later works are isolationist attempts to preserve English tradition against emergent national threats, I argue that these works use the deep past as a way to articulate a more inclusive method of tracing kinship that suggests significant affinities among humans and nonhumans—even in the face of extinction posed by human progress and advanced war technologies.

The two modernist chapters illustrate the ways that twentieth-century authors used various narrative framings to understand the implications of Victorian science and the situatedness of humankind within an increasingly compromised planet. By looking backward to the deep past, authors like Jones and Woolf were able to consider the profound inter-implications that come from tracing humankind's co-evolution alongside other creatures. Using histories of speciation to think about community and collaboration, these authors highlight historical multivalency and resist teleological outlooks central to fatalistic apocalyptic narratives. They encourage futures marked by creative solutions grounded in multispecies sensitivities. The continued centrality of Victorian science in modernist narratives also points to the ways that

writers of the Victorian and modernist Anthropocene were attempting to articulate many of the same ecological concerns, an idea that puts pressure on any sharp demarcation between the two periods.

My project concludes in an epilogue that considers the literature of the early Anthropocene within the context of the current ecological crisis. The discourse of nineteenth- and twentieth-century literature that deals with extinction and human development throughout the prehistoric past can be useful to such contemporary discussions. At their best, authors of the early Anthropocene show how a sensitivity to the deep past and humankind's enmeshment with the natural world might help one deconstruct anthropocentric and deterministic models of human history. This literary discourse challenges those alive in the current moment to reconsider the ethical imperatives that one has to other people as well as to non-human life. These ideas are central to the Anthropocene—a time where humans and nonhumans are co-implicated in a rapidly changing ecosphere.

An "Every-day Story" and Every-Day Speech: Science, Language, and Power in Gaskell's *Wives and Daughters*

Elizabeth Gaskell's incomplete *Wives and Daughters: An Every-day Story* (1864-6) eschews the manufacturing cities of her earlier novels in favor of provincial England. Unlike her previous work, *Wives and Daughters* does not foreground Chartist complaints or the living and labor conditions of the working poor. Its opening pages detail "the old rigmarole" of Molly Gibson's childhood (3). Molly, the only child of a widowed country doctor, Mr. Gibson, does not face the same kinds of class-based obstacles encountered by Gaskell's other protagonists. Aside from her motherlessness, the reader is told that Molly's awkward position amidst the competing affections of Miss Eyre, Molly's governess, and Betty, one of the household servants, was one of the only "small grievances of a very happy childhood" (33). At first glance, *Wives and Daughters* seems far afield from the pointed political and social explorations that were so central to Gaskell's early works.

Along with the change in physical setting, Gaskell's choice to set her novel during the late 1820s and early 1830s—a time frame that, along with *Sylvia's Lovers* (1863), hedges closer to the start of the century—has some bearing on discussions of the novel. Helen Kingstone groups the novel with other "recent past" novels, like George Eliot's *Middlemarch* (1871-2), that look to the 1820s and early 30s to consider the impact of the 1832 Reform Act. The act, among other things, made the ownership of property worth at least £10 a prerequisite for voting rights. This stipulation excluded the working classes, but extended rights to men of the middle classes. Kingstone argues that authors used the Reform Act, and the conditions of the years immediately preceding it, to consider the implications of the Second Reform Act of 1867. This explanation for the historical setting makes sense, particularly considering the Chartist interests of Gaskell's first novel, *Mary Barton* (1848), which evaluates the lives of Manchester workers in the years following the Reform Bill. Taking up a different perspective, Leon Litvack argues that the scientific debates central to *Wives and Daughters*, particularly the Geoffroy-Cuvier debate,[12]

[12] I discuss Gaskell's references to scientists like Georges Cuvier at more length later in the chapter. The debate between Cuvier and Étienne Geoffroy St. Hilaire centered around classificatory systems. Cuvier's rigid system of classification ruled out the possibility of adaptation and transmutation. Geoffroy proposed a "transcendental Anatomy" that concluded, as Litvak puts it, that "all animal life," humans included, could be placed into "a continuous, related series" (732). Geoffroy's work precipitated evolutionary theory.

which led the way to the popularization of evolutionary theory, are also important to Gaskell's attempts to make contemporary readers consider their own lives in relation to recent breakthroughs. Even beyond the scientific and social developments of the 20s and 30s on the periphery of the novel, one feels further historical reference points, such as the reverberations of the Napoleonic Wars that can be felt in the dialogue of certain characters, particularly Squire Hamley.

Wives and Daughters is laden with historical flashbacks and the foci of many of them extend beyond the scope of this chapter. There are multiple, overlapping reasons for the historical setting. There is more to say about the scientific contexts of the novel, however, and I am primarily going to focus my attention here. Litvack has made a compelling case for the way that Gaskell's novel approaches the intersecting questions of science and imperialism. I think that there is something to his claim that Gaskell's contained focus on the small country town of Hollingsford fails to account for the work of one of its protagonists in Africa and that, therefore, she "demonstrated, at the very least, a tacit complicity with the imperial project, and so did not think it necessary or appropriate to contradict or adjust prevailing metropolitan sentiments" (757-8). Even on this point, I think there are potentially implicit critiques of imperialism that Litvack overlooks (an idea I will return to later). Primarily, however, I take exception to his claim that science stands as the democratizing presence or, as he puts it, a "precursor to a new era," with "Lord Hollingsford (a Whig with affinity for the French), Mr. Gibson (a member of the medical profession), and Roger (the scientific son of a Francophobe Tory landowner) all coming together to discuss their mutual passion" (737), and Molly's nascent scientific leanings offering "a wider range of possibilities for women to understand and contribute to the key debates of the day" (736). I argue instead that *Wives and Daughters* operates with a deep ambivalence toward the direction of emergent science, particularly in the way that its increasing formalization created exclusionary boundaries along lines of gender and class.

Though science became increasingly exclusionary as it became increasingly formalized, it still was present in the lives of many Britons, even members of the working class who are frequently subjects of Gaskell's early work. *Wives and Daughters*' secondary title, *An Every-day Story*, is fitting in relation to the novel's scientific content because a scientific interest in the natural world was indeed a part of the everyday for people from a range of different backgrounds. Gaskell and her husband stayed current with scientific progress, and she was aware

of the work of figures like Reverend William Turner, a relative who attempted to act as intermediary between formalized scientific thought and the middle and working classes by delivering public lectures on scientific movements to audiences that partially consisted of working-class men and women. During the early decades of the century, Manchester became home of five scientific societies, speaking to the fact that even the less affluent were invested in the direction and insights of scientific discourse.[13]

Science was a similarly popular pastime for middle-class women during the century. Barbara T. Gates' work has shown the primary role women writers had not only in popularizing scientific writing for laypeople but also in shifting scientific discourses even if they were barred in many cases, though not all, from publishing primary scientific treatises themselves.[14] Relevant to the focus of this project is Alice Bodington (1840-1897), who published works that popularized Darwinian thought. Far from parroting Darwin's ideas, she offered conjectures that sought to supplement limitations within Darwin's own published works. Her essay, "The Mammalia: Extinct Species and Surviving Forms" (1890), theorized causes for extinction that could not be explained solely by processes of natural selection. Her work does not foreground human-caused extinction, but it calls attention to the need for expanded understandings of species loss across the fields of geology and biology, particularly in a scientific climate that was adverse to the precepts of catastrophism.[15] Popular scientific writings enjoyed a readership comprised of women, the working classes, and children who were not able to access specialist literature. I explore the popularity of amateur natural science more fully in what follows, but a passion for the natural world and natural artifacts was widespread. During the early and middle decades of the nineteenth century, amateur scientific hobbies, such as bug-hunting, rock-collecting, and botany were "increasingly female more than male pursuits" (Gates 36).

It is not novel to observe that Gaskell's writing reflects a key sensitivity to scientific developments and scientific language. This is reflected in the interests of the characters as well as the narration itself. Danielle Coriale points to Gaskell's description of John Barton's physical attributes in *Mary Barton*, as well as a reference to him as a "specimen" of Manchester's

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[13] See Amy Mae King for more on Turner and the scientific communities of Manchester (617).
[14] Gates notes that generalist magazines printed entries on natural history by women contributors. She notes that women found it much more difficult to publish by the 1850s, as science became more formalized (3).
[15] Gates offers a more detailed discussion of Bodington's works (61-3).

working-class men, as an example of how the narrative "seems to offer at its outset a natural history of factory life" (369). Similar tendencies to use scientific ideas to help order experience can be seen even outside of Gaskell's fictional work. *The Life of Charlotte Brontë* (1857) uses ethnographic language to describe the people and location of Yorkshire (and the parsonage at Haworth specifically). Drawing from Michael Hechter's idea of "internal colonialism," Maria H. Frawley argues Gaskell's ethnographic gaze in the biography reflects classist "discourse about Britain's peripheries that surfaced throughout the nineteenth century"—discourses that "enabled middle-class people to represent themselves as 'elite overseers' of the 'quaint and primitive'" (182). Gaskell, as Frawley points out, was also re-presenting Brontë's own presentation of parts of Yorkshire, and herself, as belonging to a place and time out of step with Britain's industrial modernity. As writers like Coriale and Frawley have shown, there are ways to read the language of the natural and social sciences in Gaskell that reveal its critical edge. Gaskell's work critically reflects on the gendered and classed considerations that come along with the scientific gaze.

I argue that *Wives and Daughters* shows the ways in which established homosocial networks of scientific exchange were already comprised of men ready-made for Britain's imperial project (a project that became closely entwined with scientific progress). While discussions of science in Gaskell find obvious sites of inquiry in Molly Gibson and Roger Hamley, I think that some of the more outlying figures bear consideration. Mr. Gibson (not exactly an outlier, but not as closely associated with science as Roger), Lord Hollingford, and Lady Agnes, the botanist of the Cumnor family, deserve more consideration than they have been afforded. Lady Agnes is particularly interesting. She is a woman who reveals a mastery of Latin classificatory language and seems to have the capacity to inspire a scientific interest in the women of Hollingford. Her abrupt departure from the novel following her marriage also seems to have something to do with the possibilities afforded to women with the arrival of new scientific careers. Lady Agnes holds an interesting relationship to Job Legh, the working-class naturalist of *Mary Barton*, who is similarly unable to pursue natural history as a profession but, unlike Lady Agnes, seems more interested in purchasing specimens from abroad than sharing his knowledge with those around him. By analyzing some passages from *Mary Barton*, I argue that Gaskell's work offers a criticism of the way that amateur science was increasingly becoming associated with consumer practices. Gaskell's writing expresses a subtle distrust of amateur collecting and larger arguments concerning the way in which science excluded participants along

lines of class or gender. Her work anticipates many of the issues that would become exaggerated in Britain's larger imperial project and exacerbate symptoms of the Anthropocene that we are still experiencing.

The scientific gaze present among certain characters in Gaskell's novels was something that came into being gradually, and its emergence was met with shifting perceptions of what nonhuman life constituted. As Jesse Oak Taylor argues, "in order to become a species, an individual has to become an image," a process that involved "shooting, skinning, boiling, preserving, stitching back together, shipping around the world, and putting on display" ("Tennyson's" 229). This becoming a species had implications for mammalian and avian life, a topic I take up more fully in Chapter 2, but it also involved the killing and collection of nonhumans from insects and arachnids to plants. While men and women were encouraged to collect their own specimens (particularly in the service of exploring natural theology), collecting became a commercial practice throughout the decades, one that went beyond the purchasing and display of individuals for the sake of education. While these ideas might call to mind the garish commodity objects of the Victorian imperialism (one thinks of chairs made out of giraffes, and tables with legs made from the legs and hooves of exotic animals), other less disconcerting objects were also calling for the careful culling of nonhuman life. Maria Zytaruk traces the popularity of Victorian books that included mounted natural history specimens, for example, "nature printing, in which plant specimens were inked and used as a printing surface" (185). Over time, subsequent print runs of these books would require tens of thousands of specimens.

Gaskell's work speaks to the ways that the logic of species and the collection of individuals involved the recoding of gendered scientific practices, particularly as the acquisition of specimens became part of Britain's imperial and commercial projects. Lucile Brockway, for example, documents the ways in which Britain funded the acquisition of new plant species, particularly those with potential commercial value, and also facilitated their distribution to points in the empire where they might be cultivated most profitably—ostensibly altering global plant biodiversity through the introduction of non-native species abroad. Brockway remarks that this global exchange "constitute[s] an almost unrecognized government subsidy to natural science" and makes it difficult "to draw the line between science, commerce, and imperialism" (189; 84). Even as some plants were going extinct due to overcollection, Britain began growing others as quickly as possible, radically altering the products of the empire's agriculture. This paradigm

shift required the reframing of scientific interests that had been principally taken up by women. Gates notes how writers began publishing pieces in the second half of century extoling botany as an appropriate interest for men, part of a larger movement to codify science as an "endeavor […] linked to masculine intellectual qualities" (64). This movement that also saw women popularizers of science replaced by male writers that took up the text for non-specialist readers. Though women and working-class men remained passionate about amateur science, there is an observable shift from women's voices to imperialist, commercial men's voices within scientific culture—a pattern that seems replicated in Gaskell's work, when botanists like Lady Agnes become displaced by the voices of men early in *Wives and Daughters.*

From Manchester to Hollingford: Science and Mary Barton

Despite the rustic setting of *Wives and Daughters*, Gaskell's narration does not tend to highlight the beauty of the natural surroundings. This seems notable because the reader knows that the natural world shapes much of Molly's existence—there are asides where she mentions how she enjoys riding her pony around Hollingford, for example. There is no indication that Molly has spent any considerable amount of time outside of her country environment, yet there is little description of the countryside at all until Molly's initial stay with the Hamleys, six chapters into the novel. One of the first instances when the narration does pause over natural beauty, before the more sustained descriptions of Hamley Hall, occurs when Molly first visits the Towers as a child, the country home of Lord and Lady Cumnor. While touring the grounds, Molly is struck by the beauty of the surroundings, particularly the elaborate flower gardens, loved by Lady Agnes, the plant expert. It is the juxtaposition of the "exquisite cultivation" of the grounds against "the wilderness" that holds such an "inexplicable charm" for Molly. This passage is interesting because it is the cultivation, in a sense the artificiality, of the grounds that endears it to her. Molly is enmeshed in the natural world more than many of Gaskell's protagonists, like Manchester's Mary Barton, but the novel does not suggest Molly has an innate love of the nature, perhaps because it does not stand in as a sharp contrast to her own surroundings. The next key moment when Molly enjoys a natural setting comes during her stay at Hamley Hall. When Squire Hamley takes Molly on a tour of the grounds of the estate, she is struck by the wildlife that inhabits it, particularly a swan and a heron. She remarks that she has never seen a heron before. Instead of acknowledging the novelty of the moment for Molly, the squire enters into a behavioral aside describing how the herons and rooks compete for territory, a

foreshadowing of the scientific lens that is rendered over most descriptions of nature later in the novel. In both instances, the flower gardens at the Towers and the heron and swan at Hamley Hall, the beauty and appreciation of nature is overwritten with differential standings in wealth and class.[16]

Even in the early pages before the episode at the Towers, there are narrative elements that suggest that Hollingford is perhaps not as idyllic as it might appear. Despite Molly's childhood happiness, Gaskell carefully points out the modes of restriction placed upon her. Mr. Gibson's decision to hire Miss Eyre as a governess is not meant to further Molly's education, for example, but to maintain propriety during Molly's teenage years in a home where Gibson typically has one or two male pupils under his wing learning the medical trade.[17] In fact, most of his instructions to Eyre focus on what he does not want Molly to learn. In one alarming moment, he remarks to the governess, "I'm not sure that reading or writing is necessary. Many a good woman gets married with only a cross" (31). Molly is a willing reader, however, who attempts each of the books in Gibson's library, with the exception of his medical books, which he keeps locked away in the surgery, a portion of the house Molly is not allowed access to. The strictures Mr. Gibson's places on Molly's education and the power he exerts in attempting to shape her is at the center of their relationship. Hilary Schor even argues that his reactions to Molly when they are at odds over Cynthia later in the novel "suggests that what Mr. Gibson had loved about Molly is that he *could* 'inculcate' conduct in her" and his anger is a reaction to the realization that he couldn't "form" her completely (190). Mary Jean Corbett positions the relationship between Molly and Mr. Gibson, specifically "the father's wish to keep his daughter to himself," as the dynamic that "structures the novel and poses a central problem for the heroine's plot" (151). Molly must "renounce a desire for the father as a prerequisite for achieving adult (heterosexual) womanhood" and "the father, too, must redirect his desire away from the daughter" that he desires to keep for himself. Even beyond the interpersonal tensions of Gibson household, the

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[16] Gaskell develops Molly's affinity for the natural world as the novel progresses. Liana F. Piehler argues that in early portions of the novel, as Molly readies herself for her father's remarriage, "nature provides Molly with comfort and solace, a sense of care more often associated with human interaction." In many ways, her love of nature might serve the purpose of a sort of coping mechanism (84).

[17] Leah Price argues that Gaskell's apparent nod to Brontë's *Jane Eyre*, a rather quick one as Miss Eyre is dismissed almost immediately from the novel, is a means whereby Gaskell "dissociate[s] herself" from certain "literary-historical" pasts (760).

novel deals with patterns of power and control. Almost from the novel's outset, Gaskell mentions that there is a "very pretty amount of feudal feeling" in Hollingford and that while it is "droll enough to look back upon," the class dynamics were relevant to "serious matters of importance at the time" (4). It is clear that Gaskell positions *Wives and Daughters* to consider questions of political and patriarchal control. While one would expect a rural novel to begin with a description of the countryside, Gaskell instead foregrounds the position of Molly in a motherless household and the position of Hollingford within England, a rural town in pre-Reform Bill England.

The beginning of *Wives and Daughters* almost inverts the beginning of Gaskell's first novel, *Mary Barton*, and it is worth placing these novels in conversation with one another. Though the bucolic air of *Wives and Daughters* is distinctively different from the urban focus of the earlier work, both emphasize the importance of the natural world to the lives of their characters. *Mary Barton* does not open in the streets of Manchester. Rather, it starts in its environs, with factory workers enjoying a holiday away from the city while conversing in the countryside directly outside of the urban perimeter. The opening is striking when considered against the rest of the novel, which retains, for the most part, a narrative focus on the conditions faced by the Manchester working poor in the factories and in their rented homes. Gaskell avoids any sort of characterization in the opening paragraphs, opting instead to feature the attractions that the countryside holds for the people living and working in cities, with the country standing as a space where "the artisan, deafened with noise of tongues and engines, may come to listen awhile to the delicious sounds of rural life" (7). The novel positions an idealized rural community with "old-world, gabled, black and white houses" existing unobtrusively against scenes of natural beauty, such as a "deep, clear pond, reflecting in its dark green depths the shadowy trees that bend over it to exclude the sun" (8). *Mary Barton* is an urban novel, but one that situates a pastoral idyll directly outside of its center. Gaskell frames the countryside as a popular, even necessary, destination for urban workers.

The sustained descriptions of the countryside that mark the first two chapters are thrown into relief as early as Chapter III, when Mary Barton's mother, who is also named Mary, dies in the family's rented rooms during the birth of her son. The remainder of the novel maintains an urban focus, with the occasional character trekking into the countryside. Mentions of natural settings occur primarily through dialogue, such as sailors narrating their time abroad or aging

characters recounting memories from younger years in other locations around England. The novel's opening is so anomalous with what follows—factory fires, starvation, and disease—that it initially feels like part of a different work. It is even arguable that Gaskell's descriptions of the country draw from different literary traditions. The pastoral elements juxtaposed against the novel's more straightforward Condition-of-England passages signal the shift to literary realism, but they also point to other realignments in humankind's orientation to the natural world itself.

But the opening is not as idyllic as it first appears. There are nods to points of friction that recur throughout the novel. Though it is not central to the plot, the novel thematizes the shift from local herbalism and folk medicines to more formalized and monetized medicinal practices. Near the gabled homes Gaskell describes in the first chapter is a herb and flower garden that was once "the only druggist's shop within reach" and filled with "roses, lavender, sage, balm (for tea), rosemary, pinks and wallflowers, onions and jessamine, in most republican and indiscriminate order" (8). This aside is connected to a later passage in which John Barton buys medicine from a druggist when his acquaintance, Ben Davenport, is dying of what is presumably typhoid fever. Gaskell presents the druggist, with his "smooth manners" (58), more as a businessman than someone interested in caring for the poor. He sells John a remedy that he knows will not do any good for Davenport, and John leaves "with comfortable faith in the physic given him" (58).

The garden in the opening pages of the novel finds a correlate in the character of Alice Wilson. Alice is familiar with herbal medicine and the medicinal properties of local plant life. She assists the Barton family following the death of Mary's mother, and Mary grows connected to her throughout the early section of the novel. When Gaskell first introduces Alice, the reader learns that, along with being a washerwoman and sick nurse, she has "considerable knowledge" of medicinal herbs and "on fine days, when no more profitable occupation offered itself," she would make excursions into the countryside on foot to collect plants for remedies. In describing Alice's room, the novel foregrounds the drying plants draped along the walls. These plants, the reader is told, "which we are accustomed to call valueless, […] have a powerful effect either for good or for evil, and are consequently much used among the poor" (17). There are gendered considerations when discussing Alice, a topic I explore more fully below, but Gaskell is clearly also evoking questions of class in her contrasting characterizations of Alice and the druggist. The fact that the plants are considered "valueless" is also suggestive of the devaluing of local

knowledge (primarily held by women) with the arrival of emergent forms of professional medicine.

Though Alice holds generational knowledge of the natural world, the figure most associated with the pursuit of natural history is Job Legh, the grandfather of Mary's close friend Margaret Jennings. Job works as a spinner but dedicates most of his time to the procuring and collecting of natural history specimens. His interests are not confined to any particular branch of natural history—the reader is told that, among other things, Job collects and preserves varieties of fish, insects, moss, and arachnids. When Mary first encounters Job when she visits Margaret at her home, Job's virtuosic pursuits and demeanor cause him to be, even when Mary is forming her first impression, out of touch with the people and places around him: "Indeed, the whole room looked not unlike a wizard's dwelling. Instead of pictures were hung rude wooden frames of impaled insects; the little table was covered with cabalistic books; and beside them lay a case of mysterious instruments" (38). The naturalist paraphernalia, which Mary is entirely unfamiliar with, prompts her to wonder if Job is a fortune-teller. His detachment from others is driven home by his employment of Latin classificatory terms, which others cannot decipher. Later in the novel, Job is described as being in a state of "habitual abstraction" (133).

In many ways Job is a likable character who helps the lead protagonists at several key turns; however, the novel is not entirely uncritical of him. Though some passages suggest that he is sensitive to the social and political issues impacting himself and fellow members of the working class, particularly the Chartist activist John Barton, Gaskell reverses many moments that might otherwise endear him to the reader. One moment involves Job's passionate entreaty to John. Before John leaves to offer a Chartist argument before Parliament, Job provides him with a number of demands to put forward that are meant as ameliorative measures to help the Manchester working class (80). Though Job appears, and in many ways likely is, sensitive to the ills faced by those around him, the reader knows from previous sections that his hobbies have come as a burden to his granddaughter. In prior sections, Margaret has complained about Job's habit of taking days away from work to collect specimens and that, when buying them from others, "he'll think little enough of four or five shillings for a specimen" (45). His preoccupation has left Margaret as the sole person left to fret over their finances. Job raised Margaret after her parents died, but she is now the one burdened with the cost of his hobby. Job might believe

himself to be socially conscious, but that sensitivity does not extend to the impacts of poverty on his own grandchild.

While the novel is not overtly critical of Job, it does call the importance of his naturalist pursuits into question. The first anecdote Margaret offers about Job involves a deadly scorpion that he buys from a sailor for what he terms the "good bargain" of two shillings (39). Once Job returns home with the scorpion, it escapes from the bottle in which the sailor contained it. Though the scorpion attempts to sting Margaret, Job prevents her from killing it in a way that would hurt its anatomy. They eventually manage to drop the scorpion in boiling water and then to preserve its body in a jar. The story is meant to amuse Mary, and to establish Job as an eccentric character, but it takes on a different light once Mary begins to understand the financial burden that Job's hobby has placed on his granddaughter. Moreover, his preoccupation has cost her a certain amount of companionship. She remarks this, but her remark seems disingenuous: "It keeps him silent, to be sure; but so long as I see him earnest, and pleased, and eager, what does that matter?" (40). Gaskell's groups Job with other working-class naturalists who keep "Newton's 'Principia' […] open on the loom" and "set off with single purpose to fetch home the humble-looking weed" (37). The narration does not always seem outright dismissive of the work of naturalists, but passages like the ones above, at the very least, seem to gently mock them. The same tone is not taken up in descriptions of Alice's pursuits. Alice also treks after "humble-looking" plants, but unlike Alice, Job's collection holds no practical purpose.

The novel frames natural science and the increasing prominence of the Linnaean system of classification as exclusionary and homosocial practices. In the passage that discusses working-class naturalists, Gaskell discusses the ways in which "more popularly interesting branches of natural history"—namely botany and entomology—are commonly taken up by male factory workers. The novel uses gendered pronouns to indicate that these hobbies are not as popular among women. For example, "the two great beautiful families of Ephemeridaea and Phryganidae have been so much and so closely studied by Manchester workmen, while they have in a great measure escaped general observation" (37). The term "workmen" is key. Job engages in discursive networks organized around natural history, but they are constituted by other male laborers, sailors, lawyers, and professional naturalists. The introduction of classificatory language in this passage, Ephemeridae and Phryganeidae, to refer to the common mayfly and caddisfly, also feel excessive (if not a bit silly), particularly compared to the opening passage of

the novel—which frames nature as a universalizing and ameliorative presence in the lives of the Manchester poor. The terms "Ephemeridaea and Phryganidae" precipitate Job's use of Latin terms only pages later, language that Mary and Margaret find alienating.

Considerations of class also arise in the passages describing urban naturalists. Gaskell is careful to point out the ways in which professional naturalists have relied on the local knowledge of the working classes in developing more formalized scientific classifications. She includes an anecdote involving Sir James Edward Smith, the founder of the Linnaean society, who relied on information provided by a Manchester worker when trying to learn about a "very rare plant" located in Lancashire (37). The passage suggests that the name of the worker is negligible or perhaps even forgotten: "[…] Smith proceeded by boat to Manchester, and on arriving at that town, he inquired of the porter who was carrying his luggage if he could direct him to So and So." This passage models the way in which professional naturalists have exploited the local knowledge of working-class people who share no part in the prestige or income that results from the published work of eminent scientific figures. On one hand, one can identify a sense of pride in the fact that local working-class people have contributed to key scientific developments. On the other hand, it is clear that Gaskell is drawing attention to the classism inherent in those developments. Interestingly, *Mary Barton* also suggests that the formalization of scientific classificatory terms, and the necessity that working-class naturalists learn this formalized language, has created intraclass tension among members of the lower classes. While women tend to be excluded from knowledge of classificatory systems, many men find them to be alienating as well. When Will Wilson, Alice's nephew, discusses his time at sea, and his encounters with flying fish, he pokes fun at Job, grouping him as "one o' them folks as never knows beasts unless they're called out o'their names. Put 'em in Sunday clothes, and you knew 'em, but in their work-a-day English you never nought about 'em" (136).

Gaskell's uneasiness with the popularity of amateur natural science is well founded. As I discuss more fully in Chapter 2, amateur science would contribute to the decline of a range of species around the world throughout the nineteenth century. This is largely because of the way that collecting, the trapping or purchasing of specimens for preservation and display, caused a decrease in nonhuman populations and the disruption of local habitats, both in England and in its colonial outposts. The differences between Job and Alice signal a shifting orientation toward the natural world. Though her collecting plants seems to have the secondary mental and emotional

benefits that come from time spent outside of the city, Alice's interest in nature primarily relates to her interest in local medicine. Her character bears traces of quickly disappearing trades and traditions. As Amy Mae King puts it, Alice's "social position as a sick nurse and herbalist, as well as washerwoman, gestures back to a much older and, by and large, fading vernacular medical tradition in England"—one to which women had access before the professionalization of medicine (620). Job's interest in nature is more grounded in consumerism. Despite his potential contributions to science through his discursive circles, Job is foremost a collector. He is a collector who, as I discussed above, places his own wellbeing (and the wellbeing of his granddaughter, who is slowly going blind) below the acquisition of new specimens. He even goes so far as to visit the Liverpool docks to see if sailors have brought back exotic species from abroad in the way that a merchant might attempt to acquire goods from foreign locales. Though Mary considers Job an eccentric, it is clear that there are many working-class men involved in the same pursuits, and the popularization of amateur collecting in the following decades (*Mary Barton* is set during the late 1830s and early 1840s) would see preserved specimens in a large number of working-class and middle-class homes.

This reorientation toward nonhuman lives and the natural world more broadly operates not only along lines of interclass consumerism, but also along lines of gender. Job's naturalist networks are homosocial. They are comprised of men who utilize a specialized and exclusionary language. These networks obscure their classist dynamics to suggest a universalizing interclass discourse around a shared interest. They also are not interested in the knowledge base held by women like Alice, who have a specialized understanding of local flora that would be worth documenting. The novel clearly positions Job and Alice as contrasting figures. Though the validity of the novel's framing might be disputed, the novel imagines an earlier tradition, upheld by Alice, of a humanistic and unobtrusive engagement with the natural world and an emergent, more highly destructive orientation arranged around collection and preservation. The latter is propelled by consumerism and is taken up predominately by men.

Science and Gender in Hollingford

To bring the discussion back to *Wives and Daughters*, it is clear that Gaskell's final work shares a number of similarities with her first. Both have an overarching interest in the role that the natural world plays in the lives of Britons, despite the fact that the novels have significantly different settings. In addition to a focus on the natural world, both novels feature male characters

with a driving passion in natural history. Despite the fact that Roger and Job occupy disparate social standings, they are characterized primarily by their interactions with nature. Both are also engaged in discursive networks organized around the study of natural history. The primary difference between them is that one approaches natural science as a professional and one approaches it as a hobbyist. For both characters, however, their engagement in scientific discourse shapes their experiences. The presence of these characters in the works that bookend Gaskell's career speaks to the author's continued interest in the ways that nineteenth-century science was becoming increasingly gendered. Their presence also indicates her interest in the ways in which science was influencing and being influenced by economic practices. Job reflects the way in which natural science was, in part, a consumer practice. Roger reflects the way in which science held new professional opportunities for men whose prospects were limited under the systems of inheritance defined by primogeniture.[18]

The woman for whom a scientific career would be most appealing might actually be a relatively minor character within the novel: Lady Agnes, the first of Lady Cumnor's children to be featured in the text. Agnes is only mentioned a handful of times throughout *Wives and Daughters*, but she has a keen interest in botany. The flower gardens around the Towers are overseen by her. In Chapter I, Mr. Gibson, on the occasion of treating an ill servant at the Cumnors' summer home, brings a *Drosera rotundifolia* (a species of sundew) for Agnes' collection. Gibson's remark to Lady Cumnor indicates that he and Agnes have discussed their shared interest in botany, though the extent of their exchanges is unclear: "I was calling to see Nanny, and I took the opportunity of bringing Lady Agnes the plant I was telling her about as growing on Cumnor Moss" (8). The humor of Lady Agnes' detached remark that the plant is "very pretty, I daresay, only I am no botanist" would depend on the reader's knowledge that the flower is actually a carnivorous plant that grows in swamps, not the kind of flower that would typically be kept by a lady in a manor house. Her unfamiliarity with Linnaean taxonomy as well as, presumably, a lack of interest in the local names for the town's environs ("Cumnor Moss")

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[18] Even though professional science putatively created more class fluidity, Brockway discusses the ways that for emergent scientists "social origins had subtle effects on the precise status they might achieve" (88). She discusses this in relation to the disparate receptions to the work of Charles Darwin and Alfred Russel Wallace.

prevents her from realizing the strangeness of the plant. Lady Agnes does not respond to her mother's remarks but does seem rather excited to have the specimen.

Agnes offers an interesting counterfigure to characters like Job. Job is prevented from pursuing science as a profession because of his class standing and the fact that the scientific career opportunities available to characters like Roger did not exist in his youth. Agnes is prevented from following a scientific path because of gender. Though it seems strange to compare Agnes and Job because of differences in age and sex, there are a number of overlaps. The first is their apparent interest in amateur collecting, even if Agnes' collecting is limited to the acquisition of plant species. The other major similarity is the connection that Gaskell establishes between both characters and the use of classificatory language. When Molly takes her tour of the garden and the greenhouses and hothouses, a tour led by Agnes, the reader is told through narration that the latter "had a more scientific taste" than Molly and that she "expatiated on the rarity of this plant, and the mode of cultivation required by that, till Molly began to feel very tired, and then very faint" (13). When Molly feels herself faltering in the heat and asks Miss Browning if she can leave the greenhouse to go back into the open air, Browning, mistaking Molly's distress for boredom, states: "Oh, yes, to be sure, love. I daresay it's hard understanding for you, love; but it's very fine and instructive, and a deal of Latin in it too" (13). The exchange is suggestive of the kind of alienation that Job's working-class interlocutors in Manchester encounter throughout *Mary Barton* whenever he employs Latin terms in conversation. In the case of Agnes, however, Browning is only assuming that Molly feels alienated, when in fact she is suffering from the heat. Browning herself is also apparently able to follow Agnes' discourse without much trouble and seems quite interested. Browning's interest might have something to do with class deference, but Agnes' role as an intermediary between formalized science and lower-class members of the community calls to mind the work of women during these decades that popularized scientific ideas for broader audiences. Browning turns away from Molly so as not to miss any of the points Agnes is making. Agnes is therefore employing scientific discourse to her listeners in a way that is accessible, even engaging, to those without specialized knowledge—something that Job fails to do.

Unfortunately, Lady Agnes disappears from *Wives and Daughters*. After Molly's day at the Towers, Agnes's name only turns up in the form of conversational references from Lady Cumnor. Agnes is more or less traded in the text for her brother, Lord Hollingford, who spends

more time at the Towers following the offstage death of his wife. Gaskell glosses over Agnes' marriage and mentions the arrival of Lord Hollingford in the same sentence, reinforcing the sense that a sort of tradeoff has taken place within the narrative: "Lady Agnes was married; there was only Lady Harriet remaining at home; Lord Hollingford, the eldest son, had lost his wife, and was a good deal more at the Towers since he had become a widower" (33). Agnes' retreat from the forefront of the narrative to, presumably, a quiet domestic existence offstage lends a ring of irony to her married name, Lady Agnes Manners.

Hollingford's characterization feels quite similar to that of his sister, the primary difference being that he has an interest in natural history broadly rather than botany in particular. The novel also mentions that Hollingford has a number of scientific discoveries to his credit. His scientific contributions endear him to the people in the town, though most of them are unsure even of what branches of science he pursues. Gaskell's descriptions of him are rather gentle, primarily casting him as a very kind, though exceedingly awkward, man. The narrator remarks that what the locals take as Hollingford's pride is actually just shyness. One odd description mentions how Hollingford finds it difficult to talk to those whose "daily habits and interests were not the same as his" but that he wished to be more sociable and that he "would have been very thankful for a hand-book of small-talk, and would have learnt off his sentences with good-humoured diligence" (33). In other words, Hollingford wishes that he could improve his interpersonal skills by approaching them as a kind of study, which the narrator likens to the way that an early learner of a subject might memorize and recite the core principles of a discipline.

Gaskell clearly sets up a communicative contrast between Hollingford and Agnes. Despite Agnes' dedication to botany, she is able to communicate her knowledge to non-experts in a compelling way. Miss Browning is so worried that she might miss some of the information that Agnes is offering about orchids that she turns away from Molly and does not notice that the girl is on the verge of fainting. Hollingford, however, only seems able to converse with others who hold the same scientific tastes. Molly's experience of dancing with Hollingford at the charity-ball much later in the novel perhaps best exemplifies the disparity between his intellectual and social abilities. Molly finds that "the wise and learned Lord Hollingford" is "strangely stupid in understanding the mystery of 'Cross hands and back again, down the middle and up again'" and "quite unaware that the duties of society and the laws of the dance required that he should go on capering till he had arrived at the bottom of the room" (283). Fortunately for

Hollingford, he finds an ideal interlocutor in Molly, who by this time is well-versed in natural science and is able to converse with him on Cuvier's *Le Règne Animal*.

Wives and Daughters positions Lord Hollingford at the center of the town's homosocial scientific discourse, and by extension larger metropolitan and international scientific fraternities, and begs the question of why a figure like Agnes, someone with the same tastes and class standing (and perhaps a bit more charisma), could not exert the same influence. Hollingford contributes to the work of the "European republic of learned men" (34), and brings back news of the progress of such men—even, eventually, Roger Hamley. At the start of the novel, Lord Hollingford acts as a catalyst that reignites Mr. Gibson's active, if comparatively subdued, scientific interests. The larger passage that describes Gibson's renewed scientific and medical enthusiasm is compelling in the way that it frames his interests as a form of homosocial bonding:

> [W]hen Lord Hollingford returned to make the Towers his home, affairs were altered. Mr. Gibson really heard and learnt things that interested him seriously, and that gave fresh flavour to his reading. From time to time he met the leaders of the scientific world; odd-looking, simple-hearted men, very much in earnest about their own particular subjects, and not having much to say on any other. Mr. Gibson found himself capable of appreciating such persons, and also perceived that they valued his appreciation, as it was honestly and intelligently given. Indeed, by-and-by, he began to send contributions of his own to the more scientific of the medical journals, and thus partly in receiving, partly in giving out information and accurate thought, a new zest was added to his life. (35-6)

Though this passage does not feel overtly critical of their interests, Gaskell is clear in pointing out that the people involved in the exchange of ideas are solely men. The fact that this passage also occurs directly after the novel has essentially removed Agnes from the ongoing plot points to an implicit criticism. The reader knows that Gibson and Agnes conversed on the topic of science. The extent of their discourse is unclear, but it was substantial enough that Gibson procured botanical specimens for her. Evidently, however, his exchanges with Agnes were not enough to kickstart an interest in publishing ideas in the "more scientific of the medical journals." Interestingly, Gibson's sudden penchant for contributing his thoughts in any form is brought on more by Hollingford's presence than the substance of their conversations—when Hollingford first arrives, the reader is told that the two men like one another but rarely make time

actually to hold substantive conversations (a fact that changes as their relationship deepens). It seems Gibson wants to engage with the scientific community at large, not just Hollingford. Moreover, it seems like Gibson's interest, beyond mere homosocial bonding, is tied to a desire to differentiate himself from the men he must circulate with in the town. Through free indirect discourse, the novel reveals that Gibson is excited by the scientific world Hollingford has opened up to him because "there was no one equal to himself among the men with whom he associated, and this he had felt as a depressing influence, although he never recognized the cause of his depression" (36).

The characterization of Mr. Gibson is complicated. As I discuss more fully below, like Job (and Lord Hollingford, to a certain extent), many of Gibson's traits endear him to the reader. His wit makes him seem likeable. His rapport with Molly and her fondness for him also make it easy to overlook the negative ways in which he exerts his authority over those around him, particularly women. As previously mentioned, he tries to limit Molly's education, never even taking notice of how particularly intelligent she is. When Gibson intercepts a surreptitious love letter written to Molly by one of his live-in medical pupils, Mr. Coxe, Gibson responds by chastising Coxe and sending Molly out of the house to the live with the Hamleys. The reader discovers later on that Gibson dismissed Bethia, the maid who attempting to deliver the letter to Molly on Coxe's behalf. Gibson's cook, Jenny, a relative of Bethia, also leaves her position out of family loyalty. Gibson finds Jenny's argument—that Coxe was more to blame than Jenny and therefore should have been the one dismissed—to be sound. He also, however, feels some relief that Jenny is out of the house because he no longer has to deal with "the discomfort, the uncertainty" that comes with "meeting a woman at any time in his house, who wore a grievance and an injury upon her face as legibly as Jenny took care to do" (70). His misogyny extends even to Mrs. Hamley, of all people, who is kind enough to look after his daughter for a long stretch of time as Mr. Gibson attempts to deal with, what is to him, a domestic crisis (the need to find an adequate way to keep watch over his daughter now that she is an adolescent without a mother). He remarks that one of her comments "is just like a woman's idea – all kindness, and no common sense" (73). He makes similar statements to Molly; when Gaskell outlines Molly's early childhood, she notes that Mr. Gibson "laughed at her, quizzed her, joked at her, in a way which the Miss Brownings called 'really cruel' to each other when they were quite alone" (29).

Mr. Gibson continues Gaskell's pattern, established in *Mary Barton*, of constructing an ostensibly likeable man of science who, upon closer consideration, occupies an exploitative standing in relation to the women around him. As previously discussed, Job's charming eccentricities and fondness for amateur collecting come at the expense of his granddaughter, who has to take up the slack when Job takes time off work or spends more than they can afford in pursuit of his scientific hobbies. At least Job does not seem to be self-consciously exploiting Margaret. Gibson, by contrast, is hardly ever generous to the women he employs in his household. Moreover, most of his domestic decisions center around the prospect of controlling Molly, from her education to her relationship prospects. This need for control ultimately results in his ill-advised second marriage to Clare, which he believes will be enough to maintain propriety in a home with his teenage daughter and his medical pupils.

It is interesting to note how Gibson seems to grow more distrustful of women (not men) following his interception of Coxe's note. The same Mr. Gibson who "was anything but suspicious" (44) in nature when he noticed Bethia acting strangely as she was on her way to deliver the note to Molly comes to wonder if Molly shares or is even somehow aware of Coxe's affection. He, somewhat incredibly, mistakes Molly's desire to return home after her long stay at the Hamleys as a betrayal of her own affections for Coxe, something that is completely unfounded based on what the reader knows of her. When she understandably asks Mr. Gibson if she can return home when he visits Hamley Hall, her question prompts "[a]n uncomfortable suspicion" that results in her own shocked confusion after Gibson "pulled her round, and looked straight and piercingly into her innocent face" (72). Fortunately for Molly, her reaction does not contain confirmation of the "feeling which he dreaded to find." By this point, Gibson's need for control results in the questionable physical treatment of his daughter. The reader begins to wonder how much of his response to Coxe's letter actually resulted from the need to maintain respectability in his household and how much was from a compulsion to quell any feelings of sexual desire that would be a natural part of Molly's development into adulthood.

Gaskell repeatedly works out how these likeable men of science exercise control over decisions that they lack the sensibilities to fully appreciate. Job is able to influence the plot of *Mary Barton* because of his connections to homosocial networks comprised of other natural science enthusiasts, particularly lawyers, but he lacks the social knowledge to recognize the ways in which class-based power differentials truly shape the labor and living conditions for working-

class men and women in Manchester.[19] In *Wives and Daughters*, men of science make domestic choices without consulting the advice of others who might have a more informed take on matters. Mr. Gibson's decision to marry is largely prompted by the comments of Lord Hollingford, for example. Once the men have built a rapport around the discussion of science, Hollingford suggests that Gibson remarry while having lunch at Gibson's home. His suggestion is, of course, based on the practical idea that educated men should "be free of any thought of household cares" and that a wife would offer the "kind of tender supervision" that "all girls of that age require" (95-6). The statement is ironic partially because of the fact that Hollingford is the father of two boys, a role that, he implies, must require less thought than raising a girl (not least of all because a boy's education can be left to boarding schools like Eton and Harrow). At this point in the novel, Gaskell has already thoroughly developed Hollingford's social shortcomings and the fact that he, of all of the town's residents, would perhaps be one of the worst to offer any of kind of marriage advice or domestic insight more generally.

The somewhat sympathetic, though not entirely likable, Squire Hamley is a similar case. It would be difficult to classify him as a man of science, but it is clear that he has gleaned some information from Roger's interests. He offers behavioral explanations for the animals on his property, for example. Though he lacks scientific expertise, he still runs his household without asking for input from his more reasonable wife. Like Hollingford, he lacks the social common sense necessary to avoid making the people around him uncomfortable. He also tends to lash out at the women around him, particularly Mrs. Hamley. The reader grows more sensitive to the squire as the novel approaches his death. This is mostly because his anger and prejudices (particularly against the French and members of lower classes) begin to ease following Osborne's death and the arrival of Aimée. However, like many of the men in Gaskell's stories, Hamley would have benefited from listening to the women around him.

One way to understand the masculine identities Gaskell puts forward in *Wives and Daughters* is to consider them in light of the imperial project that rests at the very boundaries of

[19] Job's suggestions to John Barton, preceding the latter's presentation to Parliament, offer solutions to Manchester's working-class issues that rest in freeing up the possibilities of international trade. Based on Job's explanation, an adjustment to foreign policy would allow laborers to buy inexpensive clothing. As Coriale points out, Job's take on working-class hardship is grounded in the "relationship between government policy and the economy" as opposed to "the empirically observable relations between owners and operatives" (355).

the story itself. Once Roger distinguishes himself at university, he is selected to travel as a naturalist to East Africa to procure specimens for the development of a museum. The museum is commissioned by the trustees of a late Mr. Crichton. Lady Harriet, Lord Hollingford's other sister, explains the situation in somewhat disparaging terms to attendees of a dinner party:

> Didn't you hear of that rich eccentric Mr. Crichton, who died some time ago, and—fired by the example of Lord Bridgewater, I suppose—left a sum of money in the hands of trustees, of whom my brother is one, to send out a man with a thousand fine qualifications, to make a scientific voyage, with a view to bringing back specimens of the fauna of distant lands, and so forming the nucleus of a museum which is to be called the Crichton Museum, and so perpetuate the founder's name. Such various forms does man's vanity take! Sometimes it stimulates philanthropy; sometimes a love of science! (344)

Harriet's description frames the development of a museum as a kind of act of narcissism from beyond the grave. This is quite different from voices that would frame natural history museums as a source of national pride since they partially represented Britain's increasing power around the globe. It also does not present the museum as a useful educational tool for the ever-advancing field of biology. Instead, the Crichton Museum is a monument to one man's egotism, formed through the efforts of a second man "with a thousand fine qualifications." If *Wives and Daughters* is guilty, as commentators like Litvack maintain, of a "tacit complicity with the imperial project," there are at the very least passages like this that go against the grain of unexamined scientific efforts. Roger's time in Africa is left unsatisfactorily off-page, but Harriet's comments might reflect some misgivings about the motives fueling scientific imperialism, if not the methods behind it as well.

On the topic of imperialism in Gaskell, it is also worth noting the implicit critiques one might see in the configurations of characters themselves. Susan Morgan takes notice of the fact that in Gaskell's novels "the son often exists only to be absent," such as Roger (107). In *Cranford* (1853), sites of imperial interest that the male characters are off overseeing exist off the page, foregrounding the values of its women characters. Morgan discusses how *Cranford* "insists that the values those businessmen and heroes [of the novel] have believed to be trivial and naive, the values of women who live in a world of their own, far from being out of touch with truth, are a powerful force in creating what we call reality" (86). By placing key male characters far from

the action of the plot, Gaskell foregrounds the feminine values she believes central to the improvement of the lives and future of Britons. The men, scientists like Roger and professionals like Mr. Gibson, who attempt (with varying degrees of success) to actively suppress feeling in favor of cold rationalism, signal futures based around well-established patterns of control. As Morgan puts it, the world Gaskell imagines through her women characters "did not come." Instead, "the worlds of the sons, with their emphases on the values of individualism and competition and aggression, won" and "what actually lay ahead for these communities was the Boer wars, the Great war, and the continuous aggressions we live in now" (110). The ecological legacies of this historical moment and its masculinist, expansionist drives, for British communities and indeed all communities around the world, are still unfolding.

Roger does not share some of the shortcomings of the other masculine identities that populate the novel, but it is worth considering the fact that any number of them might have occupied the same imperialist position. If Mr. Gibson had been born a decade or two later, he might very well have embarked on the kind of career that Roger pursues. If the new science held new career prospects for men, its imbrication in the imperial project also meant that these men stood to become imperial actors. Mr. Gibson's interest in comparative osteology (254) could have easily evolved into an interest in zoology. His energies in medicine could have just as easily been channeled into natural science. Hollingford also might have become interested in procuring "specimens of the fauna of distant lands" if the opportunities had been present when he was at a different stage in his life. It is easy to see how Hollingford's well-meaning but ill-founded domestic advice could translate into exploitative policies if he found himself in the role of an imperial administrator. Along the same lines, Mr. Gibson's need for tight control in just his household feels like a contracted version of the kinds of policies England attempted to establish abroad. In fact, Gaskell already offers some idea of what an imperialist Mr. Gibson might look like. His sexist jokes easily transition to racist ones upon Roger's return from Africa. One example occurs when Molly learns from her father that Roger has returned and she asks if anything about him has changed, including his voice. Mr. Gibson responds: "I didn't catch any Hottentot twang, if that's what you mean. Nor did he say, 'Cæsar and Pompey berry much alike, 'specially Pompey,' which is the only specimen of negro language I can remember just at this moment" (564). Frawley discusses the possibility of internal colonialism in *The Life of Charlotte*

Brontë, but *Wives and Daughters* suggests that the abuses driving imperial excess were already active in men's private, domestic lives.

Molly and Roger: The Uses of the New Science

Since Roger's ushering of Molly into the scientific fold is so central to the novel's plot, it is tempting for any discussion of science in the text to start with their relationship. In reversing the order and considering these characters last, I have hoped to show how carefully Gaskell codifies the emergent power structures that would come to mark the scientific world during the rest of the century. Even before their relationship begins, Gaskell carefully establishes the scientific networks that were already active between men in the town, with Lord Hollingford acting as a node connecting Mr. Gibson to the "odd-looking, simple-hearted men" who are the "leaders of the scientific world." The introduction and prompt departure of Lady Agnes also says something of the prospects open to women with a knack for science. In a sense, then, the novel has already said much of what it has to say with the character arcs of Molly and Roger themselves—the established themes are simply explored with more detail in the friendship and eventual romantic relationship between Molly and Roger.

Part of what is interesting about the presence of Roger Hamley is the way that, unlike other male characters, he seems to have a direct referent in an actual scientific figure. As Litvack has thoroughly shown, Roger holds key similarities to a young Charles Darwin.[20] Roger's eventual exploration of East Africa acts as a rough correlate to Darwin's own trips around the globe on the HMS Beagle beginning in 1831. Gaskell was quite familiar with the career of Darwin because of her connections to the scientific world (not to mention the fact that Darwin was a distant cousin). William Gaskell's involvement in the Manchester Literary and Philosophical Society exposed the Gaskells to a range of scientists including chemists, physiologists, and physicists. The inclusion of intertextual asides to scientific treatises throughout *Wives and Daughters*—including Cuvier's *Le Règne Animal*, a famous attempt to divide the entire animal kingdom into four branches—also allude to Darwin's critical takes on traditional scientific outlooks early in his career. Cuvier's large survey was notable for the way that it attempted to group living animals with extinct ones by considering correlating parts and

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[20] Though Litvack offers the most thorough comparison of Roger and Darwin, he is not the only commentator to draw this connection. W.A. Craik among others also points out similarities.

similar physiological features. Though Cuvier was dismissive of evolution, his thoughts influenced Darwin's budding evolutionary ideas.

The inclusion of *Le Règne Animal* nods toward the taxonomic theories that Darwin would contest throughout the 1830s. Most notably, perhaps, is the quinary system of nature proposed by William MacLeay in 1819. MacLeay proffered an even more elaborate taxonomic system that grouped animals based not only on anatomical similarities ("affinity") but also, as Harriet Ritvo explains "what was known as 'analogy'—primarily likenesses reflecting shared habits, such as the convergent aquatic adaptations of whales and fish" (*The Platypus* 31). MacLeay's proposed system gained traction throughout the 1820s among certain members of the Zoological Club of the Linnaean Society and carried on into the 30s because it was adopted by William Swainson, the popular natural historian. Darwin pushed back against such taxonomic systems throughout his writings from the decade, presumably because of the ways in which the questionable approaches made the scientific public less amenable to his own emerging theories.[21] It is interesting how *Wives and Daughters* continues to reflect Gaskell's sensitivity to classificatory and taxonomic systematics, a subject she took up as early as her first novel, which, as I've discussed, also engages with the social implications of classificatory language.[22]

Despite the novel's interest in international scientific developments, it relegates many of these larger discourses to the background, focusing instead on Roger and Molly's intellectual development. Part of this development is the two-way exchange of ideas that results from their mutual reading of scientific works. Though these conversations aren't always rendered in great detail, the reader knows that Molly and Roger discuss scientific texts together. In addition to Cuvier, the narrative reveals that Roger has introduced Molly to Swiss writers like François Huber. Because of the conversations regarding bees, it is most likely that they have read Huber's 1792 *Nouvelles observations sur les abeilles* (*New Observations of Bees*). The book touches on a number of questions surrounding honeybees that were of interest to Darwin. It is interesting how international scientific texts are being explored in the relative seclusion of rustic Hollingford.

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[21] Ritvo notes how Darwin characterized quinarian methodology as 'vicious circles' and 'rigmaroles' in "his correspondence and notebooks" (*The Platypus* 33).

[22] King offers the compelling argument that the action of *Mary Barton* is driven by a sort of misclassification: "The industrialists' failure is a failure of perception and classification; their breach is in misclassifying their workers as brutes, hence setting in motion the cycle of violence that the novel then depicts" (629).

From one perspective, the circulation of such ideas in a rustic setting reflects the way that science was beginning to make headway among places and classes inaccessible to it in the past. Another perspective is that the knowledge and discourse operating in even out-of-the-way places far removed from central hubs of scientific knowledge could have something to lend to scientific trajectories.

The intellectual relationship between Molly and Roger reveals a number of things. One is that a "new man of science" like Roger Hamley (an analogue for Darwin himself) can find a worthy interlocutor in a woman, even the daughter of a relatively obscure country doctor. This is an instance where a man, unlike many of the other men of the novel, does not show as much resistance to the idea of an educated woman. Even characters like Lord Hollingford, who does not have the open misogyny of others in his homosocial network, have surprising moments of sexist bias. Consider, for example, the narrator's commentary following Hollingford's dance with Molly, when he finds her surprisingly well-versed in Cuvier: "It is very likely that if Molly had been a stupid listener, Lord Hollingford would not have discovered her beauty; or the converse might be asserted—if she had not been young and pretty, he would not have exerted himself to talk on scientific subjects in a manner which she could understand" (284). For the most part, Roger does not fail to listen to the women around him, in the way that Gibson and Squire Hamley tend to. In the case of Molly, the novel reveals the ways that the new science does not extend the same novel opportunities for women that is does for men.[23] This theme was already taken up with Lady Agnes and holds true for Molly as well.

Questions of career aside, Roger's relationship with Molly shows what science can offer to people who are unable (or uninterested) in pursuing science as a profession. Like Lady Agnes, Roger is willing to present scientific principles to laypeople in a way that coaxes their curiosity. When he first shows the "treasures" he has collected to Molly and his mother on the microscope, he brings out relevant books and "translates" what the narrator terms "slightly pompous and technical language into homely every-day speech" (114). This recalls Agnes' ways of making scientific knowledge of orchids interesting to Miss Browning in the gardens at the Towers. It is also quite different from Lord Hollingford, who typically would not have "exerted" himself to

[23] Robin B. Colby also explores the disparate opportunities afforded Molly and Roger. She argues that through "juxtaposing Roger with Molly, Gaskell makes it clear that, although she has the potential, Molly has no real opportunity to pursue her intellectual interests" (102).

pose scientific matters in ways that nonexperts could understand. The episode with the microscope is a formative one for Molly. Roger relishes her reactions to observing the intricacies of life under the microscope. He "cherished her first little morsel of curiosity, and nursed it into a very proper desire for further information" (114). Following this, Molly begins to become interested in other forms of life and branches of natural science. Miss Browning finds Molly's sudden interest in bees odd (141), but Miss Phoebe and Miss Browning herself seem to later find them interesting when Roger explains the ways in which they interact with wasps (157). The empiricist sensitivity to her own surroundings that Molly cultivates through her relationship with Roger arises at the same time that she is developing her own social awareness and attunement to the personalities around her as well as their motives. There is an implicit idea that Molly's scientific exercises in observation and the natural world also help her begin to become a keen social observer, important skillsets once her father remarries and she is surrounded by people who do not hold her best interests in mind.[24] For the women that science excluded professionally, an increased knowledge of scientific insights and the natural world more generally held a number of benefits within the domestic sphere as well, both in terms of understanding humankind's placement within the natural world as well as human social relationships and societal standings.

The New Science and the Anthropocene

Gaskell's *Wives and Daughters* is a particularly difficult novel to historicize. Set decades before the years of its actual composition, with allusions to historical events even deeper in England's past and other references that look forward to the developments of the 1860s, the novel operates with a historical oscillation that encouraged its readership to consider the implications of the past in the present. The text is even more difficult to historicize for Anthropocene readers, for whom Gaskell's uneasy depictions of scientific developments ring particularly relevant. Roger's scientific excursion into Africa prefigures the intricate ways that scientific development began to go hand-in-glove with imperialism as England's global project became progressively mobile throughout the decades. How can a present-day reader view Lady Harriet's take on the Crichton Museum as an example of egotism as anything but accurate as the modern world still watches the slow erasure of species that began with the scientific collection

[24] Pauline Nestor argues that through Clare Kirkpatrick/Mrs. Gibson, Gaskell "provides [her] most extended and penetrating study of a failed mother" (48).

and overhunting of the imperial moment? The kinds of collecting Roger was involved in grew to an excessive degree as museums attempted to claim "examples of every conceivable species and sub-species" (39). This did little to assuage species loss, and museums would pay large sums for endangered species. In 1839, for example, Robert Coryndon sold the bodies of what he believed to be the last two white rhinoceros to the Rothschild collection and to Cape Town.

Wives and Daughters is only one example of Victorian domestic fiction that began exploring the ways in which amateur science was preparing men for the kinds of careers opened up by the new science in the coming decades. One of the many similarities between *Wives and Daughters* and Eliot's *Middlemarch*, beyond just the way that each implicates the past in the present, lies in how each foregrounds questions of science. Lydgate is the most obvious example but, like *Wives and Daughters*, *Middlemarch* contains a number of characters from different walks of life with interests in natural science. One example is the Reverend Farebrother, who has a rather sizable entomology collection and a personal command of Linnaean classification. His interest in taxonomy (he notes that he was "bitten with an interest in structure" [163]) would also put him at home in the debates that surround the characters in *Wives and Daughters.* The perception that the Vicar was "not altogether in the right vocation" (163) and the description of his mad-scientist workspace, complete with pinned specimens, might easily be compared to Job. Is there a subtle sense of misgiving about these men of science in Victorian domestic fiction? For current readers, aware of the lasting impacts of imperial science and even amateur collecting, it is difficult not to see them as bellwether figures signaling key social and ecological changes that would carry into future centuries.

Along with its concern with the way that the new science would open up professional opportunities for men to the exclusion of women, a truth that is reflected in the continued gender disparity in the sciences today, *Wives and Daughters* also points to the importance of popularizing scientific discourse. The present moment calls for science to articulate the immediacy and import of climate change and species loss. This urgency has not been well-met by the science of today, which is increasingly specialized. There remain in the world of science quite a few Lord Hollingfords who cannot to be bothered to "talk on scientific subjects in a manner" that the general public can understand. As several of Gaskell's characters show, Roger and Lady Agnes in particular, their ideas of science are engaging to the layperson. Science can illuminate the average person's everyday life, and also enable us to re-evaluate the placement of

the human within the natural world. Now more than ever, science needs to work past its "technical language" and seek nonexpert advocates if we are to avert planetary crisis.

‘There Must Be Some Poison in a Lion’s Teeth’:

Imperial Hunting, Collecting, and Ecological Decline in Victorian Adventure Fiction

At the beginning of H. Rider Haggard’s 1885 novel *King Solomon’s Mines*, the narrator, Allan Quatermain, provides a rationale for recording his time in South Africa. Quatermain, a big game hunter and professional ivory trader, is one of the most frequent figures in Haggard’s novels and short stories. Quatermain explains that one of the reasons for setting down a record of his life is an injury he suffered from a lion mauling, an injury that leaves him infirmed each year on the anniversary of the original attack. He remarks, “I am laid up here at Durban with the pain and trouble in my left leg. […] There must be some poison in a lion’s teeth, otherwise how is it that when your wounds are healed they break out again, generally, mark you, at the same time of year that you got your mauling?” (42). Quatermain explains that the lion in question was the 66th he had killed, and that its successful mauling broke the “routine” he had established in killing them.

From the novel’s very outset, then, Haggard evokes both the excesses of hunting culture and its centrality within Britain’s imperial project and Victorian culture more broadly. Throughout the nineteenth century, British hunting parties had a staggering impact on animal populations and global biodiversity. As John Miller puts it, “Killing animals appeared as a necessary element of most forms of exploration in the nineteenth century,” a time when “the British [...] demonstrated [...] a cavalier attitude to the possibility of extinction” (7; 8). Exotic animal death stands as a prominent feature in Quatermain’s narration—interrupting the plot of the novel in much the same way that the recurrent pain from the lion’s bite interrupts his own life. Nonhumans die because of hunting, accidents, and disease, among other causes, in nearly every chapter of *King Solomon’s Mines*. From Quatermain’s description of the 66 lions he has killed to the novel’s closing pages, the dying animal remains at the heart of the novel’s tropology.

The figure of the undomesticated animal and the spectacle of its death were far from a novelty for Victorians. For Haggard’s readership, animal death was present in a broad range of everyday scientific and cultural practices. Britons captured or killed a range of species for sport and education throughout the century. Zoos displayed an increasingly diverse array of exotic species and museums vetted thousands of stuffed specimens for natural history exhibits. The middle and upper classes enjoyed household natural history displays featuring taxidermied

specimens that they purchased or personally collected to serve as educational centerpieces and class markers. Animal remains were even a key component of Victorian fashion. As Robin Doughty notes, after 1850, nearly "every hat worn on the street could almost be counted upon to boast a pair of wings" (16). While hunting parties abroad harmed and sometimes erased exotic species, amateur scientists had a marked impact on domestic ones. The decline of local nonhuman populations was observable.

While animal advocacy movements and antivivisectionists combatted the violence enacted upon animal populations throughout the century, the continued popularity of zoological exhibits and the use of animal bodies within Victorian material culture had a marked impact on animal biodiversity. This was even true for species present within Britain's own borders. For example, at the beginning of the twentieth century, as I discuss in my introduction, Edmund Gosse lamented the rapid decline in England's local species throughout the previous decades, in particular the marine life in England's rock pools that faced extirpation. The threat was largely attributable to the rise of amateur collecting, a hobby popularized in part by the successful writings of Gosse's father, Phillip Henry Gosse.

It is worth comparing the act of local "collecting" and the prevalence of animal bodies within Victorian material culture with the rhetoric of hunting found within Haggard's adventure fiction. On a practical level, both big-game hunting and domestic amateur collecting contributed to the nineteenth-century decline in biodiversity. There are also clear associative ties between amateur science and adventure fiction within the cultural imagination. Imperial adventure novels feature explicit and implicit asides to Victorian domestic practices involving the collection of nonhuman species, sometimes even going so far as to explicitly encourage readers to engage with the natural world and nonhuman life in prescribed ways. In other words, adventure fiction promoted the killing of animals at home as well as abroad, even suggesting at times that amateur collectors imagine themselves as big-game hunters writ small. Of course, there were many voices calling for the killing of animals either for profit, science, education, or sport, but the popularity of imperial adventure fiction positioned it as a key transmitter of the imagery of animal death within the Victorian cultural imagination.[25]

[25]*King Solomon's Mines* struck a chord with the British reading public, selling more than thirty-one thousand copies in England during its first year of publication and becoming one of "the hottest best-sellers of the time" (Etherington 9).

This chapter considers Victorian adventure fiction, particularly *King Solomon's Mines*—one of the most influential imperial adventure novels of the century—within the context of the Victorian culture from which it emerged. The work of Haggard and other adventure writers, such as R.M. Ballantyne, another key author whose fictional works on Africa came to influence the conventions of hunting memoirs, makes pointed references to the ways in which animals and animal remains became common features within domestic English life. Imperial fiction also provides insight into the ways that engagement with nonhumans played a role in gendered imperial identities, for both men and women. Haggard was writing for a public that collected natural history artifacts ranging from shells and leaves to insects, birds, mammals, and even microbes. They created enclosures to house animals, read how-to taxidermy manuals to learn how to preserve and display them, found garish ways to incorporate nonhuman bodies into their clothing, and imbued animal remains with a range of gendered meanings. These domesticating habits were tied to imperial mindsets on a number of representational levels, especially in the use of spatialized discourses to construct interspecies power dynamics notably similar (though not identical) to those found in imperialist fiction. By exploring the way in which domestic space (particularly spaces that housed wildlife and natural history displays) and material culture (the use of animal remains for display and fashion) reproduced habits of domination and mastery, I hope to draw connections between domestic practices and discussions surrounding African landscapes and hunting in the work of writers like Haggard. The rhetoric and practices surrounding the imperial hunt and the rhetoric and practices surrounding amateur collecting were not the same, however, and they help reveal the ways that Britain's orientation to nonhumans increasingly diverged along lines of gender. These differentiated approaches by which men and women were encouraged to understand and engage with nature played a role in shaping attitudes regarding the decline and erasure of species around the globe.

Victorian cultural practices go some way toward explaining the ubiquity of animal death within imperial fiction, and the genre reflects some of the anxieties surrounding the sustainability of such practices. Haggard and Ballantyne's work express direct fears of extinction. If their writing is partially interested in the ways that heavily-gendered imperial identities were reinforced by the killing of animals, then humankind's capacity to erase species in a geologically short span of time calls into question the sustainability of such identities—a fact that surely stood as a problem for writers like Haggard, who often attempted to naturalize human imperialist

drives by locating analogous behavior in other species. For modern readers who have inherited the ongoing extinctions that began with British imperial activity, references to species loss and decline feel remarkably current. Much like Quatermain himself, for whom the "poison" of a lion's teeth produces a recurrent memory of the hunt, imperial fiction frequently turns to questions of overhunting and the role of animal death within culture—as well the future these practices signal.

Persistent Tropes: Hunting Across the Centuries

It is perhaps not surprising that imperial literature celebrated hunting's capacity to sharpen abilities that would assist in its own militaristic expansion; it did not produce these associations, however. Perceived links between military ability and hunting are longstanding. MacKenzie traces a shift from practical hunting during the Greek Bronze Age to recreational hunting with the arrival of Greek aristocracy. What was once a necessity for sustaining the populace became a pastime of the ruling classes. Like the Victorians, ancient Greeks argued that hunting was central to the development of a man's military instincts, an argument that was echoed by nineteenth- and twentieth-century apologists for the chase and classist game laws. MacKenzie discusses how even the writing of Robert Baden-Powell, author of *Scouting for Boys* (1908), echoes many of the arguments made by Xenophon regarding the primitive connections between hunting and one's comportment in battle, an argument that relies on appeals to the deep history of humankind to justify the keeping of game and the denial of hunting rights to those people that rely on hunting to survive (11). The aristocratic hunt gained popularity with the Romans, who, MacKenzie argues, used the present emperor's prowess for hunting as a kind of "fever chart" for the "health of the imperial state" (12).

Victorians did not have to look as far back as Greco-Roman culture to find defenses for hunting. Precedents for the kinds of pro-hunting rhetoric found in Victorian adventure fiction can easily be located in the literature of the preceding century. Some eighteenth-century poetry posits hunting as a substitute for war rather than simply an instructional supplement. Alexander Pope's *Windsor Forest* (1713) looks forward to a future where Britain "shall retain no trace / Of war or blood, but in the sylvan chace" (371-372). William Somervile's *The Chace* (1735), a poem split into four books that detail the pursuit of distinct game, similarly imagines hunting as an avenue through which to funnel and sublimate violent drives innate in the male character. *The Chace* champions hunting as the "Image of War without its Guilt," but it also celebrates the fact that, if

Britain were threatened from without, hunters would be adequately trained to “hew…thro’ the embattled Foe” (I, 15; 28)—a sentiment that presents hunting not as a surrogate through which to eliminate war, but rather as the very vehicle that provided eighteenth-century British male citizens with *a priori* knowledge of battle before they even set foot on the battlefield. Somervile, like Pope, cannot describe a time entirely free of violence, but speculates that large-scale conflict might indeed be reduced so long as certain sacrifices, the animal body in particular, were made within a new ethical order.

That eighteenth-century writers supposed that hunting could be harnessed to fulfill abstract psychological and physiological needs oriented around violence is important to consider, but the work of eighteenth-century authors, similarly to that of nineteenth-century authors, is also interesting for the ways in which it presents hunting as a conveyor of diverse forms of knowing as well as an important catalyst for homosocial bonding. Somervile’s hunters, much like the hunters in the works of Victorians from Trollope to Haggard, suggest that hunting is a highly social engagement that can dissolve differences along class lines. The tendency of eighteenth-century poetry and nineteenth-century fiction to present the sport as a key component of male homosociality or even as an important site of cross-class contact is not a very accurate construal of the history of hunting in England. English hunting is as much a story of social inequality as it is one of human/animal relationality. As early as the seventeenth century, the Game Act of 1671 legally restricted hunting to a sport enjoyed only by land-holding gentry. These qualifications would remain in place until the passing of the Game Reform Act of 1831. The Game Act, and the subsequent acts it prompted, ensured that any unqualified persons discovered poaching could face harsh fines and even imprisonment, punishments enforced by the gentry themselves in their positions of justices of the peace.[26] An increased interest in animal rights and the ethical considerations they warrant partially arose out of the class tension that hunting engendered.

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[26] The regulations were never stable, and at least two dozen acts were passed by Parliament between 1671 and 1831 to account for loopholes and oversights in previous acts. Hesitancy to repeal prior legislation, even laws that contradicted newly enforced acts, rendered the legal discourse virtually unnavigable. As P. B. Munsche puts it: “[T]he game laws soon became a legal thicket in which it was very easy to get lost” (8). The game laws also provided a legal precedent for landholding gentry to enforce inhumane rights afforded to the property owner; this peaked in the mid-1700s with the use of man traps, similar to the sharp-toothed leg traps used for various game, the largest of which weighed 88 pounds, along with automated spring guns that operated on pivots and wires.

Though hunting enjoyed a reputation as a universalizing force within the cultural imaginary, in reality it was a normative and normalizing practice.

Public concern for animals grew throughout the eighteenth century, but hunting still enjoyed a healthy reputation within the works of some writers. Matt Cartmill presents the century as effecting a sea change within public understandings of animal welfare: “Britons at all levels of society were exhorted to be kind to animals, not only in literary writing but also through …engravings, sermons…nursery rhymes” and “children’s books” (104). MacKenzie likewise sets up a clear demarcation between eighteenth-century attitudes toward animals and the hunting culture that was to follow, labelling the eighteenth century as a “false dawn” before the Victorian “wholehearted adoption of the hunt and its values by all branches of the elite – with individual exceptions” (13). The act of offering persuasive arguments in the eighteenth-century cultural sphere was instrumental for reformers who hoped to influence a society where the upper classes enjoyed watching animals kill one another for entertainment and the lower classes enjoyed bull and bear baiting as well as the public torture of domestic animals. In a culture increasingly critical of violence to a broader community of creatures, and one fueled by the class conflict embodied in the game laws, works such as *The Chace* appear, at the very least, unattuned to their historical moment.

Likewise, nineteenth-century works that fully embrace the excesses of the imperial hunt feel staggeringly out of touch with or indifferent to the ecological consequences of imperial excesses. Regardless of the century, many works that deal with hunting seem to overlook the legally-enforced inequalities ratified by the game laws as well as their lasting impact among the lower classes. By attempting to defend hunting as a repository of British culture and knowledge (without acknowledging it as a pastime only legally extended to a select few), these works seem thoroughly propagandistic. The continuities between Victorian adventure fiction and the hunting literature of the previous century show that the outlooks of nineteenth-century hunting culture did not exist in a vacuum. Rather, Victorian hunting sequences stand as an amplification of insistent arguments concerning the importance of hunting on the levels of nation, culture, and perhaps even species. While writers like Somervile or Haggard might present the chase as an accepted, even venerable practice, the truth is that the sport was contested on a number of levels.

Victorian adventure fiction also dispenses with many eighteenth-century tropes. Though the hunting literature of the prior century celebrates the violence of the chase, it is careful to

discuss gamekeeping and the etiquette of domestic hunting—such as who is allowed to kill certain animals and when. Though hunting within Britain's borders was certainly cruel, there were still limitations that prevented extirpation. Literature detailing the imperial hunt does not emphasize any of the checks and balances that prevented species like foxes from becoming erased due to overhunting (because, until legal restraints came into place during the latter part of the century, limits on hunting in England's imperial outposts were not enforced). The lack of legal and cultural restraints in the context of the imperial hunt are one of its major points of differentiation from domestic hunting, a fact that is reflected in the content of hunting literature between the eighteenth and nineteenth centuries. It is also a fact reflected in the unprecedented number of animals that were killed during Britain's imperial moment.

"War Without Its Guilt": Hunting and Warfare

Since hunting sequences necessarily require an imagining of the African landscape, the question of hunting in Haggard is closely connected to discussions of land and territory. As hunters, both practical and professional, the characters are oriented toward the landscape in a way that foregrounds an immediate understanding of one's surroundings. In many cases, Quatermain's overview of a given environment tends to highlight features relevant to tactical engagement—descriptions that are evocative of direct military engagement—as opposed to abstracted, bird's-eye views that would be more akin to administration and control. These boots-on-the-ground descriptions bear more consideration than they have been given in prior scholarship.

Analyses of territory in *King Solomon's Mines* often center on a map in Quatermain's possession that the men in his party use to navigate portions of South Africa that are unknown to them as they attempt to locate the diamond mines of Kukuanaland. The map was created in 1590 by a Portuguese trader, José da Silvestre,[27] as he lay dying after locating the mines. For the map's canvas, he used a piece of linen torn from his clothing and etched the contours of the map using his own blood. Anne McClintock's influential reading of Da Silvestre's map emphasizes the fact that it construes the African countryside as a feminized body. Da Silvestre in fact etches

[27] One inconsistency in *King Solomon's Mines* is da Silvestre's name. Though I opt for "da Silvestre" throughout the chapter, he is referred to interchangeably as "da Silvestre" and "da Silvestra" in the novel.

the map as he dies at the top of a mountain formation that he refers to as Sheba's Breasts. McClintock points out that the land is "explicitly sexualized" and analyzes the novel in part as representing "the conquest of the sexual and labor power of colonized women" (3). Building on McClintock's argument, Paola D'Ercole notes that the logic presented by the map suggests that Quatermain, Good, and Sir Henry "perform a symbolic rape by removing the treasure" (237).

There are also moments in *King Solomon's Mines*, particularly when Quatermain begins a descent from the peak of Sheba's Breasts and achieves an elevated view of the uncharted landscape stretching in front of him, that stand as examples of what Mary Louise Pratt would classify as "monarch-of-all-I-survey" tropes—elevated, commanding views of a landscape that convey a sense of domination. While Haggard's hunting scenes operate with many of these same gendered and racialized underpinnings, the embodied pursuit of different species across African terrain provides additional orientations to imperial space that provide a more immediate and tactile presentation of terrain than is offered by the visual abstraction of a map or a sweeping bird's-eye view of a landscape. The most sustained description of a hunt arrives in Chapter 4 ("An Elephant Hunt").

Though previous passages consider hunting's pedagogical dimension, in the sense that it purveys certain skillsets associated with imperial masculine identities, it is here that its instructive nature is most evident. The chapter discusses the hunting feats of three Englishmen (including Quatermain and Sir Henry—an English squire), but is most centrally concerned with the skillsets of Captain Good, a retired naval officer "burning for slaughter" (74), who works on his poor aim while firing at a group of giraffes. Haggard's description of the particular injuries suffered by animals calls to mind an account of battlefield casualties rather than the "bag" of sportsmen. Good hits one of the giraffes, "shattering the spinal column" and sending it "rolling head over heels just like a rabbit" (72). The hunt is also a formative experience for Good not only because it improves his capabilities with a rifle but because it partially cures him of what the novel views as a feminized tendency to obsess over his clothes—he is nearly killed by a bull elephant because they inhibit his ability to run. The trajectory of Cpt. Good is almost exactly paralleled by Ralph in Ballantyne's *The Gorilla Hunters* (1861). Ralph, a naturalist, spends most of the novel attempting to collect scientific specimens; the logic of the novel, however, suggests that his learning has come at the expense of his skills with weaponry and survival. Ralph's

character arc hinges on his eventual development as a hunter and marksman who is attuned to the landscape rather than his professional contributions to the field of biology.

Tellingly, *King Solomon's Mines* and other Quatermain stories offer strong associative connections between the landscape the hunt is enacted upon and scenes of imperial conflict in Africa. The elephant hunt ends near a dried-out water track that Quatermain claims "very much resembled" the place where the Prince Imperial, the only son of Napoleon III, was killed in a skirmish in 1879 while participating in the Anglo-Zulu War (77). The night before the same hunt, Quatermain is reminded of his time working as a guide to Lord Chelmsford and Chelmsford's expeditionary military force. He discusses how his association with Chelmsford led to his direct involvement in the Battle of Isandlwana, one of the most disastrous defeats in British military history. It is implied that the practice of hunting prepares men for these types of military exchanges and gives them an intimate awareness of the terrain that they will have to traverse.

In keeping with one of Haggard's most common tropes, the novel not only casts the men in the hunt as military actors, but also depicts the nonhuman animals the men pursue as creatures similarly engaged in quasi-militaristic behavior. An example appears in "A Tale of Three Lions" (1887), a Quatermain short story set before the events of *King Solomon's Mines*:

> [T]here […] is the wild game, following its feeding-grounds in great armies, with the springbuck thrown out before for skirmishers; then rank upon rank of long-faced blesbuck, marching and wheeling like infantry; and last the shining troops of quagga, and the fierce-eyed shaggy vilderbeeste to take, as it were, the place of the cossack host that hangs upon an army's flanks. (70)

The idea of locating behavioral correlates to imperial and militaristic behavior in other species is not limited to just Haggard's writing. In *The Gorilla Hunters*, Ballantyne similarly uses cross-species comparisons to imagine both the men involved in the imperial hunt and the nonhuman animals they pursue as engaging in militaristic behavior. Ballantyne presents Africa as a kind of interspecies battlefront where the geologic configuration of the continent allows for the easy circulation of species. Ralph relates that "there is no cordillera, or mountain range extending across the whole continent to limit the habitat of certain classes of animal," while Peterkin, noting that lions and gorillas don't cohabit the same territories, wonders if "'the gorilla has […] driven [lions] out of this part of Africa'" (loc. 377; loc. 2331). Haggard employs a comparable

logic in *King Solomon's Mines* in the chapter detailing the elephant hunt. Giraffes are "troops" and bull elephants who stand at the borders of the herd are "evidently keeping sentry" (72; 77). Quatermain's description of a lion stalking an antelope through the tall grass the night before the hunt calls to mind an expeditionary military force (74).

The chapter also contains a striking scene of nonhuman predation when a lion dies by being gored with the horn of an antelope it has just killed. Quatermain notes that he has seen "the same thing happen before" (75). John MacKenzie calls this trope of inter-animal predation the "chain of destruction" (165). It casts the human hunters as just another species within a natural order organized around killing. I would add that it locates correlations for territorial and wasteful imperial behaviors in other species, such as the lion who attempts to extend its territorial range or the elephants who are "destructive feeders" and leave a "trail like a carriage road behind them, crushing down the thick bush as though it were tambouki grass" (77). The animals war with each other, and use natural features such as water, tall grass, and elevation to achieve strategic advantage.

From this angle, the imperial hunt and its excesses appear as a natural part of the world. The men are simply enacting natural impulses that can be located in other species—impulses that would normatively be quelled within English borders. This cross-species comparison is, of course, an uneasy one. There is in fact a charged moment in Ballantyne's writing when a hunter openly disapproves of comparing human hunting practices to the practices of nonhumans.[28] Ballantyne is fond of comparing his characters to animals, however, in ways that trouble the boundaries between human and nonhuman. The men routinely compare Jack to a gorilla and Peterkin to a monkey; Ralph is not subject to these comparisons, aside from one moment when Peterkin remarks that Ralph is "a naturalist, which is the strangest beast of all" (loc. 397).

Interspecies comparisons in imperial literature also, of course, produce meanings that extend beyond questions of the nonhuman. Although some comparisons work to limit the distance between human and animal in ways that are in keeping with popularized Darwinian insights of the era, many contain racialized undercurrents that reverberate with discussions of degeneration that marked the final years of the century. A clear example of this can be seen in

[28] Objecting to Jack's comment that an anteater moving its tail to entice insects is similar to a human waving a rag on a ramrod to entice antelopes, Peterkin counters, "Wagging a ramrod is not wagging a tail. Besides, I spoke of beasts doing it; men are not beasts" (loc. 1443).

Hendrika, the “baboon-woman” of the Quatermain novella “Allan’s Wife” (1889). Raised by baboons, Hendrika is, in Quatermain’s words,

> of white blood, very short, with bowed legs and enormous shoulders. In face she was not bad-looking, but the brow receded, the chin and ears were prominent – in short, she reminded me of nothing so much as a very handsome monkey. She might have been the missing link. (188)

The fact that she is raised by baboons does not explain her particular features. Though the reader knows that Hendrika was raised by animals, her origins are left unclear, with a character only speculating that she “must have been stolen by the baboons when she was quite tiny” (197). Her ambiguous background alongside a physical overview that couples “white blood” with what feels like racist caricature participates in the racist discourses surrounding miscegenation and degeneration. Alongside the racist elements of Hendrika’s characterization, her intense possessiveness of Stella, who eventually marries Quatermain, and her severe jealousy of their courtship hints at queer desire. Hendrika is an example of how imperial adventure utilized interspecies comparisons to imprint characters with the racist and homophobic fears that swelled in the final decades of the century.

Even when cross-species comparisons are limited to the human and the nonhuman, the militaristic lens of imperial adventure fiction tends to be utilized in an effort to justify or explain away the staggering slaughter of animals. In reality, the “bags” of imperial hunters, both real-life and fictional ones, were completely disproportionate to the deaths caused by animal predation. The elephant hunt in *King Solomon’s Mines* reaches a violent crescendo when the Britons corner an elephant herd in a dried-out water track (the setting that calls to mind where the Prince Imperial was killed) and the hunters fire on them “as quick as we could load”; Quatermain notes the party could have “bagged the whole herd” if the elephants had not found a way to retreat and the hunters had not found themselves “too tired to follow” (77-8). This scene is echoed in “Allan’s Wife” when Quatermain’s expedition chases a herd of elephants into a swamp. The elephants are unable to remove themselves from the mud, allowing the men to shoot them one by one (155). A similar sequence occurs in *The Gorilla Hunters* when Jack tallies up the gorillas they have killed and estimates that they have “‘bagged thirty-three altogether’” and Peterkin offers a quick adjustment: “‘Thirty-six, if you count the babies in arms’” (loc. 2517). Such episodes read more like military massacres than hunting episodes, particularly since each

mentions (and in the case of "Allan's Wife," attempts to justify) the killing of females and young offspring. The recurring scenario involves using an element of the terrain to blockade a family of animals before killing the entire group—all while including biological asides to suggest that animals themselves exhibit the same behaviors.

While eighteenth-century authors like Pope and Somervile imagined hunting as a surrogate to war necessary to stem violent tendencies in the human makeup, Victorian imperial literature tends to imagine it as a supplement rather than a replacement.[29] Newcomers to Haggard who are unfamiliar with his expansive mythos might be confused by the character of Quatermain himself. For a figure primarily meant to be a big-game hunter and ivory trader, he spends much of his time engaged in international and intertribal battles and skirmishes. As previously mentioned, *King Solomon's Mines* hints at his ongoing preoccupation with the Battle of Isandlwana, a personal hang-up explored further in "Allan's Wife." Quatermain and his English companions also play a decisive role in a Kukuana civil war in the latter half of *King Solomon's Mines*. In "Allan's Wife," Quatermain finds himself in the middle of a skirmish between a Zulu regiment looking for payback for the battle of Blood River and a group of traveling Boers. He is able to survive and prepare for these engagements primarily because of his skill with firearms and the knowledge of the countryside that he has earned from his time as an ivory hunter.

But even when he is not directly involved in a conflict, Quatermain hunts as though he is involved in a military encounter. Villains that take the form of formidable soldiers in opposing Kukuana or Zulu armies even find correlates in imposing animal figures that Quatermain must seek out for retribution. There is the buffalo with his "devilish cruelty" (49) that kills

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[29] Even among the authors mentioned, this claim was uneasily made due to the increasingly apparent limits of animal populations. For example, during the pursuit of a rabbit in *The Chace*, Somervile tempers his mock-heroic tone to offer admiration for the rabbit's movements and to describe its visible fear. In other words, we are not sympathetic to the pursuers, particularly the "blood thirsty" hounds, who act as an extension of the hunters themselves. The eventual moment of violence is also correspondingly inordinate to the rabbit's defenselessness. One of the hunters produces "a deep incision" in the rabbit's body and "with Hands impure" throws "her reeking Entrails and yet quiv'ring Heart" to the hounds, as "the bloody Perquisite" for their "toils" (II, 281-5). The account contains both the viscera and brutality of a battlefield account, but in constructing the rabbit as an undeserving victim, and in drawing attention to the hunter's hands, soiled or "impure" through the animal's blood, Somervile tests the degree to which of hunting can satisfy the supposed psychological imperatives underlying war as well as the justifiability of this disproportionate violence on the animal body.

Quatermain's companion Hans in "Hunter Quatermain's Story" (1885). An attack from a particular bull elephant in "Allan's Wife" prompts Quatermain to chase the rest of the herd into a swamp while in pursuit. Quatermain hunts and kills a specific group of lions in "Long Odds" (1886) to seek revenge when they kill one of his oxen, Kaptein. When he locates the lions, after setting fire to a field that they are hiding in, he notes that the lioness looks "just as wicked as it is possible to conceive" (64). This pursuit results in the mauling Quatermain mentions at the start of *King Solomon's Mines*. Though Quatermain often remarks on his own general passivity and sensitivity to animals, he often comes across as a bully enacting military fantasies on the wildlife he stalks.

Exotic Habitats, Familiar Places

Readers of adventure fiction in England were met with the idea that the hunter's engagement with foreign terrain could be understood as the site where imperialist skillsets were developed and honed, but such readers were already occupying spaces organized around a similar logic within the metropole itself. Even outside of domestic spaces (which I will return to later), public areas such as zoos stood as important nineteenth-century sites of signification. Zoos showcased animals from Britain's colonized regions and were thus emblematic of British power around the globe. Zoos were arranged in such a way as to evoke a radical sense of difference between England and its colonized territories abroad—which were metonymically connected to the exotic animal life on display. Harriet Ritvo observes that the physical layout of zoos stressed the sense of separation between nature and culture to such an exaggerated extent that zoos could only be imagined as natural when set in "contrast to the surrounding urban landscapes." In addition, zoos that included "horticultural displays…composed of plants from all over the world," as many did, only further "emphasized the artificiality of the setting" (*The Animal* 217). Zoo design, from the architecture of its buildings to the very ways in which walkways guided one through the park, scripted the way in which Victorians interacted with animal life. Caged animals were displayed for maximum visibility, unlike modern habitats, which are commonly (though not always) designed so that animals can achieve a degree of solitude. The proximity of exposed, caged animals to zoo patrons was meant to promote a sense of power in the spectators. It is worth noting that many zoos still feature holdovers of nineteenth-century design. In an interview from 2007, for example, Jane Desmond discusses how the Budapest Zoo's century-old elephant house (which holds many aesthetic and infrastructural similarities to the London Zoo of

the Victorian era) recalls a “historical mode of interaction between the visitor and the elephant, putting the single elephant on display like a jewel to be contemplated up close under the shaft of sunlight from the window above” (qtd. in Federmayer). As is suggested by Desmond’s description, the way in which zoos exhibited animals and designed physical spaces situated creatures “and by extension the people who lived in the countries where [the animals] came from” in ways that prompted a sense of radical otherness.[30] If the hunt in outposts like Africa was a place where British men could enact a kind of imperial masculinity, then the zoo was a place where Britons could experience a sense of the empire’s mastery over nature around the globe.

Many facets of the spatialized logic of empire inherent in public zoos can also be applied to the household zoological habitats and gardens of the British middle and upper classes in the Victorian era, but there are some differences worth noting. Similar to zoos, private spaces reflect upper-class concerns with domestic England in addition to a mindfulness of the nation’s activities abroad. On another level, despite the ways in which household enclosures like marine aquariums and aviaries might prompt certain distancing behaviors between humans and nonhumans, amateur guidebooks that offer ideas for designing these enclosures can sometimes encourage the reader to feel an interspecies familiarity that the fleeting spectacle of zoo exhibits would not as readily offer. While private zoological habitats and public zoos were similarly exploitative, and thus tempt polemic analyses, some writings on private enclosures describe a bond that borders on interspecies kinship.

Shirley Hibberd’s popular *Rustic Adornments for Homes of Taste, and Recreations for Town Folk* (1856) is an ideal text to consider because it remained one of the best-selling and most influential gardening books of the nineteenth century. Hibberd acted as a precursor to other influential horticulturalists and botanists like Gertrude Jekyll. *Rustic Adornments* contains detailed instructions for designing and maintaining aviaries, aquariums, and apiaries. In keeping

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[30] Even though much of this chapter is centered around Victorian representations of Africa, I employ ideas from Edward Said’s work on Orientalism. I agree with Lindy Stiebel’s argument that the “broad precepts” of Orientalism can be applied to Europe’s “imaginative construction of Africa” and that this construction is “weighted down by a wealth of manifest ‘Africanism’ in the form of scientific information, classification systems, maps, and so on” in ways that overlap with Europe’s construction of “the Orient” (6). I would also echo Stiebel’s point that Said’s afterword to the 1995 edition of *Orientalism* offers his approval of the fact that his work has “made a difference to the invigorated study of Africanist and Indological discourses” (qtd. in Stiebel 6).

with the aesthetic approach of public zoos, Hibberd encourages readers to construct aviaries for nonnative creatures, especially birds, in ways that accentuate their exoticism. *Rustic Adornments* promotes “Moorish style” parrot-houses, for example, and recommends that they be accentuated with vinery. With the addition of parrots and parakeets, the text concludes, “such a building …[would have] a truly oriental appearance” (240).

Throughout *Rustic Adornments*, household zoological spaces hold a scriptive force akin to what Desmond observes of public zoos in her discussion of the Budapest elephant house. The location of the habitats within the domestic sphere could also promote the sense of otherness. Hibberd suggests aviaries be constructed on lawns, in conservatories, or outlying rooms, ostensibly bringing a form of otherness into a domestic setting. He also recommends owners keep food dispensaries close to the entryway to ensure that they can quickly feed birds upon entry. Once one has adequately established the physical space of the aviary and sufficiently tamed the birds within it, Hibberd claims the captured creatures will immediately “perch, and ask for dainties, and submit to be fondled” (206). Other passages seem racially tinged. A kind of racialized logic seems particularly codified into Hibberd’s descriptions of different bird species that become increasingly docile over time. The section on parrots stands as one example. In describing the feeding practices of parrots, Hibberd states, “It is amusing to see the sly criminal mount to the top of his cage with the purloined treasure, to handle it with his scaly fingers, while he eats and mumbles in a low chuckling tone” (238). His anthropomorphization of the canary is perhaps even more direct: “[The canary is] a domesticated citizen…[who has] forgotten all the circumstances of his aboriginal wilderness…[and] is proud of the fetters that bind him” (217).

Hibberd’s descriptions call to mind passages from Edward Said’s work on Orientalism, which discuss the “imaginative geography” developed by European artists and authors that constituted “a universe of representative discourse peculiar to the discussion and understanding…of the Orient” (71). This imaginative geography attempted to “characterize the Orient as alien and to incorporate it schematically on a theatrical stage whose audience, manager, and actors are *for* Europe” (71). In their aesthetics and in the exotic creatures they housed, private aviaries might be thought of as an extension of the imagined spaces discussed by Said—a site where a form of the Orient could be enjoyed by Victorians going about their everyday lives. Moreover, they are sites to be tamed. The aviary starts as a chaotic space that can be ordered through the careful attention and oversight of the householder.

It is also worth noting the way in which Hibberd discusses the keeping of native animals. The Victorian interest in amateur nature collecting involved procuring creatures from various habitats and geographic locations, but seaside collecting remained in vogue throughout the century because it was a convenient way for Victorians to collect specimens themselves. *Rustic Adornments* encourages its readers to personally capture specimens for their aquariums from British waterways, lakes, and shores. Interestingly, the sections of Hibberd's writing that discuss keeping a household aquarium do not reverse the quasi-imperial logics present in passages on aviaries, which use exotic species and decor to create a sense of otherness in both the physical space and the creatures it contains.

While the aviary stood as a site of careful order, where interactions with humans acted as a domesticating force on animal life, Hibberd constructs the aquarium as a site where one can take pleasure from observing inter-animal predation and competition. As might be expected, anthropomorphism figures prominently in such passages. Hibberd acknowledges this himself when he explains—following his comparison of gobies to a "gang of mad school-boys"—that he "cannot help fancying sometimes that [gobies] possess human sympathies" (48). Indeed, he constructs the aquarium with language laced with interclass fears. In the aquarium: "There is always something new to be seen…[in] the freaks, pranks and even crimes of its inhabitants—theft, murder, and cannibalism" (48). He exhorts his readers to be "incipient philosophers, enquiring into the cause of things," and to draw larger inferences about nature by observing an aquarium over time. As a consequence of the passage's anthropomorphization, Hibberd is instructing his readers to be not only careful natural philosophers but also social scientists. He implies that the aquarium allows the pleasure of class or imperial voyeurism "without any shock to […] moral sensibilities" (48). If the aviary becomes a site of order due to the interventions of the homeowner, then the limited opportunities for direct human interaction offered by the aquarium positions it instead as a window into the disordered workings of nature (one that, judging from Hibberd's word choices, offer some kind of insight into the workings of race and class as well).

Naturalist writings were popular with both men and women and they self-consciously encouraged both to learn from and engage with nature. *Rustic Adornments* addresses women directly throughout its chapters, often in its instructions for ways to nurture and raise wildlife in domestic settings. Another prominent naturalist, Reverend John George Wood, similarly

employed direct appeals to women. Wood's *Common Objects of the Country* (1858) sold over one hundred thousand copies within its first week of release (Poliquin 67), while his prior work, *Common Objects of the Seashore; Including Hints for an Aquarium* (1857), enjoyed a similar degree of cultural saturation. The cover of the 1860 edition of *Common Objects of the Seashore* (fig. 1) depicts two women, partially silhouetted by a brilliant sunset, collecting natural artifacts along a shoreline. The lack of male figures is interesting because it suggests that the naturalist hobby can provide an avenue for homosocial bonding among women. Indeed, as the work of Barbara Gates has shown, the hobbies of natural science were at least as popular among women as they were with men.

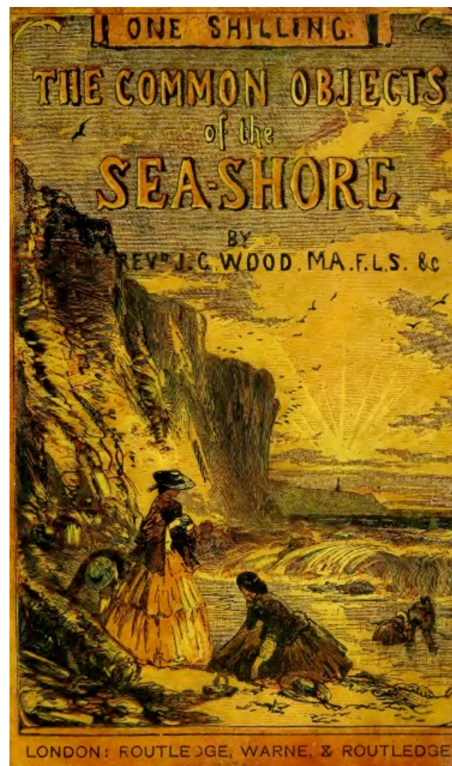

Fig. 1. Cover of *The Common Objects of the Seashore*, 1860

Many naturalist manuals also utilize feminine third-person pronouns. This can be interesting in passages that evoke a sense of imperialistic ordering. *Rustic Adornments* stands as one example—where shes and hers establish rule within exotically-ornamented enclosures.

There are a number of evocative overlaps between natural history displays within domestic space and the way that imperial adventure fiction presents the killing of animals abroad, but there are also some key differences. The logic of imperial hunting is clearly organized around patterns of domination and control. While amateur collecting and the keeping

of nonhumans, like birds, also intersect with notions of mastery, science hobbyists acquired specimens for reasons related to self-education. As many amateur scientists in England were women, these differences take on gendered meanings. So while writers like Haggard and Ballantyne stress the ways in which amateur scientists are like big game hunters, in that both take "trophies," the acquisition of animals is for different ends, and thus their script only tells part of the story. It overlooks the fact that many amateur scientists were women engaged in the practice for their own personal development. This arises alongside the recoding of amateur science as a masculine pursuit, an idea I explored in the introduction to this project. Adventure fiction can be seen as participating in a larger re-inflection of feminine scientific pursuits—such as botany and collecting—as masculine. This trend is also reflected in the way that men increasingly displaced women as the popularizers of science in books written for non-specialist audiences. Another key shift takes place throughout the century as the call for natural history artifacts as well as the popularity of hunting trophies begins to make a marked impact on animal populations. The cultural meanings surrounding animal specimens shift as the collection of animals becomes closely connected to commercial practices, an idea I explore more fully below.

Trophies or Exhibits? Commodities and Specimens

Quatermain short stories typically begin with observers in an English manor house looking at a hunting trophy. After some prompting from the onlookers, Quatermain narrativizes the situation in which the trophy was killed. "Hunter Quatermain's Story" involves a dinner party in which the hunter explains the backstory to a pair of buffalo horns mounted on Sir Henry's wall. In "Long Odds," a drunk Quatermain begins a hunting yarn after taking notice of a lion skull fixed above his own mantlepiece. The narrator of the latter story remarks that "[t]he whole room was hung with trophies of his numerous hunting expeditions, and he had some story about every one of them" (54). The story-within-a-story device foregrounds the importance of the hunting trophy as a repository of meaning. It speaks to the prowess of the hunter that bagged it and, by extension, the mastery of the hunter over the natural world. The stories these objects prompt also extend beyond the manhood of the individual hunter, however, to detail the homosocial bonding of the other men involved in the hunt.

Though they accrued different meanings, the collection of hunting trophies is connected to the collection of specimens for scientific and educational display. Scientific collection played an important role in the decline of certain species, and it allowed for hunters to continue killing

certain animals even after measures were put in place to protect them. Nigel Rothfels notes that even after elephant-hunting became increasingly regulated later in the century, hunters shooting specimens for museums were still granted licenses as the animal's numbers continued to dwindle (58). MacKenzie likewise places scientific collection alongside other destructive practices, such as hunting for sport, that led to sharp declines in populations of species ranging from insects to mammals. He points to an incident where Robert Coryndon killed what he believed to be the final specimens of white rhinos to sell them at a high price to the Rothschild collection at Tring and at Cape Town (39). Elizabeth Kolbert traces a similar example in the auk, a species (albeit not an African one) that was hunted to extinction not only because of the feather trade but due to the demand from exhibitions (62-7). As species declined, museums and collections scrambled to claim specimens. The problem was made even worse by amateur collectors and the popularity of natural history displays in domestic spaces.

The collection of living natural artifacts was a popular nineteenth-century pastime, but the production of taxidermied specimens was even more common. Some specimens were preserved in such a way to maintain a likeness to their natural state, but other animals were used to create utile household objects—such as bones that created furniture or the ivory employed in the creation and ornamentation of cabinets, billiards, and pianos. As stuffed creatures became widely available in marketplaces throughout the middle and late decades of the century, they came be understood as commodities which, as Miller argues, "reflect power dynamics that render the mute body eloquent with the imperial status quo" (50). Even in public spaces, stuffed exotic animals became a driving force within the emergence of the commodity spectacle, as the popularity of Victorian exhibitions attests.[31] Initially, however, the collection and stuffing of native creatures was largely seen as pedagogical, not commercial.

The prevalence of taxidermic preservation, principally of bird specimens, during the early part of the century was partially fueled by an enthusiasm for natural theology and the period's

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[31] The 1886 Colonial and Indian Exhibition at the South Kensington Museum received around five and a half million visitors. One of the central attractions of the exhibition was the exhibition was Rowland Ward's diorama, "The Jungle," which featured African charismatic megafauna and turned, as Merrick Burrow argues, "the masculinist iconography of the big-game hunting trophy into a totalizing simulacrum of empire" (73). Even prior to the era of New Imperialism, however, animal displays were popular draws for exhibits. Thomas Richards marks the Roualeyn Gordon-Cumming's display of hunting trophies at the 1851 as a key moment within the history of the commodity spectacle (5).

appetite for natural beauty. This made taxidermied creatures regular sights in domestic settings. With the arrival of popular how-to manuals, private taxidermy collections grew, and Victorians often understood the process of expanding a private collection to be a valuable family pastime. In addition, public ornithological displays were seen as family attractions. When ornithologist John Gould exhibited his collection of 180 stuffed hummingbirds at Regent's Park on May 17, 1851, *The Times* declared it "beautiful" and of interest to both experts ("lovers of ornithological rarities") and general audiences ("lovers of pretty sights")—descriptions that cast the event as something of aesthetic value. Rachel Poliquin goes so far as to describe the appreciation of natural beauty, particularly appreciation cultivated through collecting and creating stuffed animals, as "a cultural activity of such ubiquity and importance that it can be understood as an unofficial social program" (70). Children, especially boys, were encouraged to obtain specimens because "[c]ollecting inculcated socially useful and practical virtues such as originality, order, neatness, patience, passion, curiosity, physical vigor, taste, a desire to pursue knowledge, and a degree of national pride…[i]n a sense, taxidermy made good citizens" (71). As Britain's empire grew, the popularity of exotic specimens grew with it, and it is with the importation of nonnative species that taxidermy became increasingly commodified. This enthusiasm was partially due to the novelty of foreign creatures, but taxidermy also accrued an element of nationalism and empire—the presence of stuffed creatures from across the world in British marketplaces spoke to England's power and dominance over other nations as well as nature itself.

Similarly, adventure fiction regularly thematizes the intersections between health and engagement with one's environment. *The Gorilla Hunters* features a number of pedantic asides that extol the benefits of nature and posit the outdoors as an avenue to a kind of masculine self-knowledge. Early in the novel, the narrator, Ralph Rover, when lost in his private thoughts, reflects on the importance of "boys" being exposed to "dangers of every possible description, such as tumbling into ponds and off trees, etcetera, in order to strengthen their nervous system"—activities that serve to "prepare them to meet and grapple with the risks and dangers incident to man's career with cool, cautious self-possession […] founded on experimental knowledge of the character and powers of their own spirits and muscles" (loc. 510-5). Ralph notes that this idea applies "to some extent to girls," but the passage maintains a chiefly masculinist tone. *King Solomon's Mines* likewise frames engagement with nature, particularly in the form of the imperial hunt, as a key pedagogical foundation. While *The Gorilla Hunters*

remains comparatively vague in its suggestions that British domestic life feminizes British men, Haggard explicitly frames this theme in the opening pages. The book is dedicated to “the big and little boys who read it” and Quatermain assures the reader that “there is not a petticoat in the whole story” (42).

Through the middle of the century, taxidermy enjoyed its highest status. Most houses included at least a handful of stuffed birds as well as natural history artifacts (seaweed specimens were particularly popular). The birds were not simply decorative, however, but rested at the very center of a number of key social behaviors. Both boys and girls were encouraged to examine specimens, and it was not uncommon for families to study natural history together and to use stuffed animals as a frame of reference. Much like household aviaries and aquariums, stuffed specimens were meant to manifest an element of the wild within a domestic space. Paintings from the time that depict families engaged in studying stuffed birds, like John Everett Millais' *The Ornithologist* (1865), which I discuss below, depict the engaged reactions on the faces of observers that one might expect from museumgoers viewing an exhibit. Prominent British taxidermists like Montagu Browne encouraged amateurs to compose their creatures in animated acts, and it was common for both professional and amateur taxidermists to feature specimens in the middle of distinct motions such as flying, swimming, and running. The emphasis on animal locomotion drew attention to anatomical differences between humans and animals that reinforced the presumptions of natural theology. To be sure, some observers emphasize a perceived resemblance between the human and nonhuman that produced apprehension, a feeling that increased with the rise of Darwinism and the decline of natural theology later in the century.

The work of several taxidermists, exemplified by the anthropomorphic tableaus of Walter Potter, placed domestic animals in evocative poses to recreate and subtly mock human customs and attire. These tableaus directly grappled with questions about the separations of nature and culture, of human and animal. In his analysis of Potter's work, Conor Creaney points out how contemporaries sometimes viewed his exhibits as “morbid…an unacceptable over-writing of [the animals'] primary identities” (7). Such reactions, Creaney implies, may have been part of the point.

While there are exceptions, like Potter, taxidermists from earlier in the century, like Browne, championed the realistic mountings of specimens, and their writings were the most widely circulated. Browne's status as one of England's most prolific writers of taxidermy guides

is important to note, because his work is normative. *Taxidermy: or, the Art of Collecting, Preparing, and Mounting Objects of Naturalism for the Use of Museums and Travellers* (1820), tends to employ third-person masculine pronouns when discussing the shooting and collecting of specimens, but interestingly shifts to first-person plural when it comes to the processes of preparing specimens. Take, for example, his explanation of how to dry and preserve caterpillars: "We must provide ourselves with a chafing dish or earthen furnace, and when the coal or cinder is well lighted, we cover it with an iron plate…[w]e then present the caterpillar to the top of the furnace, but not to its greatest heat" (103-104). The writing initially invites the (presumably male) reader to imagine himself as an individualized hunter but then as part of a homosocial order when it comes to the actual motions of the taxidermist. Because this particular method requires an earthen furnace, Browne's description also calls to mind artisans like blacksmiths or masons.

The socializing functions of taxidermy are similarly observable through the way in which guides and the press discussed Elizabeth and John Gould. Though the Goulds' work contributed to Darwin's theories, their celebrity was closely tied to the popularity of natural theology. An article from *The Times* (June 21, 1851), titled "The Collector of Humming Birds"—which is ostensibly about John's life—presents him as a disengaged youth "sometimes […] lying under the willow branches in a little boat, with a book on his knee and a gun by his side" until he one day shoots and stuffs a kingfisher and finds himself "amazed that there can be life in death." The article explains that Gould dedicated himself to study nature and became an amateur taxidermist, practices that continued after his marriage (the article is careful to establish the fact that Elizabeth holds "a remarkable talent for delineating objects of natural history"). John and Elizabeth publish ("a beautiful example of their joint ability; he, as the scientific author; she, as the accomplished artist"), and John becomes a foremost naturalist of his age.[32]

The article is questionable for a number of reasons, particularly for how it diminishes Elizabeth's contributions, but its portrayal of taxidermy and naturalism's socializing power over both Elizabeth and John are paradigmatic. To borrow Poliquin's term, contemporaries viewed taxidermy and related activities, like painting, as "an unofficial social program" with profound pedagogical force. Gendered logics undergird these practices, and they had different ends. In the

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[32] See Gates for more on the way that Elizabeth Gould's contributions have gone "unacknowledged" (74).

case of women, they were seen as supplementing other normative domestic skillsets. Even women who offered notable scientific contributions, such as Elizabeth Gould, who was an important scientific illustrator, tended to not be recognized for their contributions. For men, these gendered practices could shape them into scientists. As the century progressed, it seems they could also, if writers like Haggard are correct, mold men into soldiers, imperialists, and artisans.

Even in death, John Gould's memory would bear witness to the socializing power of taxidermy. John Everett Millais' *The Ornithologist*, which was inspired by a visit Millais paid to Gould before his death, depicts a family gathered around an infirm, elderly man (Figure 2). The man holds a stuffed bird in his hand as a group of his family members, most of them female, look on with intense interest. Other specimens can be seen scattered around his person, under glass on a bedside table, and overflowing from a nearby box onto the floor. The painting implies that the family's interest in natural life produces a sort of generational continuity. The fact that the family patriarch is situated as the main conveyor of knowledge to his predominately female family members celebrates and naturalizes the gendered distribution of education characteristic of the period, perhaps infusing the term "ruling" in the painting's original title, *The Ruling Passion*, with a kind of irony. This configuration is also evocative of the socializing and normativizing aspects of taxidermy. However, the uninterested older girl in the left of the painting, as well as the physical distance between the ornithologist and the boy and girl in the right of the pane, suggest a possible breakdown in tradition. This reading aligns with Paul Barlow's analysis of the work, which recognizes a tension between natural theology and emerging Darwinian theories. Barlow similarly sees a strained gendered order, particularly between the mother who suggests "the so-called 'angel in the house' model of Victorian femininity" and the inattentive girl on the left (163-164). Interestingly, though the painting was inspired by a visit to Gould, Millais did not want his viewers to think of Gould when viewing the work. In fact, the ornithologist himself is modeled not on Gould but on T. O. Barlow, an engraver and Millais' friend (Barlow 215). Millais' painting was representative of many of the evolutions and tensions at work in parlors around England. Taxidermy may have scripted certain social behaviors, but it began to accrue new meanings as the century progressed and natural theology declined.

Fig. 2 *The Ornithologist*, 1865

Feather Fashion and Fears of Extinction

While sport hunting and scientific collection had a marked impact on nonhuman populations around the globe, the popularity of feathers in women's fashion arguably received more criticism than any of the other factors driving extinction. As early as the 1850's, the popularity of taxidermy had spread to fashion, and designers began incorporating birds and other creatures into their work. Women's hats, dresses, skirts, and even shoes contained feather ornaments from various bird species and sometimes entire specimens or distinct anatomical features, like wings. They were most popular among upper-class women, but they also became common among the middle class in the 1860s. Species nonnative to England were among the most coveted.

There was a nationalistic component to such apparel, for the same reasons that the collection of exotic specimens was patriotic in general, but it came to hold unique meanings for women—some styles indicated motherhood, for example. More broadly, plumage grew entwined with notions of feminine beauty. Feathers were strategically implemented to draw attention to specific physical features of the wearer, and their placement was often altered to keep up with shifting conceptualizations of beauty. Doughty explains, for example, that when the "idealized female silhouette" changed in the latter part of the century to pull "attention away from the

fullness of the lower body (exemplified by the crinoline and bustle) to the upper body, neck and head," feathers "upon enlarged hats and bonnets" were instrumental in lending "height to upper features and provid[ing] [a sense of] dignity and elegance" (17). She also notes that feathers were "necessary to soften and fill out body and dress contours and to highlight the face." These fashion trends were mirrored in the literature of the period as well. When Allan Quatermain reunites with his childhood friend, Stella, for the first time as an adult, one of the first things he notices is the ostrich plumes affixed to her hat ("Allan's Wife," 191)

The enthusiasm for feathers and stuffed birds partially led to issues of depopulation and extinction in avian populations as milliners used millions of specimens to keep up with demand.[33] A corresponding uproar arose at the end of the century. Several organizations were formed to fight for anti-plumage legislation. The Association for the Protection of British Birds formed as early as 1869, and the influential Audubon Society was founded in 1883, to list only two examples. Commentators from these organizations often overlooked other factors contributing to the decline in bird populations, such as industrialization and deforestation, to focus on female consumer habits. The Audubon Society was especially guilty of this. The first volume of its periodical, *The Audubon Magazine*, featured articles with titles such as "Woman's Heartlessness." Even less conspicuously-charged entries, such as "The Trade in Bird Skins," blamed women for the decline of bird populations in both England and abroad: "[M]ost of the birds are killed in a great measure for export to England, and thus the destruction of bird life is kept up by English women" (160). With the rise in anti-plumage sentiment, taxidermy and the fashion that had adopted it came to be associated with consumptive and excessive femininity. All this even though, as Virginia Woolf (in response to *Wayfarer*'s quip that birds "have to be shot in parenthood for child-bearing women to flaunt the symbols of it") would later point out in 1920, when the Plumage Bill failed to pass, "We may fairly suppose…that the birds are killed by men, starved by men, and tortured by men—not vicariously, but with their own hands" (242).

Interestingly, even London's West End theatres entered into the controversy during the 1890s. By embroidering dead swallows into the costume of its antagonist, Mrs. Cheveley, Oscar Wilde's *An Ideal Husband* (1895) placed itself at "the center of arguments about shooting parties and vanity markets that occupied West End playgoers through the season of 1894" (Kaplan and

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[33] Gates notes that "in just one year in the 1880s, over 400,000 West Indian and Brazilian birds and 350, 000 East Indian birds were sold on the London market" (115).

Stowell 32). *The Sketch* from January 9th, 1895, found Mrs. Cheveley's dress to be, though "original and, in a way, effective," ultimately "barbarous and unpleasant." The review not only repeats familiar outlooks on female consumer practices but also reflects anxieties concerning the West End's influence on fashion in general: "I only hope," the reviewer writes, "that women will show their disapproval of this needless slaughter by refraining from imitation" (qtd. in Jackson 156). Concerns that the theatre could influence fashion trends are by no means unfounded. In fact, West End theatres had a formative impact on the London fashion scene and offered an accompanying, often oppositional, voice to Parisian influences. As Joel H. Kaplan and Sheila Stowell put it, "[P]layhouses became second showrooms, with London's leading ladies serving as living mannequins" (10). The theatre both mirrored and cultivated women's fashion and the performances of femininity surrounding it, and playgoers often incorporated stylistic touches they viewed on the stage or even purchased items from dressmakers commissioned for certain productions.

It seems telling that the controversies surrounding imperial overhunting as well as amateur and professional scientific collection were relatively modest compared to the outcry that resulted from the use of feathers in women's clothing. In this context, imperial adventure fiction, with its celebration of exotic animal death, partially illuminates the rhetorical techniques Britons used to excuse the extinctions produced through the excesses of British hunting culture. Such extinctions were brushed away largely because the sport was emblematic of British masculinity and imperial power. Exotic species death was also easier to ignore because English citizens at home would not notice the disappearance of animals abroad while the potential disappearance of local birds would be more upsetting. The relative indifference toward the prospect of extinction stands in sharp contrast to the rhetoric that emerged at the end of the century when anti-plumage activists argued that female cruelty and consumer practices were threatening to erase certain avian species. Thus, the rhetoric of extinction grew heavily gendered.

Articulating Extinction: Victorian Science and the Imperial Hunt

Even though Haggard was writing at a time when questions of species loss were coming to the fore because of a range of practices, hunting literature had already brushed up against the question of extirpation. In *The Chace*, for example, Somervile betrays a number of related apprehensions once he expands his geographical scope to encompass the hunting and trapping of animals in locations such as Africa, Asia, and India. Scholars have recognized these "exotic

digressions" as allusions with "Virgilian precedent" (Chalker 95). They also represent an intensified tonal progression: while the violence described in *The Chase*'s English scenes is almost always disproportionate to the prey being pursued, the practices Somervile imagines being conducted against alpha predators in other locales is entirely excessive. The first account involves a hunting party, led by the Mughal emperor Aurengzebe, pursuing a variety of local predators including lions, bears, wolves, and tigers. In imaging such a large-scale hunt, or, considering its extent, what might be described as the methodical and sudden de-population of a range of species, the poem grapples with the specter of extinction. While the initial scenario in Book II ends with the death of a single rabbit, the Mughal hunt ends with "strange promiscuous Carnage, drench'd in Blood, / And heaps on heaps amass'd" (II, 499-500). The procedural slaughter forces animals left alive to "creep" beneath the "bodies of the slain for shelter" in an attempt to avoid the ongoing result of Aurengzebe's "one dread Frown," which, the poem claims, "extinguish'd half their Race" (II, 504; 508). Book II does not end with local extinction but rather an abrupt act of mercy. The hunters, described as well-trained soldiers, form an opening in their configuration and allow the remaining animals to escape. Somervile closes this sequence with an entreaty:

> Ye proud Oppressors, whose vain Hearts exult
> In Wantonness of Pow'r, 'gainst the brute Race,
> Fierce Robbers like yourselves, a guiltless War
> Wage uncontroll'd: Here quench your Thirst of Blood;
> But learn from Aurengzebe to spare Mankind. (II, 519-23)

On the surface, the Aurengzebe episode satisfies the poem's main conceits. It uncomfortably couples an attentiveness to animal distress with the assertion that to inflict such suffering is a "guiltless" act. It once again presents war as an adequate substitution for a supposedly innate violent drive in the male constitution. It also stages the British psychological imperative for a morally-inferior foe by aligning the Mughal hunting party with animals, both of whom it describes as "fierce robbers." The possibility of local extinction, however (half the race was destroyed in a single hunt), complicates the assertion that hunting could "wage uncontroll'd," or that the animal population is adequate to the "quench" the human "Thirst of Blood." In this segment and the following passage, which describes the extirpation of wolves from England as a

result of King Athelstan's call for tributary wolf skins, the exhaustion of local animal populations due to overhunting is a clear anxiety.

Haggard's work in the following century contains descriptions of slaughter that are true to real-life accounts of British overhunting. By the time Haggard was writing in the last quarter of the century, hunting culture, and accompanying factors, had made a marked impact on biodiversity both in South Africa and around the globe. This caused additional species to become victims of anthropogenic extinction. The blaubok, an antelope, was extinct as early as 1799 and the great auk, a flightless bird, was extinct by the mid nineteenth century. By the 1890s, the Cape warthog of South Africa was also gone. The quagga, a subspecies of zebra, was hunted to extinction even though it was not profitable quarry. The creature was extinct in the wild by 1878, and the final individual specimen died in the Amsterdam zoo in August of 1883. Ironically, Britain passed acts protecting the quagga three years after it was already extinct (Miller 10).

Even writers in the early decades of the nineteenth century were beginning to remark on hunting's capacity to transform the region. Scottish poet and abolitionist Thomas Pringle, who led a party of Scottish settlers in the Baavarian River Valley between 1820 and 1822, noted the impact that the "incessant pursuit of the huntsman" had on local animal populations (149). Hunting was partially driven by profit. MacKenzie notes that animal products made up the majority of trade in Albany, the English settlement on the eastern Cape. He observes that by 1831, "animal products accounted for" more than 75% of the total trade of £51,290. Kudu, eland, wild boar, and wildebeest, once abundant, became increasingly rare sights (91). Many Boer place names also derived from species that were now fully or nearly, as Pringle says, "extirpated in the Colony." Profit was not the only force driving overhunting, however. Pringle's *Narrative of a Residence in South Africa*, published in 1834, expresses what would prove to be a prescient anxiety over the future of the quagga. Pringle seemed to have a fondness for subspecies. He describes them as "stouter and handsomer" than a European donkey with a "swiftness" that, though "inferior to the horse," "baffles the huntsman" as the animal goes "flying for refuge to the most rugged parts of the mountains" (149). Pringle expresses fear that the quagga might disappear from the area completely. He also wonders at the capacity of colonists to kill the animal wantonly:

> The quagga whose flesh is carrion, and even whose hide is almost useless, might be permitted, one would suppose, to range unmolested on his native mountains;

> but man, when he has no other motive, delights to destroy for the mere sake of pastime. Thus the poor quagga, in the absence of better game is often pursued for sport alone. (149)

It would be difficult to argue that the authors of Victorian adventure fiction are not guilty of presenting the killing of animals, particularly exotic fauna, as closely connected to good citizenship and personal wellbeing. There are self-reflexive moments, however, when writers like Ballantyne and Haggard seem to question the sustainability and "naturalness" of identities organized around and partially formed through the abject killing of animals. Proposed benefits aside, many hunting narratives call into question the long-term ecological impacts of large-scale hunting. Even Ballantyne's hunters speculate that if more sportsmen knew about gorillas the species would be extinct within a year's time (loc. 1874). Interestingly, though *King Solomon's Mines* was published two years after the death of the last quagga in captivity, the novel features a rather charged encounter with the species in its fifth chapter, "The March into the Desert." The sequence also directly follows the elephant hunt analyzed earlier in the chapter.

The setting of the fifth chapter offers an interesting departure from the earlier spatialized metaphorics of the novel. The desert wasteland incorporates elements of the sexualized bodyscapes that are prominent in Haggard's fiction, but it is far removed from the pre-industrial edenic landscapes that are also common in his work. Throughout the desert scenes, imperial undertones remain central to the novel's associative layerings. Haggard rather evocatively places the desert at the very edge of an agricultural settlement. The novel itself draws attention to the immediate change from an arable landscape to a desertscape. When describing the strange suddenness of the transition, Quatermain remarks: "To the right was a scattered native settlement with [...] cultivated lands down by the water[...]. To the left was the vast desert. This spot appeared to be the outpost of the fertile country, and it would be difficult to say to what natural causes such an abrupt change in the character of the soil is due. But so it was" (79-80).

Quatermain's speech is often comprised of both biblical allusions and scientific discourse, but once his party enters the desert, the novel becomes heavily inflected with the language of Darwinian and Lyellian science. As the expedition attempts to survive the desert, Quatermain reflects on geologic and evolutionary timescales. While discussing the mountain formation that he refers to as Sheba's Breasts, Quatermain relates the fact that the mountains are actually "extinct volcanoes" (94). Later, as the men reach the mountains and are out of danger,

he notes that they are walking on “lava beds belched from the bowels of the earth in some far past age” (96). He also takes notice of the fact that soil has apparently formed from decomposed lava and that it has come to house various plant life. These scenes suggest a geohistorical awareness and curiosity.

These Lyellian asides to Earth’s geological development are paralleled with Darwinian nods to deep history and, more broadly, systems of speciation that unfold within the expanse of deep time. Quatermain reflects on the relative longevity of distinct species with disparate evolutionary pasts. When the expedition is assailed by flies, for example, he recalls seeing a fly “enclosed in amber” that was “half a million years old, looking exactly like his descendant of today” (89). The image of the preserved fly is echoed later in the next chapter when the men find the perfectly-preserved body of José da Silvestre in an ice cave at the peak of Sheba’s breasts. The three-hundred-year-old body is remarkable, but perhaps not as impressive as the half-million-year-old fly. Quatermain states: “I have little doubt but that when the last man lies dying on the earth…[flies will] be buzzing round” (89). Notably, the word ‘extinction’ appears in only these two chapters of the novel. It is within this context that the expedition stumbles across a group of quagga. In a passage that speaks to the current moment of rapid species loss, the African guides, startled by the sudden presence of the herd, mistake them for spirits rather than actual living creatures (87).

The associative links the novel suggests between prehistoric extinction and modern species death hint at anxieties regarding humankind’s capacity to erase species in a span of time that, from a geologic perspective, was greatly accelerated. This speaks to a difference between pre-Victorian hunting sequences that focus on local extinction, such as *The Chace*, and Victorian hunting sequences that foreground imperial excesses. While Somervile focalizes instances of extirpation, the insights of Victorian science make the possibility of anthropogenic species loss particularly laden with the threat of global extinction. Darwin and Lyell proposed that processes of extinction unfolded over the expanse of geologic time, not within the span of a century or even a few decades. Anthropogenic extinction poses a considerable complication to typical processes of speciation and species loss. These ideas started to crystallize during the Victorian era, when questions surrounding local populations grew to include global populations and questions of time grew to meet the expanded timescales that arose out of biological and geological thought.

Quatermain's attempts to use a scientific gaze to reconcile human agency with the natural world often fail. Through cross-species comparisons, hunting sequences in *King Solomon's Mines* attempt a biological or determinist understanding of overhunting; ultimately, however, the excesses that characterize the imperial hunt do not easily map onto nonhuman hunting and behavioral territorialization, particularly within stable ecosystems and food webs. Due to its sensitivity to deep time and speciation, the desert sequence of chapters 5 and 6 connects to other self-reflexive moments in Haggard's writing when declines in animal populations or the impact of imperial growth and agriculture on the landscape prompt asides shot through with fears of extinction and ecological decline. By the publication of his 1926 autobiography, Haggard, once a great ambassador for the imperial hunt, was able to state: "the destruction of lower animals for the sake of sport, has become abominable to me" (vol. 2: 105). England's observable impact on animal populations and the natural world stand as a key anxiety within Haggard's writing, even in his most ostensibly pro-imperial works. His first book *Cetywayo and His White Neighbors*—an 1882 nonfiction work regarding Shepstone's policies in South Africa—was already flush with language that resonates with many of our own anxieties concerning the erasure of species:

> [I]t was not always so lifeless and so still. Some few years ago those hills, those plains, those rivers were teeming each with their various creatures. […] [T]he traveller could have seen herds of elephants cooling themselves yonder after their day's travel. […] That bush-clad hill was the favourite haunt of droves of buffaloes and elands, and on that plain swarmed thousands upon thousands of springbok and of quagga, of hartebeest and of oribi. […] [T]hese wild denizens of forest, stream, and plain have passed away never to return. (284)

Much like Quatermain, for whom the "poison" of a lion's teeth produces a recurrent memory of the hunt, Haggard and even contemporary readers are haunted by the problems of overhunting and the future it signals.

"Wounded Trees and Wounded Men":

David Jones' *In Parenthesis* and the Question of Community During the Anthropocene

The language of the Anthropocene is often shot through with apocalyptic foreboding. The immediate and projected impacts of humankind on Earth's biosphere and geophysical systems resonate with traditional imaginings of Earth's final days. As Tobias Menely puts it, in the age of climate change "it is scientists, not prophets, who speak the language of apocalypse" (478). One wonders, however, if it is not only the imagery but also the logics of apocalypticism that have been mapped onto Anthropocene discourse. Traditionally, the Apocalypse is thought of as an absolute suspension of human agency, a time when human sovereignty over the world makes way for the unfolding of a theologically-predetermined state of events. Within the context of the Anthropocene, for some, the moment humankind was beginning to recognize its geologic agency was the same moment that it had become unable to positively intervene in its own destructive processes—climatic tipping points were surpassed, and feedback loops were initiated. Our agency was largely stripped away before we even fully realized that we had it. This sort of defeatism, the admission that the situation is largely irreversible, is an understandable reaction to the realities of climate change and mass extinction. I agree with Donna Haraway's assertion, however, that this sort of thinking can, at the very least, "discourage" those inclined towards environmental and conservationist causes and forestall the kinds of collaborative and creative interventions that might go some way toward addressing the problems we face (*Staying* 3-5).

Literary studies of the Anthropocene that address the potential impacts of apocalypticism within discussions of climate change and mass extinction might look to early examples of cli-fi from the late nineteenth and early twentieth centuries. However, other genres also offer promising avenues for Anthropocene reading. I turn to the modernist poems of David Jones, particularly *In Parenthesis* (1937), a largely autobiographical work on World War I, which may seem like an unlikely source to consider in a discussion of the Anthropocene and the impacts of extinction. Though Jones is primarily known for his Roman Catholic beliefs and the allusive complexity of his writing and artwork, his work has deep stakes in the environment—a fact that bears more consideration. In casting the war as an apocalyptic event, the poem engages with eschatological reasoning as an aesthetic mode. It brushes up against apocalyptic conventions, lending insight into what eschatological logics obscure, and it resists the tendency to emphasize the suffering of the human while obfuscating that of other forms of life. The poem also looks to

the speciescidal potential of modern technology to consider the importance of creaturely life to the wellbeing of humans.

For a poet so dedicated to theological matters, Jones' work operates within frameworks that are surprisingly materialist. *In Parenthesis* regularly turns to the materiality of the body: the means of retrieving corpses by troops on fatigue duty, as well as the sensory experience of being in the trenches themselves. *The Anathemata* (1952) traces the development of human morphology throughout deep time in ways that are expressly Darwinian.[34] Both poems allude to differentiated sensory experiences across species and differences between human and nonhuman sensoria.[35] Though his theological worldview might suggest otherwise, Jones was quite aware of scientific developments, and he often attempted to understand his Catholic faith through ecologically-centered frameworks. In *The Anathemata*, he notes that a particular phrase during the Eucharist of a Latin mass requests divine assistance on behalf not just of humankind but "in some sense, of all sentient being, and perhaps, of insentient too, for as Paul says, 'The whole of nature, as we know, groans in a common travail all the while'" (106 n.2). He was likewise interested in science's use and exploitation of nonhuman life. Kathleen Raine recalled that in Harrow during the later years of his life, he kept among his few possessions (which included mostly deeply personal items) a photograph of Laika, emblem of the Soviet space program and one of the first animals launched into orbit. Raine notes that the items he kept "had for him that sacramental dimension which he sought for in vain in the increasingly secular surrounding world" (63). Considering his multispecies sensibility and his attunement to scientific progress, it is perhaps no wonder that his WWI poetry breaks with many of the conventions of trench poetry.

It would be misleading to imply that *In Parenthesis* is solely about Jones' time during the war; much like his other major works, *The Anathemata* and his sequence of poems dealing with

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[34] "Rite and Fore-Time," the first section of *The Anathemata*, speculates about quadruped lifeforms that evolved to eventually form what biologists would refer to as humankind's Mitochondrial Eve.

[35] The conclusion to "Rite and Fore-Time" alludes to worms and to Charles Darwin's last major work, *The Formation of Vegetable Mould through the Action of Worms, with Observations on their Habits* (1881). Darwin emphasizes the sizable impact of worms on earth's soil through slow labor over large spans of time. He essentially frames them as a geological force and directly links them, in terms of their slow terraformational influence, to Charles Lyell's geological deep time. Jones emphasizes the blindness of worms and their particular sensory perceptions of the world, another major theme in Darwin's work.

Roman soldiers present in Jerusalem at the time of the Crucifixion—posthumously published in *The Sleeping Lord* (1974) and *The Roman Quarry* (1981)—*In Parenthesis* is notoriously difficult to categorize.[36] In terms of plot, it follows the semi-autobiographical Private John Ball and other soldiers in the 55th Battalion of the Royal Welch Fusiliers as they embark from England until the moment many of them become casualties of the First Battle of the Somme, a battle in which Jones himself was badly wounded. Though the timeframe and geographic scale of the plot is relatively small, the thematic scope is broad, encompassing, among other things, Romano-Britain, Arthurian legend, the development of empire throughout history, and modernity's ecocidal potential. Though the poem may initially seem to be "about" life during the war, Jones clearly thinks its relevance is far more expansive.

Jones' poetry mingles contemporary history and even the deep past with imperial and capitalist histories in a way that resonates with contemporary eco-analysis and critical animal studies. Dipesh Chakrabarty notes that the Anthropocene requires a rethinking of historic frameworks so as to expand typical bounds of historical inquiry to include deep history. Models of history that only account for the last four thousand years or so (or even the last ten thousand years, since the birth of agriculture) are insufficient. From Chakrabarty's perspective, these histories do not provide an adequate viewpoint either on the biological and geological conditions essential to human wellbeing in the past or for considering the status of these conditions in the future (212-3). This new way of thinking about human progress, which he refers to as "species thinking," would also allow for a non-deterministic view of industrial history. The shift in energy regimes from wood to coal has had detrimental impacts for both human and nonhuman species, but it did not *have* to happen this way at all. One of the limits of species thinking, however, is that it may not lead to the same kind of unified action on the part of humankind that is required to address climate change and mass extinction. No one experiences being a species, and the idea of species does not engender any sort of affective connection. "We can only intellectually comprehend or infer the existence of the human species but never experience it as such," Chakrabarty writes; "one never experiences being a concept" (220).

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[36] In his preface, Jones perplexingly remarks: "I did not intend this as a 'War Book'--it happens to be concerned with war. I should prefer it to be about a good kind of peace[...]" (xii-xiii). In "A Note on *In Parenthesis* and *The Anathemata*," T.S. Eliot also offers comments on the categorical difficulties that these works pose in their thematic expansiveness and blending of poetry and prose.

Jones' work may not contain the answer to uniting humankind against climate change, but I do think that it offers a powerful model for considering the complex, interspecies stakes of the present ecological crisis. Counterintuitively enough, it does this by infusing the idea of species with an emotional register. Jones represents a mode of species being that approaches the question of species at a personal level—through the body. His work actively attempts to think through what it means to be a member of a species with a deep past. It is partially Jones' interest in placing human development in conversation with geologic development that makes texts like *The Anathemata* worthwhile to consider in relation to climate change; as Matthew Griffiths argues, *The Anathemata* "allows space" for readers to observe "complicity in environmental change, as well as culture's contingency in that environment" (151). Jones also thinks about what knowledge of this past might mean for emotional bonds in the present—bonds involving both humans and nonhumans. Humans, animals, plants, and even the lithic are given ethical consideration in *In Parenthesis*. Jones is interested in "making kin," Haraway's term for seeking ways to "become with" a range of nonhuman life. His work exhibits a particular ability to value both the human and nonhuman worlds and to express humankind's affinity with other species in ways that undo popular conceptualizations; in his work even rats, which most WWI poetry treats as anathema (in the popular non-Jonesian sense of the term), become remarkable. Moments when characters become aware of the cooperative existence of other species, asides that I term interrelational sideshadowing, are juxtaposed with collaborative ways of being that enable personal and group flourishing against the alienating modes of existence that characterize a soldier's life during the war.[37] In keeping with his interest in the personal and the particular, he is also keen on showing how the harmful effects of everyday action become obscured through ideology, processes of commodification, or plain mindlessness. Like that of any writer, his work isn't without its ideological shortcomings, and some of his passages run counter to a body of work that typically assumes an environmentally-centered perspective. His adherence to religious orthodoxy can be frustrating, particularly when it follows passages inflected with Darwinian language. Despite his multispecies sensibilities, there are moments where he can be surprisingly anthropocentric. Generally, though, his work is concerned with "thick copresence," another term

[37] This is a variation of Michael André Bernstein's idea of sideshadowing—moments in historic narratives that offer alternative historical potentialities and resist teleological or deterministic models of historical progress. I discuss Bernstein's work at more length below.

I borrow from Haraway (*Staying* 4), between diverse forms of life. His poetry focuses on the copresence of both the recent and deep past and the present as well as the material effects of modernity on a range of species; he goes even beyond this, though, to think about what embodiment and emotional resonance have to offer in the time of military and ecological crisis—thinking that speaks to the time of the Anthropocene.[38]

There are many examples of modernist poetry that model the way in which apocalyptic rhetoric can occlude human agency. Madelyn Detloff argues that both Yeats' "The Second Coming" and Eliot's *Four Quartets* present time as a closed system. The poems imagine that from a position outside of history where all of human time could be considered, one could see how the "accidents and catastrophes of our lives [are actually] coherent triumphant narratives" (83). The losses incurred from a catastrophe are reinscribed as inevitabilities in service of a larger divine plan. Human action is negligible in a system where outcomes are predetermined. Detloff argues that these types of apocalyptic narratives might provide comfort for the survivors of catastrophe, but they also cause us to overlook the "particularity of suffering, and thus circumvent the ethical response called forth by that suffering—to resist the forces that brought it about" (91).

Is it possible for apocalyptic narratives to avoid logics of redemption without falling into defeatism? This essay explores the ways that Jones examines the boundaries of human agency within a fraught historical moment. I argue that through asides to human relationships as well as human and nonhuman interrelationality, Jones gestures toward alternate historical trajectories that undermine the sense of inevitability a retrospective gaze could bring to the apocalyptic conflict at the Somme. Thus, the deaths of soldiers are not transfigured through redemptionist logic into necessary sacrifices within a coherent historical order. Jones often pulls attention away from the conflict at hand to emphasize particular interactions, thoughts, and observations discordant with the violence that ends the poem. This horizontal movement from historical

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[38] There are times when Jones' outlooks are comparable to those of the Deep Ecology Movement. Like Jones, the idea of deep ecology, as outlined by Arne Naess, involves the "[r]ejection of the human-in-environment image in favor of *the relational, total-field image*" as well as a "[*b]iospherical [e]galitarianism*" (3; 4). I think that Jones and the Deep Ecology Movement diverge in several ways, however. One is that Jones' work highlights power differentials and inequality along lines of class and gender. In addition, though Jones' work tends to elevate the status typically afforded to nonhumans, his religious outlooks still privileges the human in ways that the Deep Ecology Movement does not.

catastrophe to the phatic hints at the futures the men might have experienced—including inchoate relationships that might have matured under different historical conditions and modes of being outside of military order. The other side of this argument is the fact that the soldiers often do not recognize their own individual agencies within the conflict. The apocalyptic frameworks of *In Parenthesis* thus make it a valuable text during the time of the Anthropocene. The poem models the ways in which a recognition of one's interrelation with other humans and nonhumans can encourage creative action within a historical moment laden with loss and uncertainty. It also examines the difficulty of recognizing one's own agential power in the face of cataclysmic unfolding. Jones' particular take on apocalypse in *In Parenthesis* distinguishes it from modernist poetry that attempts to transcend disaster through positivist logic.

The Body, the War, and the Anthropocene

From its very preface, *In Parenthesis* presents the reader with a historically-novel cognitive challenge, the mental difficulties present in recognizing emergent technologies, along with their secondary effects, as direct products of human effort. Jones notes that much of the problem lies in embodiment itself, an idea he returns to beyond the preface in the larger work. The passage questions how an individual of "the same world of sense" as nonhumans might understand human-made "creatures of chemicals"—a term that is itself a curious construction—for what they are: "true extensions of ourselves" (xiv). It is difficult to quantify the ramifications of new technologies. The preface suggests, however, that their impact resonates beyond their intercessions into everyday life or their exterminatory potential (in the case of war technologies). They have harmed the environment (ix). They have, perhaps, even altered patterns of human cognition—each "requiring a new and strange direction of the mind, a new sensitivity, certainly, but at a considerable cost" (xiv). The preface questions how the human species can register the environmental and psychic consequences of technological 'progress' as well as how we might recognize this progress—which sometimes seems quite alien—to really be extensions of ourselves when our individual faculties tell us otherwise.

The problem that Jones describes finds more contemporary correlates in the literature of the Anthropocene. Bruno Latour posits that the general public lacks "the mental and emotional repertoire" necessary to process the "vast scale of events" involved in the Anthropocene, much less appeals to "feel responsible" for the unfolding drama (1). Rob Nixon offers a similar sentiment in his introduction to *Slow Violence and the Environmentalism of the Poor* when he

reflects on the “representational challenges” posed by the present ecological crisis and the “slow violence” that fuels it, a violence that is difficult to pin down conceptually due to the fact that it “occurs gradually and out of sight” with “delayed destruction that is dispersed across time and space” (2). The problem of thinking the Anthropocene that Latour and Nixon point out is complicated and essential. How does one look at a crisis involving timescales vastly different from ordinary human lifespans and see oneself? How do individuals recognize their own geologic agency?

The preface to *In Parenthesis* suggests the kinds of imaginative difficulties inherent in ecological slow violence that Nixon and Latour identify. Interestingly, it is the magnitude and immediacy of new war technologies that seems to prompt Jones to extend his thoughts on violence to include gradual ecological violence on a global scale. Though the book-length poem largely focuses on wartime experiences, the first page of the preface couples a discussion of life as a soldier during World War I with a reference to how one’s everyday actions in civilian life could cause lasting harm to the earth itself. Jones also indicates that these forms of gradual violence act as a means to distinguish the present from the past: “Just as now there are glimpses in our ways of another England—yet we know the truth. Even while we watch the boatman mending his sail, the petroleum is hurting the sea” (ix).[39]

Jones’ experiences during WWI had an influence on the ecological interests reflected in his poetry and art. Technological breakthroughs offered the potential for wartime devastation to operate on unprecedented scales. Machine guns, chemical warfare, and the tank were all fresh faces to the scene. Both the material casualties of war as well as the psychic toll of war technology, for both soldiers and civilians, increased with the arrival of poison gas, new “creatures of chemicals,” as Jones would put it. WWI soldiers also experienced prolonged,

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[39] Jones’ introduction is replete with examples of how contemporary life is comprised of human ‘advancements’ that are potentially harmful to humans as well as the environment. It feels remarkably charged with the language of the Anthropocene: “That our culture has accelerated every line of advance into the territory of physical science is well appreciated--but not so well understood are the unforeseen, subsidiary effects of this achievement. We stroke cats, pluck flowers, tie ribands, assist in the manual acts of religion, make some kind of love, write poems, paint pictures, are generally at one with that creaturely world inherited from our remote beginnings. Our perception of many things is heightened and clarified. Yet must we do gas-drill, be attuned to many newfangled technicalities, respond to increasingly exacting mechanical devices; some fascinating and compelling, others sinister in the extreme [...]” (xiv).

traumatizing exposure to war casualties. David Cannadine notes how after major military exchanges the dead bodies would sometimes remain for weeks, either because it was too dangerous or too costly to collect them (204). Throughout *In Parenthesis*, Jones viscerally illustrates the experience of being surrounded by the dead, and the difficulties that presented to maintaining a sense of the corpse's humanity. The conditions of war barred any effective means of corpse disposal, which often resulted in the unconventional treatment of the dead, Cannadine notes: "New trenches might be dug through them; parapets might be made of them; even bodies decently buried might come to the surface again." In a discussion of this passage in Cannadine's essay, Sandra Gilbert astutely observes how even after death the "casualties of technology" were utilized as "grotesque tools of technology" (186). Jones was aware of the physical and psychic human toll that WWI had taken, but he is also careful to detail nonhuman deaths as co-casualties of the conflict.

In Parenthesis illustrates the way in which industrialized warfare helped cement the idea of anthropogenic extinction within the cultural imagination. Marion Girard notes how even after the armistice, fear persisted that further developments in chemical warfare might yield "new chemicals" with the capacity of "permanently destroying life on any land they touched" (158). Such fears are reflected in *In Parenthesis* when characters are awed by a completely denuded landscape void of all signs of organic life:

> The cratered earth, of all grow-
> ing things bereaved, bore that uncreaturely impressiveness of
> telescope-observed bodies--where even pterodactyl would
> feel the place unfriendly. (97)

An articulative problem rests at the center of *In Parenthesis*. The problem is exemplified by Jones' attempts to use the local and embodied, the act of watching a local fisherman, for example, as loci to ground larger claims about humankind's interruptions of natural and cultural history. What it attempts to articulate is partly, if not largely, concerned with humankind's agential standing within the natural order—its lasting mark on Earth's topographical features and ecosystems, along with its capacity for speciescide. In other words, it feels like an early articulation of what a contemporary reader would term the Anthropocene. Interestingly, the poem does so not by assuming a macroscopic gaze but through the representation of individual experiences. Jones is not alone in representing the embodied experience of WWI as largely

inarticulable—nor in suggesting that this experience is indicative of larger changes within modern experience. In "The Storyteller," Walter Benjamin marks World War I as a watershed moment in the course of human phenomenology, a time when technological warfare erected new barriers to the communicability of human experience. He positions the war alongside other accelerative processes of modernity that contribute to the alienation of the subject:

> With the [First] World War a process began to become apparent which has not halted since then. Was it not noticeable at the end of the war that men returned from the battlefield grown silent—not richer, but poorer in communicable experience? What ten years later was poured out in the flood of war books was anything but experience that goes from mouth to mouth. And there was nothing remarkable about that. For never has experience been contradicted more thoroughly than strategic experience by tactical warfare, economic experience by inflation, bodily experience by mechanical warfare, moral experience by those in power. A generation that had gone to school on a horse-drawn streetcar now stood under the open sky in a countryside in which nothing remained unchanged but the clouds, and beneath these clouds, in a field of force of destructive torrents and explosions, was the tiny, fragile human body. (84; brackets in original)

The bounds of the human form, embodied experience, rest at the center of Benjamin's construal of wartime experience and in Jones' preface (as well as the poem at large). *In Parenthesis* attempts the difficult task of thinking against the cognitive disequilibrium of technological modernity.[40] Its approach to these questions rests in the "creaturely world inherited from remote beginnings" and in the "world of sense" that it alludes to in the preface—and accomplishes this by returning to the body itself (xiv).

To counter the overwhelming and stifling realizations that accompany the recognition that humankind has begun to alter the path of natural history, *In Parenthesis* engages with the idea that emotional knowledge and bonds, both interpersonal and between species, are

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[40] Jones' depictions of the overpowering stimuli of modern war also call to mind Sigmund Freud's discussions of recurring traumatic dreams among soldiers in *Beyond the Pleasure Principle* who encountered irrepressible stimuli during battlefield exchanges. Freud states: "But it is not in the service of that principle [wish fulfillment] that the dreams of patients suffering from traumatic neuroses lead them back with such regularity to the situation in which the trauma occurred. […] These dreams are endeavouring to master the stimulus retrospectively […]" (25).

intrinsically tied to abstracted forms of knowledge and, indeed, that one's emotional life provides a kind of knowing, a framing of the world and the environment, that can supplement forms of understanding that operate through positivistic separations between subject and object. In her discussion of *The Anathemata*, N. K. Sandars notes the emotional dimension Jones brings to questions of archeology and geology, among other sciences. Following her close reading of passages in *The Anathemata* and *The Sleeping Lord* which describe (in emotionally-charged detail) processes of glaciation alongside pre-historic burial rituals, Sandars remarks on the powerful way that Jones works scientifically-grounded views of prehistory into affectively-resonant works. Far from Tennysonian angst, Jones' poetic construal of scientific knowledge emphasizes the enmeshment and interrelatedness of the body, species, and the environment. As Sandars points out, it is challenging enough to imbue abstracted scientific facts with an emotional register, but this is particularly true when one seeks a register that is affirmative rather than estranging: "This new, this larger and infinitely more complicated world [provided by scientific insight] is intellectually known, but hardly yet *felt* at all. Or if it is felt it is in its more frightening and alienating aspects" (244). The poem represents the knowledge of the past provided by various branches of science as a kind of immediately knowable experience: "Jones takes this great heap of the past and tells it not as history, but as something we have experienced in our own flesh; it is closer to direct memory than anything else" (245).

Both *The Anathemata* and, I argue, *In Parenthesis* reflect a belief that one approaches abstracted scientific knowledge with *a priori* knowledge of earth systems simply through direct experience of one's own environment and through the bonds one forms with other species. It is not that one innately knows how things work, but that one can intuit the factuality of scientific insights through engagement with one's environment. Recent developments in complexity science and biosemiotics go some way to support this viewpoint. Wendy Wheeler's work thoroughly examines the complex interplay between emotional forms of knowledge and intelligence (which she refers to as "tacit" or "embodied") and more formal ways of knowing (which she refers to as "abstract" and "conceptual"); what she terms "skilful being in the world" rests in the collaboration of these two ways of knowing (55). Wheeler maintains the viewpoint that emotional knowledge is an important and undertheorized component of both individual knowledge and scientific progress itself. In a passage that feels particularly Jonesian (not least of all because it employs one of Jones' favorite terms, "creatureliness,"), Wheeler describes the

centrality and validity of embodied knowledge in relation to individual conceptualizations of complex systems:

> In their tacit knowledges about how the world works, human beings already know a lot about open complex systems. That this sort of knowledge is the natural knowledge borne of or creatureliness, and is, in reality, a part of our common sense (in the real meaning of the term) as a species, might suggest that, combined with our vast capacities for abstract thought, it is a right kind of knowledge. (55)

In their discussions of WWI, both Jones and Benjamin remark on the fundamental difficulty of expressing wartime experiences, partly because of the trauma they inflicted but also because they are part of larger accelerative processes whose articulation rests in the development of new and subtle avenues of thought. However, even before this knowledge is fully expressed, it is still felt by those caught within history's march. For readers in the present attempting to articulate the biotic and abiotic effects (and affects) of an anthropogenic climate and the accelerated decline of biomes, this problem feels very familiar.

Everyday Apocalypse

Jones' literary work and visual art emphasize the contiguous nature of the past with the present. The key entries in his literary oeuvre, *In Parenthesis* and *The Anathemata*, are partially concerned with the traces of human history within present-day England and Wales, ranging from prehistoric burial sites to the infrastructural remnants of the Roman occupation. A similar tendency can be located in his visual art. To give one example, *Roman Land* (1928) (see fig. 1), which Jones created during a visit to southwest France, presents an agricultural landscape resembling the Roman farms that arose under the imperial administration of Gaul, complete with a geometrical division of land suggesting Gallo-Roman agriculture. At first glance, *Roman Land* seems to present an image of the first century BCE of Gaul under provincial rule. Jones removes any doubt as to the painting's modern setting, however, by including the remains of Napoleonic-era barracks in the picture's middle ground.[41] It is not so much that the past is detectable in the present but rather that the past has never really left. The current moment is partially an experience of the continual unfolding of forces and processes that had already been set in motion

[41] Merlin James observes that *Roman Land*, like much of Jones' artwork, hinges upon the contradistinction of "organic movement and architectonic stability" or, to put it another way, "human construction" set against "abstract rhythms" (18).

long before. *Roman Land* offers evidence of two past world imperia that operated on the same site and whose influences are ongoing.

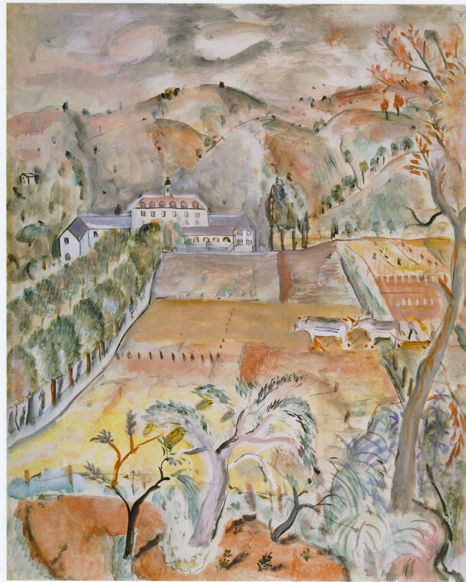

Fig. 1. *Roman Land*, 1928

Similar to *Roman Land*, Jones situates the stakes of *In Parenthesis* and its critical take on military order within a broader history of imperial growth. The poem expands its thematic gaze through the associative connections drawn by soldiers. At first glance, the autobiographical trappings suggest that *In Parenthesis* stands as an outlier within Jones' poetic output. The so-called Roman Poems and *The Anathemata* only indirectly allude to Jones' wartime experiences, instead positioning his other characteristic themes at the fore, namely Roman Catholicism, modernity's impact on religious continuity, and the homogenizing influence of imperial world systems on localized, insular cultures around the globe. These themes are still present throughout *In Parenthesis*, but they are more subtly incorporated. The poem utilizes the malleability of free indirect discourse to adroitly maneuver between the immediate realities of wartime experience and the meanings of such experiences from an array of historical vantage points. Jones' preface to *In Parenthesis* argues that soldiers and civilians commonly drew similar mental connections between their lives during the war and the past, both recent and remote.[42] This claim informs an

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[42] In reference to WWI, Jones remarks: "I suppose at no time did one so much live with a consciousness of the past, the very remote, and the more immediate and trivial past, both superficially and more subtly." The same section uses vaguely cinematic language to note that "[e]very man's speech and habit of mind were a perpetual showing" of the historic and cultural past (xi).

interpretive orientation to the poem. While *In Parenthesis* may not provide the same sort of sustained reflections on imperial dispersion that one might find in *The Anathemata* or many of the poems collected in *The Sleeping Lord*, it presents characters self-reflexively aware of a key shift in history driven by the encroachment of technological modernity. Jones forms the poem's chiasmatic crossings between modern empire and ancient Rome, WWI soldiers and mythological figures, and industrialized war and ancient symbolic orders as representative of actual attempts to reconcile a technocratic present with a preindustrial past. Many of the characters in *In Parenthesis* are self-consciously caught in history's march, and the poem is skeptical that they will ever be able to achieve reconciliation with the pasts they evoke in their attempts to make meaning of the present.[43] The poem frames WWI as a continuation of imperial and capitalist history even as it makes a case for the developments that set modern war, and the modern moment more broadly, in contradistinction to the past.

The devastating potential of industrialized war and technological modernity is central to Jones' claim that the present marks a distinct break with the past; technology pervades *In Parenthesis*'s apocalyptic final act. Like much of Jones' work, *In Parenthesis* operates within an eschatological framework. The poem moves with a teleological trajectory toward the seventh and final section, "The Five Unmistakable Marks," which details the catastrophic events that took place at the First Battle of the Somme, a battle in which Jones himself was nearly killed. In particular, Part 7 focalizes the events at Mametz Wood, a strategic objective of the 38th (Welsh) Division in which Jones enlisted. Though Part 7 stands as the poem's apocalyptic climax, earlier sections of *In Parenthesis* refer to the New Testament book of Apocalypse,[44] both through direct quotes and dense allusive layering. In Part 1, when Ball is late for parade, Lance-Corporal Lewis makes a joke about a man being "late to the last bloody judgment" (2). In one of the more obscure references, Part 2 of *In Parenthesis*, "Chambers Go Off, Corporals Stay," features company commanders giving marching orders specify that 'A' Company will mobilize last, an episode that evokes Matthew 20.16: "So the last shall be first, and the first last: for many be

[43] Jones' preface also remarks on the difficulty of aestheticizing modern, mass-produced weapons and war accoutrements, using box respirators as an example (xiv-xv).
[44] Jones referred to this book of the Bible as Apocalypse, in keeping with his Catholic background. Non-Catholic religious traditions often refer to it as *Revelation* or *The Revelation to John*.

called, but few chosen" (*King James Version*)—a phrase associated with biblical end times.[45] This episode subtly illustrates the intricate way Jones codifies apocalyptic motifs into the poem's minor details. The biblical book of Apocalypse is also directly cited in the text, including the final list of quotes that precedes the poem's endpiece, an image of an impaled scapegoat standing in a moonlit no man's land.

Apocalypticism is of course an appropriate vehicle for representing the horrific losses of life that resulted from the war, and I am not trying to make a case that Jones is all that unique among trench poets (if he may be called that) for using apocalypse as an aesthetic mode. I am, however, arguing that the apocalypticism of *In Parenthesis* is distinct from Jones' later eschatological work, namely *The Anathemata*, in the way that it resists an apocalyptic logic of disclosure. M.H. Abrams comments on the slipperiness of the term 'apocalypse' within literary criticism, noting that scholars use it to signify a range of ideas including "any sudden and visionary revelation, or any event of violent and large-scale destruction—or even anything which is very drastic" whereas biblical studies tend to apply it to "a vision in which the old world is replaced by a new and better world" (41). In his work on apocalyptic fiction, Frank Kermode notes that many eschatological traditions operate with "rectilinear rather than cyclical views of the world" (5). The Bible, Kermode notes, offers a "familiar" historical framework beginning with Genesis and ending with Apocalypse; the structure, "[i]deally," is "wholly concordant" with "the end [...] in harmony with the beginning, the middle with beginning and end" (6).

Bearing in mind Jones' considerable knowledge of the Catholic faith, one would expect *In Parenthesis* to follow an apocalyptic model in keeping with his religious background. *The Anathemata* operates with this logic of apocalypse, using the events of the Passion (particularly the Last Supper and the Crucifixion) along with the re-presentation of the Last Supper in the Eucharist as a historical centerpiece through which to make sense of the entirety of human and natural history. It proposes that all of time, earthly and cosmological, can be brought into concordance through the significance of the Crucifixion;[46] one need not wait until the last judgment for divine revelation to bring the present into harmony with the past. *In Parenthesis*

[45] Dilworth notes that "the scriptural reversal of first and last [...] signals the imminence of apocalypse" (*Reading* 36).
[46] *The Anathemata* also attempts the Tennysonian task of reconciling religious orthodoxy with scientific discourses that run counter to it.

refuses apocalyptic resolution in the biblical sense. Instead its characters experience an apocalyptic event with all of the violence of the last judgment but none of the illumination that would render catastrophe legible or bring the present into accord with the time stretching before it and behind it. From the perspective of biblical scholarship, what Jones presents might be called anti-apocalyptic. In other words, though Jones is clearly respectful of those who fought in the battle on both sides and is interested in commemorating their experiences (particularly through the figure of the Queen of the Woods), the Battle of the Somme is largely presented for what it was—a terrible and unredeemable loss of life.

With apocalyptic imagery so central to *In Parenthesis*, the question remains of what sort of apocalypse Jones is actually getting at. With the bitterness of the poem's final sections, it is tempting to read the biblical allusions and regular asides to Apocalypse as an example of modernist irony. In this instance, however, I agree with Dilworth's caution against ironic readings of Jones' work.[47] The entirety of *In Parenthesis* is shot through with apocalyptic foretelling and its central role in the poem's tropological makeup seems difficult to explain away as simple modernist reversal. Answers might be provided through the agential force driving "The Five Unmistakable Marks" and its deviation from traditional forms of cataclysm. Theological models of apocalypse operate through a divine interruption of natural and human history. The apocalyptic force comes from without. Conversely, the eschatological finale of *In Parenthesis* is secularized, and therefore the agential force fueling the violence arises out of cultural history and threatens the very conditions of its own emergence.

Compared to their biblical counterparts, the apocalyptic actors that take the spotlight in *In Parenthesis* are offputtingly banal. One incident of note occurs in a French estaminet in Part 5 of the poem ("Squat Garlands for White Knights") before Ball's battalion begins a days-long march toward the Somme. Sgt. Ryan enters and selects subordinates at random for fatigue duty, ignoring their bribes, which come in the form of wine. When the drinking soldiers first notice Ryan, one of the men compares him to the antichrist and another, referred to as John o' the Dale, remarks that when it comes to Ryan's methods of selection, "Sheep nor goats dont [sic] signify"

[47] Dilworth notes that despite the ubiquity of irony among trench poets, "the overall tone [of *In Parenthesis*] is free of irony. In even the most appalling of contexts, *In Parenthesis* brings positive vision to literary modernism" (98). While I would not go so far as to claim that Jones' tone is almost entirely free of irony, I agree that, at least in terms of the soldiers present in the field, Jones' tone is largely hagiographic.

(114). The latter comment contrasts Ryan's indiscriminate method of selecting troops for a fatigue party, whom he records in his "book o' life," with the impartiality of the biblical last judgment. As the men prepare to advance toward the Somme later in the same section—and the colossal violence of the battle can already be discerned—the men ironically wonder if Ryan, whom they have already characterized as an apocalyptic figure, has been able to read the portents or if he is an unwitting agent of the end times:

> Do the strong guts of Sergeant Ryan register the
> signs--does he sense in his iron bowels how withered are the
> yew-trees of his country, could he too retch up his heart at
> this whispering of fixed-stars frighted; of how it's at our very
> doors, Dai Davies and the Sibyl do agree--and they reckon
> we're in the first wave for sure. (120-1)

The allusion to Dai Davies and the Sibyl is a variant of the first stanza from *Dies Irae*, a Latin hymn incorporated into the Mass for the Dead. *Dies Irae* itself alludes to the day of wrath as described by David and sibylline prophecy; the stanza was a favorite of Jones and it also features prominently in *The Anathemata*.[48] The reader has been introduced to Ryan prior to these episodes. He is, like the rest of them, a common Briton. He has achieved the relatively low rank of sergeant. Like many of the characters, he works to mask the "inward abysm" of his feelings; when the reader is presented his thoughts, they are not of the war, but rather of a spouse or romantic partner who has been unfaithful but whom he still loves (109). The poem itself carefully makes the men's attachment of apocalyptic imagery and language to Ryan seem entirely hyperbolic.

Ryan stands as just one instance of the strong associative connection *In Parenthesis* develops between Apocalypse and the everyday processes of running a modern army. Often the poem sets aside the elegiac conventions of war poetry to focus instead on the minutiae of modern military management. Groups of men move frantically when given unexpected orders or they wait for long stretches of time for orders that fail to arrive. There are extended passages on the

[48] In his commentary on *The Anathemata*, René Hague offers the following translation of the first stanza of *Dies Irae*: "The day of wrath, that day, shall destroy the world in ash, as David, with the Sibyl, testifies" (1). Jones exhibited a Frazerian tendency to identify correlations and affinities between diverse religious traditions, a fact that is reflected in his partiality to the stanza from *Dies Irae*.

movement of supplies and the labor of fatigue duty. Even the opening lines of the poem do not begin with the apprehension preceding mobilization and disembarkation but with an orderly sergeant performing roll call as the 55th Battalion assembles for parade:

> '49 Wyatt, 01549 Wyatt.
> Coming sergeant.
> Pick 'em up, pick 'em up--I'll stalk within yer chamber.
> Private Leg...sick.
> Private Ball...absent.
> '01 Ball, '01 Ball, Ball of No. 1.
> Where's Ball, 25201 Ball--you corporal,
> Ball of your section. (1)

From the very beginning, Jones incorporates the language of bookkeeping into the aesthetics of the poetry. Here and in other passages, the impersonal numerical units of military ordering feel jarringly disjointed from the poem's rich allusive fold (in this instance, an allusion to Thomas Wyatt). I agree with William Blissett's note that the dehumanizing technical language "carries as much weight of moral criticism" as sections more clearly directed at condemning the outrages of the war (199). The men Jones describes do not seem to view themselves as commanders directing the course of history, much less biblical figures of the Earth's last days. Rather, Jones presents them as orderlies and bookkeepers. When Ryan interrupts the men drinking in the estaminet to recruit a number of them for fatigue duty, he is fulfilling a bureaucratic obligation (one that he has to carefully record in his "book o' life").

Unless they are in direct danger, the men remain emotionally detached from the orders they give and receive. Early in the poem, this detachment seems like business-as-usual bureaucracy; later, however, it seems more sinister, as in Post-Corporal Howells' attempts to flirt with a French woman who lives at a nearby farmhouse directly before Ball's battalion marches to the Somme. In the same section, as the men wait for their self-labelled apocalypse, at Company Headquarters Pte. 21679 Walter Map, himself burdened with bureaucratic labor, types out distribution orders and lists pertaining to weapons and various other supplies. As he works, he notices members of High Command smoking and drinking—they do not have to live with the same fears as those below them who will soon receive marching orders. Pte. Map thinks to himself that "when all's done and said there are an amenity or two making bearable their high

stations" (127). *In Parenthesis* presents the apocalyptic moment that ends its narrative as orchestrated by men undergoing the motions of daily military life in rote fashion. It is a cataclysm for which no one feels any responsibility.

The administrative figures of *In Parenthesis* find echoes in Jones' other poetry as well, particularly among the Roman poems. In "The Dream of Private Clitus," to offer one example, a soldier on duty at a guard post in Jerusalem at the time of the Passion relays a dream he had as a legionary in the Germanic Wars. During the dream, the image of Tellus Mater from the Tellus Panel of the *Ara Pacis Augustae* detaches itself from the relief and embraces Clitus and Lugobelinos, Clitus' companion during the war who is killed by a stray arrow the next day.[49] Importantly, Lugobelinos is Celtic and Clitus' interlocutor in Jerusalem, Oenomaus, is Greek, while the Greek-named Clitus is Roman. Jones notes that by having "a Roman, a Celt and a Greek serving in the same Roman unit" he hoped to evoke "the heterogeneous nature of the Empire" (15). For Clitus, the dream suggests a sense of unity among humans of diverse backgrounds because of their connection to the earth itself. He refers to Tellus Mater, the goddess of the earth, as the "gestatrix of each of us" (18). The dream is interrupted by the cries of Brasso (whose name evokes military brass), an orderly, calling men by both names and numbers for watch duty. Clitus offers a wry take on Brasso's interruption and establishes him as a certain archetype within Rome's imperial world-ordering system:

> Why, yes, of course, who else but Brasso? Who else should shake
> a man from such a dream? Of course he was up there with us,
> he's always been with us, he always will be with us, while there's
> any of us to make memento of. [...]
> [T]here's always a Brasso to shout the odds, a fact-man to knock
> sideways and fragmentate these dreamed unities and blessed
> conjugations, why certainly old Brasso was up there--and, he
> was up the ladder, too,--the higher the casualties, the higher the
> climber. (21)

[49] The *Ara Pacis Augustus* was a monument commissioned in 13 BCE by the Roman Senate to commemorate Augustus' return from the wars in Gaul and Spain. It is essentially an altar to the goddess Pax surrounded by precinct walls. The walls feature reliefs, including one of Tellus Mater, the goddess of the earth.

Clitus jokes that Brasso was born in *anno urbis conditae* (the year Rome was founded). There are clear links between the depiction of Brasso and the characterization of Sgt. Ryan. Jones was always willing to examine the way in which imperial world powers throughout history treated its people and military as homogeneous. The preface to *In Parenthesis* spends time carefully describing the diverse makeup of the British army—Jones was mostly grouped with Londoners and Welsh, and he remarks on the differences inherent in these backgrounds. His speech "Wales and the Crown," delivered to mark the coronation of Queen Elizabeth II in 1953, assumes a similar rhetorical perspective to remind the audience that the queen does not stand at the head of a single people, but a range of peoples and cultures connected to England through a history of imperial annexation.[50] Both Brasso and Ryan also interrupt processes of homosocial bonding, an aspect of military life that Jones felt was highly important. The decline in homosocial connection came, according to Jones, when the war became a "more mechanical affair" of "wholesale slaughter" (ix). Moreover, they are bureaucrats in heterogeneous armies who treat their men as interchangeable parts. Clitus' dream suggests that the men are only unified in the sense that they are all descended from Tellus Mater, the earth. Which, from a certain perspective, is a way of saying they are of the same species and connected to other forms of life through the earth itself—ideas that, for Jones, are a basis for emotional connection as well as the impetus driving anti-imperial moments of self-reflexivity among characters who question the aims and methods of imperial world ordering.

Clearly the question of imperial history was central to Jones' work and he felt that industrialization and technology had produced a tipping point in humankind's impact on the natural world. The devices of WWI had the capacity to void the landscape of all organic life. Moreover, with the dispersion of power within modern armies came a dispersion of the burden of ethical consideration. Though the poem regularly emphasizes the experiences of individual bodies, *In Parenthesis* is also aware of the broader material realities posed by emergent war technology at the level of population. In the preface to *The Anathemata*, Jones discusses what he terms "The Break," an expression he began using in the 1920s in reference to a perceived

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[50] Jones reminds the listener that England represents "things of very mixed derivation: things Christian and Roman together with things representative of the fragmented tradition of the Brythonic Celts and their non-Celtic predecessors concerning what the bards have called The White Island, The Honey Isle, the Island of the Mighty and of all that pertains to Britannia the Mother" (48).

deterioration in shared systems of signs in the arts and theology that he traced from the nineteenth century to the present moment (16). While *In Parenthesis* is certainly concerned with modernity's potential impact on the world of signs, it is also—perhaps more fully than any of Jones' other works—attentive to the material and ecological stakes surrounding emergent technology and systems of commodification. Jones was likewise aware that the war was economically profitable for directors of industry, which goes part of the way toward explaining the tendency for *In Parenthesis* to present soldiers as manual laborers and even, at times, automatons.[51] This is not to say that *In Parenthesis* does not engage with the "breaks" Jones perceived at the level of culture and symbol. It certainly does. It also, however, accounts for the material, economic, and technological developments that were concomitant with cultural changes as well as the embodied forms of knowledge that run counter to the accelerative processes of modernity.

Jones indicates that his analysis of the commodification of wartime ordnance also has some bearing on domestic patterns of industrial commodification and commercial consumption. A bombing officer who briefs the men on a new breakthrough in wartime technology, the Mills Mk. IV grenade, states that the device is "just on the market" and praises it in a way that evokes a marketing sales pitch; following his lecture, he gathers up his materials and leaves "like a departing commercial traveller" (13). In a connected episode during the battle at Mametz Wood, John Ball acquires a German grenade off the body of a fallen soldier, but ultimately decides to discard it:

> [S]omehow you don't
> fancy it and anyway you forget how it works. You defini-
> tely like the coloured label on the handle, you throw it to
> the tall wood-weeds (169).

In a footnote, Jones explains that this sequence is autobiographical. He remarks that he found the stamp or the label on the grenade visually appealing. His explanation connects the appeal of the label back to the allure that one might feel for exotic goods: "the sight of it gave me some kind of pleasure--just as one likes any foreign manufacture, I suppose" (222 n19). The passage operates with an informal language that is not in keeping with the rest of "The Five Unmistakable

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[51] See Riede (692).

Marks." Word choices such as "fancy" and off-the-cuff turns of phrase such as "[y]ou definitely like the label" are evocative of fleeting consumer desires that feel contextually disjointed from the overwhelming loss of life occurring in the immediate environment. References to a number of commodities work their way into the poem. Ball carries Bryant and May matches (23). The blond Lieutenant Jenkins who reminds Ball of a squire in a Paolo Uccello painting smokes Melanchrino No. 9 Egyptian cigarettes (5). Colloquialisms map the language of war onto certain domestic goods—such as the "gun-fire" tea served to the men before first parade (3). In addition, Jones alludes to the fact that explosive ordnance had a similar chemical composition to commercial fertilizers.[52] These comparisons thematically reiterate the treatment of soldiers by their countries as interchangeable commodities, much like war apparatuses with interchangeable parts. On another level, they broaden the stakes of the poem beyond the geopolitical specificity of WWI. Much as Jones' preface extends the reach of its argument to a broader environmental context, the connected logics Jones gestures toward between industrially-produced war ordnance and mass-produced consumer goods suggests the devastating potential of the latter.

Jones' outlooks on history and the political climate of the early twentieth century have been cause for debate, and it is important to pause over them. Several scholars, particularly Elizabeth Ward and Gareth Joseph Downes, have attempted to read *In Parenthesis* within the political context of the 1930s. Ward's controversial book, *David Jones, Mythmaker*, explores Jones' close, troubling connection to the Roman Catholic "Chelsea group," a rightist collective of Catholic intellectuals in London. Members of the Chelsea group were responsible for the publication of two politically-radical journals in the 1930s, *Order* and *Colosseum*, which were sympathetic to the rise of fascist regimes in Italy and Germany. Ward uses Jones' affiliation with the collective to argue that his views were protofascist. Downes similarly attacks Jones for his participation in the Chelsea group and levels claims of anti-Semitism at Jones' work, arguing that his poetry is perhaps as ideologically repellent as T.S. Eliot's most racially-charged work.

Much thinking remains to be done on the connection between Jones' work and the political developments of the twentieth century, but most scholars have disputed the claims initially put forward by Ward. Thomas Dilworth's "David Jones and Fascism" culls evidence from Jones' poetry as well as direct statements from personal writings and interviews to provide

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[52] See Vincent Sherry, "David Jones's *In Parenthesis*: New Measure," 377.

a convincing refutation of claims that would cast Jones as either anti-Semitic or pro-fascist.[53] Kathleen Henderson Staudt offers an equally strong case to Jones' detractors, accusing Ward of failing to see that not all Catholic conservatives necessarily held the same political outlooks. The claims put forward by Ward and Downes are compelling, however, and they speak to the need for further scholarship to address the particular placement of Jones within the larger assortment of conservative intellectual artists and writers working during the era. For the moment, considering the anti-imperialist and inclusive themes central to Jones' poetry, I am inclined to agree with Austin Riede's claim that Jones' "conservatism was based more on fears of mechanization, technology, and mass culture than any seriously considered political program" (694). I also, however, think that these temporary alignments warrant more consideration.

Co-Casualties: Loss and the Limits of Elegy

Before considering the ways in which Jones resists apocalyptic logics, it is worth examining how the poem tests the limits of apocalyptic and elegiac conventions in its cataclysmic final chapter, "The Five Unmistakable Marks," a striking poetic sequence that casts nonhumans and the landscape itself as co-casualties of the war. In her article "'Rats' Alley': The Great War, Modernism, and (Anti) Pastoral Elegy," Sandra Gilbert argues that the "relatively hopeful view of death" offered by the traditional elegy was radically and irreversibly transformed into "more nihilistic, indeed, monstrous visions" within the context of WWI poetry. According to Gilbert, the "resurrected pastoral imagination," arrived at through the comfort of natural surroundings, which "restore[d] the mourner" in traditional elegies and allowed the bereaved to achieve a belief in the "dead friend's redemption," was replaced by the imagery of barren and infertile landscapes that denied any sense of consolation (193). Gilbert's argument draws from the influential work of Peter Sacks on English elegy, which similarly grapples with the "refusals" of WWI poetry (and Modernism in general) to offer "renewed figures of consolation" for "readers at large" (306-7). While Jones certainly features the "monstrous visions" Gilbert refers to, in many ways he stands as a counterfigure to despair. Though *In Parenthesis* employs some of the conventions of what Gilbert would term (anti)pastoral elegy—such as ruined landscapes, a denial of regeneration, and voided fertility rituals—the poem

[53] It is also worth noting that Jones directly admitted his initial views on Germany during the 1930s were wrong. See William Blisset's *The Long Conversation: A Memoir of David Jones* (12).

actually insists on the possibility of redemption and renewal. Even with its apocalyptic frameworks, *In Parenthesis* maintains that the course of human (and natural) history could still be altered. Perhaps Jones' most substantial reversal is that of the ruined landscape. I agree with Charles Andrews' argument that Jones attempts to "transubstantiate" the "war-torn trenches" into a symbol of community (88). I would add, however, that *In Parenthesis* does not use landscape only as a spatialized metaphoric correlate to physical and psychic human trauma. Rather, using the emotional and morphological similarities between humans and nonhumans and humankind's connection to the landscape itself, Jones attempts to catalogue the toll of WWI on a range of life forms, including plants, animals, and even inorganic matter.

The poem regularly attends to the way in which modern war and industrialization have compromised traditional sites of signification and consolation that relied on associative connections to the natural world. Jones resists a signifying economy that adheres to assumptions of nature's reliability and separation from human history. The poem draws profound parallels between human and natural trauma. It attends to the fact that while natural destruction may trouble traditional metaphor, it also invites humankind to imagine itself as deeply connected to nature in ways that run counter to the standpoints of technocratic modernity. This explains the way in which the poem extends mourning practices to natural and hybrid objects, such as the abandoned rifle which Ball places under a tree to positionally echo sacrificed soldiers, as well as the text's inclusion of hybrid figures such as the Green Man and the Queen of the Woods who unsettle the divide between nature and culture. While *In Parenthesis* may appear to adhere to the emerging conventions of (anti)elegy, it would seem, upon consideration, that it is actually repositioning the very status of the bereaved speaker within the natural world itself.

In Parenthesis regularly returns to the idea that modern war's threat to the past's symbolic order partially rests in its capacity to radically alter natural conditions. The poem is also sensitive to the fact that a broad range of cultural signs and iconographic symbols derive from nature and humankind's observations of the natural world. It refers to the observance of sequential temporal patterns (such as seasonal change and diurnal time), within religious and scientific discourses. It is nature's very familiarity that places it at the center of practices of divination and foretelling (which Jones alludes to in Part 7 with references to horoscopes and zodiac signs) [159]. However, WWI calls the stability of natural world into question. The poem describes war trenches and shell craters as lacerations in the landscape, as at the conclusion of

Part 4, which ends with an exchange of artillery volleys. Even in instances where the land is not directly altered through the impact of shells (such as trench systems or glacis, artificial slopes constructed for advantage in combat), Jones presents the earth itself as deserving of ethical consideration. He even draws comparisons between stones and soldiers, the former of which can, like human war casualties, rest "split and dislodged…for many yards" around shell craters (20).

Importantly, the early pages of the "The Five Unmistakable Marks" contain a competing impulse that runs counter to the more ecologically evocative passage that characterize the latter pages of the chapter. Early on, Part 7 attempts a familiar construal of nature as unknowing of and fundamentally separated from human progress. It accomplishes this by incorporating a variety of non-human animals engaged in behavior that contrasts sharply with the actions of the soldiers on the field. The first instance of this occurs when the speaker describes birds flying safely above the trajectory zone of artillery shells. The birds fail to alter their behavior despite the violence being enacted below. Though soldiers can hear their "chattering" over the chaos, the birds do not evoke a sense of natural indifference, which would be in keeping with the common grammar of WWI poetry; rather, the tranquility of their calls "counter[s] the malice of the engines" and the sounds of death (154). The language found in Jones' explanation that the birds inhabit "regions of air above" the reach of military violence echoes the Genesis creation myth. As Laurie Shannon points out, passages like Genesis 1:26 group specific animals into particular elemental spheres, attributing to them a sort of "quasi-proprietary domain" (10). Though the passage is traditionally used to ground theologically-based claims to human exceptionality, at this particular point in *In Parenthesis*, Jones uses it to locate a natural order comfortingly outside of human control. Ball repeats this later in Part 7 when his focus moves from the sky to the earth and he notices insects, which the poem describes as "all manner of small creatures, created-dear things," moving about "quite comfortably" on top of the soil (157). The poem is unable to maintain most of these ideological boundaries between nature and human history, however. When the focus shifts to the events in Mametz Wood, the world is thrown into chaos for a range of species as German troops, zoomorphized as unicorns, engage with the British regiment:

> [...] foxes flee, whose warrens know the shock,
> and birds complain in flight--for their nests fall like stars
>   and all their airy world gone crazed
> and the whole woodland rocks where these break their horns. (168)

For Jones, the possibility of renewed human hope involves a broader horizon of community that encompasses the landscape and a range of nonhuman species. The poem's final apocalyptic pages at the First Battle of the Somme deconstruct traditional boundaries between nature and culture. They give voice to human suffering without losing sight of the suffering of other forms of life.

Early in Part 7, Ball attempts to imagine a natural world comfortingly outside of human history by drawing attention to birds flying safely above the volley of artillery shells below. Significantly, in the stanza following this description Jones alludes to a verse from Psalms linked to human dominion and husbandry, "But he made them a little lower than the angels and their inventions are according to right reason" (154). The line alludes to Psalms 8:5-6: "For thou hast made him a little lower than the angels... / Thou madest him to have dominion over the works of thy hands; thou hast put all things under his feet." Jones' variation on the psalm maintains the original's emphasis on the chain of being but includes an addendum: a self-conscious reference to reason. The passage evokes arguments for human exceptionality that excuse humankind's subjugation of other species by gesturing toward its greater capacity for reason. It is here that the poem undercuts its previous resolve. Jones' aside to human rationality is shot through with irony. The graphic depictions of battlefield injuries that permeate the final pages of the poem along with the disdain for modern war technologies evident throughout the passage do not suggest that the war apparatuses are a product of "right reason." It is also worth noting that "The Five Unmistakable Marks" initially positions humankind as outside of nature, referring to species that are safe from the unfolding drama to indicate such a demarcation. This stanza places humankind within an interspecies order, albeit an anthropocentric one. Despite the passage's associations with husbandry and human sovereignty, it still imbricates humans within nature. Divine dispensation may afford humans an authoritative power over its environment and fellow creatures, but humankind is nonetheless dependent upon them. These opposing impulses—simultaneous attempts to view nature as separate from humankind and to view humankind as a species held sovereign over the world it is nonetheless dependent upon—characterize the first pages of the poem's final movement, but the contrasts ultimately highlight the difficulty in maintaining a belief that nature exists independent of human progress, even from a theologically-grounded perspective.

This reading is at odds with Thomas Dilworth's interpretation of this particular section. Analyzed on its own, one might be able to recognize a belief that "the artillery fire is an expression of the rational 'rectitude' of making" and that the soldiers are "reduce[d] to the condition of the damned who nevertheless recognize goodness" (*Reading* 81). When considered in relation to the description of animal behavior and serenity directly preceding it, details that clearly anticipate the poem's inclusion of Psalm 8, it seems more likely that Jones is ironically juxtaposing the behavior of nonhuman animals to the exaggerated violence produced by the war machinery around him. It is also worth noting that Jones' claims to human exceptionality do not rest in rationality, but rather in the humankind's "extra-utile" capacities. His essay "Art and Democracy," which I discuss in more detail below, puts forward such a viewpoint.

Jones is interested not only in animal species, but also in the impact of the war on plant life. The passages on Mametz Wood accord with a comment Jones would make later in his life: "Wounded trees and wounded men…are very much an abiding image of my mind as a hang-over from the War" (qtd. in Fussell 145). The poem parallels sustained descriptions of human causalities with an emphasis on flora. In one such passage, as Ball approaches the German trenches, he encounters "tangled oak and flayed sheeny beech-bole, and fragile birch whose silver queenery is draggled and ungraced and June shoots lopt and fresh stalks bled" (165). The passage is evocative in its attempts to draw an affinity between dying vegetation and dying men. The relationship is again indicated later in Part 7 when machine gun fire bursting from foliage castrates several soldiers while simultaneously destroying surrounding plant life. Jones is careful to juxtapose the castration of soldiers with the destruction of "stamen" and "ovary leaf," a fact that prompts the reader to note resemblances between human and plant physiologies (170-171). The passage echoes a culminating moment at the end of Part 2, "Chambers Go Off, Corporals Stay," when a fascinated and frightened John Ball ("his senses highly alert, his body incapable of movement or response") first observes a long-range artillery shell destroy vegetation with "the dissolving and splitting of solid things" and reflects that the technology is "some mean chemist's contrivance, a stinking physicist's destroying toy" (24).

In Parenthesis persistently compares the material, bodily sacrifice of soldiers for the state with the material transformation of nature for the war effort. While the poem certainly uses the landscape to draw attention to the suffering of its human actors, its asides to environmental loss serve purposes beyond the poem's metaphorics. Jones comments on the use of wood in trenches

and for various structures, but he also notes the way in which it was used in mass-produced items like gun stocks. England's call for timber resulted in mass deforestation in Europe. Conflict timber was required at the front for a variety of purposes, and even for infrastructure that extended beyond the frontlines. The Allies created two regiments of forestry engineers to regularly supply the front with timber from French forests. Due to submarine warfare, which restricted the importation of foreign timber, Britain's forests dwindled to cover less than 5% of the country's landmass. This crisis led to the passing of the Forestry Act in 1919, which "advocated intensive government involvement in afforestation and timber production" (West 271). To put it bluntly, Britain expended much of its population and natural resources in waging the war. Within the pages of the poem, Private Ball encounters bundles of war timber for parapets several times as he travels from training grounds in Britain to the frontlines in France, suggesting a connection between the production and movement of soldiers and the production and movement of timber. Jones creates similar parallels rather frequently, such as in his allusion to Isaiah 57:5 ("And under every green tree") at the beginning of Part 7. The verse refers to the infanticidal sacrifice by the Israelites to Moloch and Baal. While the passage highlights the sense that the soldiers' deaths represent a sort of nationalistic sacrifice, the careful descriptions of ruined trees throughout this section of the poem also inflect the verse with an environmental register. Jones evokes Isaiah 57:5 at the end of Part 7 when a wounded John Ball observes dead and injured men scattered along the forest floor: "The trees of the wood beware each other and under each a man sitting" (184). In this moment, an injured John Ball feels an affection for his rifle and forces a comparison of the stock of the gun with the wood used in weapons from past historical moments, such as an arbalest. He places it under an oak where it will either decompose or be found by a future tourist to the "Devastated Areas" (183; 186). The poem's paralleling of damaged trees, injured soldiers, and wooden gunstocks positions both trees and men as sacrificial figures.

Jones' apocalyptic take on the Battle of the Somme suggests that emergent technologies represent an unprecedented incursion of human history into natural history and, therefore, that traditional metaphors of combat no longer capture the degree of its violence. It is in Part 7 that St. Francis' Sister Death is described as a prostitute who "stalks" with "strumpet confidence" and embraces the men indiscriminately of how they "howl for their virginity" (162). The passage implies a deviation from natural order, since Sister Death is pulled from St. Francis' "Canticle of

the Sun" (sometimes referred to as "Canticle of the Creatures"), a work that thematizes the interconnectedness and harmony of creaturely life. This deviation is implied with the way in which the soldiers who endure causalities—often death or castration—are described in terms associated with harvesting (they are "reaped" and "mowed," for example). As Staudt puts it, Part 7 employs these agricultural terms to contrast the men and their fertility, "which belongs to the natural order," with the new regime of "technological warfare" (91).

In a connected passage, Jones includes a list of battlefield casualties and attempts, with self-conscious difficulty, to compare the recent losses to a number of historical and literary correlates. In elegizing Aneirin Lewis, for example, Jones notes that Lewis' body is "more shaved…to the bare bone" than Yspaddadan Penkawr, of the *Gododdin* (155). He bitterly adds that "[p]roperly organized chemists" in the modern age can devise more "riving power" than Twrch Trwyth, the mythological boar of Arthurian legend, which for Jones "typif[ies] the wrath of the beasts of the earth" (155; 211n40). Thus, the technology used in the First Battle of the Somme facilitates a historically unprecedented escalation of wartime violence. These additions from "The Five Unmistakable Marks" echo Jones' retrospective consideration of World War I from the preface of *In Parenthesis* which, as mentioned above, identifies accelerations in processes of global capitalism and industrialization that mark a significant evolution in historical progress. Jones contrasts what he sees as the "intimate, continuing, domestic life of small contingents of men" found during the early months of the war—along with the strong interpersonal bonds it formed and its associated "connect[ion] with a less exacting past"—to the sense of change that came with the war's later years: "How impersonal did each new draft seem arriving each month, and all these new-fangled gadgets to master" (ix).

The passages of *In Parenthesis* that display soldiers as automatons are regularly linked with the realities of new war technologies, such as Pvt. Ball's eerily-detached grenading of two enemy soldiers in Part 7 as well as the poem's descriptions of artillery gunners, who fire "by map reference," in the preceding pages (168). Though Jones' preface argues that the war became more "impersonal" and "mechanical" after the Somme, Part 7 suggests that technocratic war was already well underway. The poem portrays soldiers as though they, too, were machinated, ironically referring to their bodies as mechanisms throughout Part 7. These terms hold significant meaning within Jones' work. In "Art and Democracy," he differentiates between humans and animals by claiming that only humans have access to culture and symbolic representation.

Regardless of this distinction, he still recognizes that non-human animals hold rights within what he refers to as "the hierarchy of being" (89). When humans act without "dedication," their behavior is akin to nonhuman actions; in this case, "the utile is all [they] know…and [their] works take on something of the nature of the works of the termites" (88). Stripped to the status of automata, the men in Part 7 act outside of the "hierarchy of being"—even the insects Ball notices when ducking to avoid German fire act with more productive purpose. *In Parenthesis* attempts to assuage its uneasiness with war technology and the temporal estrangement that accompanies it by using the past and mythology to make sense of the present moment; however, the accoutrements of modern war do not comfortably lend themselves to metaphor or romanticization. Jones addresses this directly in his introduction, when he questions if the romanticized objects of war represented in the traditional index of metaphor can be comfortably "equated" with a contemporary soldier "adjusting his box-respirator" (xiv). Within the poem, as the poet himself recognizes, allusion often borders on the hyperbolic when it attempts to juxtapose myth and history with modern events. The poem suggests that the soldiers do not even recognizes themselves as agents in the war that they take part in, moving with sensory estrangement, as when Ball "move[s] unchoosingly as part of a mechanism" (19).

Deep Bonds and Deep Affinities: Resisting Apocalyptic Logics

The thematic strands of *In Parenthesis*—ecocidal technologies, overlapping temporalities, local action and global effects, individual agency and historic unfolding, among others—make it a remarkably resonant text during the time of the Anthropocene. The poem pushes against generic conventions in order to offer a representation of WWI that accounts for human suffering without necessarily privileging the human body as the sole site of war trauma. This of course offers a more precise view of the scope of the violence, positioning both humans and nonhumans as victims of the conflict, but it also reemphasizes the creatureliness of the soldiers themselves. Primarily, the body is presented in one of two ways. The poem describes the human body during exhaustive labor or while performing repetitive motions as a mechanism utilized by the nation for the war effort. At other times, particularly during intimate moments with other soldiers or while observing nonhuman behavior, *In Parenthesis* presents the body as a creature itself, one form of being within systems of interrelation. This model of being links a sense of agency with an awareness of one's creatureliness, a notion that in many ways inverts the Cartesian model of animal-as-automaton. Encounters with nonhumans (or even the simple act of

observing them) stand as self-reflexively charged moments within the poem that run counter to the mechanized logics of modernity underlying both the war and the modern moment itself. If the poem is correct in suggesting that, for at least some human observers, direct engagement with nonhumans has the psychological force to momentarily suspend some of the more dehumanizing and alienating aspects of modernity, then the biological registers of the Anthropocene—its transformation of the biosphere into something unsuitable for other forms of biological life—are relevant to firsthand knowledge of human identity itself. At several points throughout *In Parenthesis*, the nonhuman provides insights to a sense of interrelationality that deterministic outlooks obscure or upend.

In his work on apocalyptic history, Michael André Bernstein posits a number of critical interventions that resist historically determinist models of time, which attempt to bring historical disasters into a logical equilibrium by framing them as inevitabilities. He argues that teleological models that frame a cataclysmic event as a culmination of an unavoidable historical trajectory deny the occurrence its "event-ness" (7). Moreover, determinist models of time are questionable not only because they distort the truth of an occurrence through reductionist logic, but also because they cast victims as somehow predetermined to die at a particular moment, thus occluding possible futures they may have attained and rejecting incommensurable aspects of their pasts that have no bearing on the disaster that caused their deaths. He also notes how the time preceding a historical cataclysm is subsequently interpreted as portentous of the event that followed; he refers to this interpretive orientation as "backshadowing." While backshadowing might stand as a comforting practice to those living in the aftermath of a historical disaster, because it brings a kind of comprehensibility to the event, it is an ethically unsound interpretive model because it operates with a logic of victim-blaming; backshadowing attempts to read the time leading up to a disaster as an expressly legible series of events—which suggests that victims should have been able to see the portents preceding their deaths and, therefore, have avoided the disaster.[54] "Sideshadowing," a concept Bernstein developed in collaboration with Gary Saul Morson, provides a counter-practice to backshadowing that attempts to highlight the complex

[54] Bernstein explains backshadowing and the victim blaming it entails thusly: "Backshadowing is a kind of retroactive foreshadowing in which the shared knowledge of the outcome of a series of events by narrator and listener is used to judge the participants in those events *as though they too should have known what was to come*" (16; emph. in orig.).

potentialities of a given moment and the multiple pathways presented through human free will. It resists unidirectional models of time and attempts to reinstate a sense of singular "event-ness." Sideshadowing accounts for the "unrealized alternatives" (8) of an event. Bernstein points to Robert Musil's unfinished *The Man Without Qualities* as an example of a text that operates with a logic of sideshadowing in its refusal to accept deterministic understandings of WWI. Bernstein describes how multiple agents are at play in determining the direction of the conflict, all while weighing potential outcomes and imagining varying courses of events, "[r]ather than one homogeneous authority planning everything" (100).

In Parenthesis offers moments that would fall under Bernstein's proposed definition of sideshadowing (its characters entertain different historical potentialities) as well as instances in which Jones explores facets of individual experience that would be obfuscated by backshadowing logics. Jones' prosaic representation of the lives of soldiers invites the reader to consider not only the position of the characters within a devastating conflict, but also dimensions of their experience that could not be teleologically aligned with their involvement at the Somme. Regularly, these incommensurable elements involve their emotional bonds with both humans and nonhuman animals, which, as I discussed earlier, I refer to as interrelational sideshadowing. Though charged moments of emotional connection do not expressly pose alternative courses of history, they do evoke a sense of narrative multivalency and possibility. The reader gets the sense that the characters' lives and relationships could have reached a fuller maturation or assumed alternate configurations if events had played out differently. At the very least, they posit alternate, cooperative forms of being that contrast with the alienating experience of the war.

These themes are present from the work's outset. The poem's frontispiece thematizes the enmeshment of the human figure at its foreground, the nonhumans surrounding him, and the landscape itself (see fig. 2). Austin Riede's interpretation of the image emphasizes the accoutrements of war present in the image, arguing that the blending of the human form with the objects of war plays on the poem's theme of soldier-as-automaton. The injured body, from Riede's perspective, is a site where "the violence of destruction has been redoubled in the violence of reconstruction, making this organic human being into a mechanism of war" (702). The technology, then, acts as a kind of prosthesis that not only supports but partially constitutes the injured body. He also notes that "the tree branches reach through the helmet into a head whose vacancy, signaled by its empty eyes, suggests that the soldier is an automaton,

mechanized and controlled by outside forces." While I agree that the frontispiece extends the poem's theme of soldier-as-mechanism, I think that the nonhuman life within the image stands as important counterfigures. While the poem presents the soldiers as automatons, it often suggests that their individuality is never wholly given over to the forces that act upon and through them. The stylization blurs the boundaries of embodiment to the point that it is often difficult to discern discrete figures within the image; if the technology of war is part of the soldier's identity, then the nonhuman, creaturely life around him is part of that identity as well.

Fig. 2. Frontispiece to *In Parenthesis*

Jones considered himself foremost an artist, and more critical work deserves to be completed on the rich parallels between his pictorial work and poetry, particularly his artwork in the years immediately following the publication of *In Parenthesis*. Much of his early artistic output consisted of *sur-le-motif* landscapes and seascapes. Though Jones did not produce many paintings during the last years of the 1930s, his '40s work is marked by an ascendant personal style that consisted of increasingly complex compositions featuring identifiable figures from religion and mythology. It is during this time period that many of his studies attempt to anachronistically blend images of WWI tommies with Arthurian, Welsh, and Celtic mythological personages. Alongside the tommies and mythological figures are, almost always, nonhumans. Like the frontispiece, Jones' pictorial art from the '40s thematizes the imbrication of nonhuman

animals within the context of various sociopolitical histories. Paul Hill describes the figures in Jones' artwork as "transhistorical witnesses" (qtd. in James 31), but—considering the violence faced by these creatures, both threatened and enacted—it would be appropriate to substitute "victim" for "witness."

One of Jones' first images after the publication of *In Parenthesis*, The *Mother of the West* (1942) attempts one of the artist's most complex distillations of several of his driving themes—Rome's imperial dispensation, the advancement of war technology, and the entwinement of human history and natural history (see fig. 3). The body of a distressed wild animal stands at its center. The painting presents Ilia, the eponymous mother of the west, giving suck to an injured ram. Jones was critical of the reverberations of Roman expansionist projects in empires throughout history, but he recognized that the empire presented the necessary historical preconditions for the development of Christianity. It is from this worldview that he presents Ilia, mythological mother of Romulus and Remus, nurturing an *Agnus Dei*. The background presents a landscape devastated by siege engines, and both the weapons and the surroundings call to mind Jones' wartime sketches of war ordnance and no man's land during his time at the front. The composition of the birds flying over the dead bodies and the ruined chapel contain visual echoes in other sets of images from the decade that contain strong environmental underpinnings and highlight threatened and emaciated animal bodies.

Fig. 3. *The Mother of the West*, 1942

Jones' other paintings from the decade consistently take up similar themes. The less dramatic *The Lord of Venedotia* (1948), created six years after *The Mother of the West*, exhibits a similar conceptual makeup. The painting examines the remnants of Roman and Christian histories within a landscape. The background is populated with the domestic animals utilized in agricultural labor, ponies and goats in particular. The lord at the foreground of the painting stands with a hooded falcon perched on his forearm, evoking histories of hunting and gamekeeping. Like the human figure in the frontispiece to *In Parenthesis*, the lord is difficult to distinguish from the landscape. Jonathan Miles and Derek Shiel read the lord as a figure of "noble vulnerability" and "cultural imperilment" (220). I would add that if the viewer understands the painting to represent historical decline or cultural deterioration, then Jones' emphasis on nonhuman life also suggests the stakes for animal populations within the unfolding of human history.

Vexilla Regis (1948) (see fig. 4) offers an interesting example of a painting that considers the situatedness of nonhumans within human history without using any human figures at all.[55] Jones considered it one of his best works. In a letter from 1949 to the purchaser of the painting, addressed as Mrs. Ede, he provides an explicit outline of his interpretation of the work. Jones' gloss explains that the three trees in the center are meant to evoke the Crucifixion and the painting is, more generally, meant to deal with the fall of Rome. He explains that the horses represent "the horses of the Roman cavalry, turned to grass and gone wild and off to the hills" (Hague, *Dai*, 150). Upon examination, the viewer will see that the tree on the right, the tree associated with the impenitent thief in Christian myth, is not actually a living tree at all but rather a Roman standard supported by a column. Unlike the trees, the column is not rooted but supported by pegs anchored in the earth. The artificiality of the beam is contrasted in the living trees surrounding it just as the Roman aquila is contrasted by the living birds nesting in the background. The druid circle along with other architectural remains suggest the persistence of nature alongside human history. The painting is apocalyptic—there are apocalyptic undertones in the notion of animals utilized for the military left to fend for themselves with the dispersion of Rome's armies. It considers the reverberations of human action within natural history and in nonhuman lives. These points of connection between human and natural history share close correlates to the points of intersection that Jones explores throughout *In Parenthesis*.

[55] *Vexilla Regis* was produced while Jones was undergoing psychiatric care following a nervous breakdown. Jones' personal writings remark that the psychiatrist treating him "made me go on" (Hague, *A Commentary*, 151).

Fig. 4. *Vexilla Regis*, 1948

These paintings are all complicated works with distinct, layered meanings. An impression common to all of them, however, is that nonhumans suffer within human history. There are many other examples I cannot cover—the cat in *Guenever* (1940) running from a falling Launcelot, the howling canids of the violent *Britannia and Germania Embracing* (1941)—but it is clear that these paintings extend the themes Jones was concerned with during the drafting of *In Parenthesis*. Unlike arguments that highlight automation in *In Parenthesis*, I do not think that these works attempt to diminish the importance of human agency, but rather to show the resonance of human action for populations beyond the human, a fact that can offer important nuance to readings of *In Parenthesis* itself. Moreover, there is something intangible and fluid about these nonhuman figures that contrasts with the rigidity of their human counterparts. They pose other orientations to the world that might be useful for the human figures to consider; though, rather tellingly, humans in Jones' paintings from this stage in his artistic career rarely meet the gaze of the animals surrounding them or even seem to be aware that they are there.

Despite the prevalence of imperiled and dying animal figures in *In Parenthesis*, it would be reductive to claim that the animal body stands solely as a casualty of human history. In fact, nonhumans often pose models of communal belonging. One of the most striking examples occurs at the end of Part 3 ("Starlight Order"), when Ball assumes night watch duty after his battalion arrives at the Richebourg Sector, following a grueling march in the December cold. As

he keeps watch over his sleeping companions, Ball listens to a group of rats feeding on corpses in no man's land. In a move that is out of keeping with the bulk of trench poetry, *In Parenthesis* does not use the rats to emblematize the cruelty of nature to the suffering of humankind. Rather, Ball recognizes that the rat (rats are referred to in the singular form throughout the passage) acts only "by a rule of his nature" (54) and therefore outside of human moral frameworks. He also admires the pathways the rats construct to navigate no man's land, using only "cunning paw" in place of "trowel" to construct passageways through the muck that are much more serviceable than the polluted and waterlogged British trench systems.

Like the communities of men fighting the war, rats and other creatures in *In Parenthesis* operate collaboratively. The rats constitute "carrying-parties" (54) and maneuver through the war-torn landscape, similar to men on fatigue duty. The rat drags away portions of "our corruptions"—an interesting substitution for "corpses" that, unlike many of Jones' word choices, seems to level moral criticism at the conflict—and "redeem the time of our uncharity, to sap his own amphibious paradise." In this passage and elsewhere rats present a disciplined, collaborative order separated from a militarist context, a model of being that preserves the communal bonds Jones admired about militaristic life but one that remains divorced from the deteriorative modern process he abhorred. This passage typifies the kind of interrelational sideshadowing that arises rather frequently in Jones' work. The rats offer a different order of being from humankind, one that is directed without being destructive. A similar interrelational sideshadowing arises in Part 5 ("Squat Garlands for White Knights") when the insect-like buzzing of distant fire at the Somme is offset by the peaceful humming of bees at the presbytery of a village priest (118).

Along with intraspecific interaction is the presence of interspecies labor and bonding. The poem discusses nonhumans such as chickens and horses used in French agricultural practices. Mules and other horses are used in the British military as part of the war effort. Often, the characters of *In Parenthesis* express fondness for the animals around them. Part 3 features the repeated calls of "good night" (29) from passing gunners to delivery men and their horses as the men unload supplies from a wagon. The valedictions echo the "Good night, ladies" (II.172) of *The Waste Land*, particularly since many of the horses have feminine names. Within Eliot's poem, Ophelia's song feels vaguely predatory, arriving at the conclusion of a conversation in a pub involving infidelity and abortion. Jones, however, uses the song to indicate the affection the

men hold for one another as well as the animals involved in the war effort. Jones was an admirer of *The Waste Land*, but his aims with using shared cultural referents feel entirely different.

While domestic animals in *In Parenthesis* feature as co-laborers, and wild animals and insects proffer de-politicized order and community, nonhumans also often serve as simple reminders that the soldiers themselves are humans with creaturely needs. In Part 2 of the poem, the men have to abandon a barn they have been using for shelter as they continue their march toward the front. The narration remains for a moment in the barn after the men have departed to juxtapose the renewed quiet with the cacophony that has just passed. In the stillness, all that can now be heard is a "kindly creature's breathing" and the occasional "knocking" of the "animal's hoof against her wooden stall" (16). The word "kindly" links this passage to night artillerymen in Part 3, who are going about some "regularly spaced" and "systemed task" as they ready equipment "through live, kindly, fingers" (28). "Kindly" forms an associative connection between the "kindly creature" in the barn that helps create a sharp contrast between the unnaturalness of the war ordnance and the creatureliness of their bodies, a motif that gets taken up again in Mametz Wood when Ball is hit in the leg by machine-gun fire that is "disproportionate in its violence considering the fragility of us" (183).

The term 'kindly' is connected with nonhumans in other sections of the poem as well. In Part 4, the men listen for an early-morning bird to make a "kindly cry" (61). In Part 7, men lying beside one another in an attempt to avoid artillery fire are compared to friends who lie "on daisy-down on warm days / cuddled close down kindly close with the mole / in down and silky rodent" (157). Jones seems to be drawing from modern definitions of 'kindly' as well as the layered meanings that form its etymon, 'cundely,' which the *Oxford English Dictionary* defines as "natural (in various senses)," as well as "in keeping with the natural constitution" or "in accordance with nature." Asides to animals, either when the narration pulls away from humans to consider the comparatively peaceful presence of a nonhuman (such as the animal in the barn) or imagined scenes where men, in more peaceful settings, would have a closer connection to nature as well as their own creaturely constitutions (such as the people Ball imagines lying on "daisy-down" as the moles tunnel beneath them), typify the kinds of interrelational sideshadowing Jones utilizes throughout the poem to pose other historical possibilities. These asides also stress the unnaturalness of modern processes by casting them as inimical to the physical and emotional makeup of humans themselves.

Nonhuman asides throughout the poem relate to the desire of the soldiers for a meaningful sense of community, a need that modern military life during the war can only partially meet. The extent of the casualties as well as the vagaries of military management disrupted what Jones characterizes in the preface as "intimate continuing, domestic life of small contingents of men" that marked the early years of the war (ix). The section of *In Parenthesis* that most closely considers the possibility of community during the war arrives during Part 4 ("King Pellam's Launde"). The setting of Part 4 is introduced during the closing of Part 3—when Jones discusses rat "carrying parties" and presents them as a nonhuman correlate to the communities of soldiers around them. This portion of the poem occurs in the Richebourg Sector, an area of France that provides one of the only instances in the entire poem where Jones provides an exact place name. Before I discuss the significance of community in this section, it is worth exploring the particularities of this section and their significance.

In Parenthesis indicates that soldiers encountered the alienating aspects of the modern British army not only in the way it treated them as interchangeable parts of a mechanism but also in the way it oriented them to the landscape itself. This alienation is apparent both in the dialogue of soldiers and in the poem's use of grid reference points. The abstraction of military grid reference systems is coupled with the disorientation that comes from marching for miles as part of an expeditionary military force. *In Parenthesis* frequently employs second person to grant an immediacy to the sense of estrangement from oneself and from one's environment, such as in sections when troops have been marching for miles toward the front: "It was not that the look of the place was unfamiliar to you. It was at one to all appearances with what you knew already. The sodden hedgeless fields—the dykes so full to overflowing to bound these furrows from these, ran narrow glassy demarkations…[T]he same astonishing expanse of sky" (18). At the poem's midpoint a Welsh character referred to as Dai Greatcoat prays to the head of Bran that the British military will no longer take part in expeditionary wars (82). His speech points to the distinction between defending one's country from invasion and acting as an expeditionary force in a foreign nation. The sections leading up to Dai's speech model the mental and physical consequences for soldiers who comprise what he terms an emigrant army. While marching, the regular change in landscape does not highlight the distinction of place, but rather creates an impression of indistinguishability.

Ironically, it is when troops are trying to navigate the countryside that the grid coordinates from HQ are especially confounding and maps do not seem all that useful for navigation. Typically, the men have to rely on guides familiar with a given area. When Ball's platoon gets lost on its way to the front in Part 2 after getting separated from their guide, a surly officer from Brigade HQ gives them directions and remarks: "You've lost your guide—you can read the map, anyway, it's a plumb straight road—you've three hundred yards to the communication trench" (40). The men get lost before they even arrive in France. While travelling from training camp to the town where they will disembark—Southampton, though it is not called by the name—the march is halted. The poem's speaker remarks on the "high figure in front of the head of the column" and the rain "on the transparent talc of his map case" (5). The passage continues, "The halt was unexpected. / The bastard's lost his way already. / Various messages are passed" (5). Later, the same men are unfamiliar with the south of England, and they have to ask locals for directions to find their way.

If Blissett is correct in asserting that technical language dehumanizes the human figures of the poem, one might pose a similar argument that the persistent grid coordinates erase the particularity of certain locales. Maps and grid coordinates arise most frequently in the first four parts of the poem as the troops progress from initial December embarkation to the front lines in France. The idea that military maps hold more value for strategists at HQ than the actual troops attempting to navigate foreign terrain becomes a running theme throughout the first sections of the poem. At the beginning of Part 2, 500 men of the battalion train behind the lines in France and wait for marching orders. The men detailing orders from HQ regularly have to forgo the numerical identifiers so central to their own spatialized construal of the war in favor of more concrete points of reference. For example, one man detailing orders from Battalion Headquarters begins an explanation of troop movement to Captain Gower by saying "the Battalion must be assembled at Z 19 a 23" but then, apparently noting Gower's confusion, clarifies by simply stating "there—by the brewery" (14). This exchange is echoed later in the same section, after the men have begun marching, and a Company Commander, after receiving orders from a cyclist from HQ, states to a sergeant: "we march by sections after we pass—X 18 b 5—four" but then abandons grid identifiers to simply state: "yes, after we pass the large / house—there—by the bend. You see it—no—yes, that one" (21). While at the rest area before they begin their march to the front, Private Saunders, who has grown familiar with the grounds, thinks that their

destination, now only known as a map coordinate, has "all the unknownness of something of immense realness, but of which you lack all true perceptual knowledge. Like Lat. 85°N.—men had returned and guaranteed you a pretty rum existence" (16). The fact that he himself uses geographic coordinates in his private thoughts rather than simply calling the North Pole by name is suggestive of the associative connections that foot soldiers drew between grid systems and a sense of alienation as well as the way that they internalized systems of mapping themselves.

Despite the poem's critical take on military mapping systems, Part 4 reflects the capacity for visual representations of place to emphasize singularity. The first edition of *In Parenthesis* included a map, drawn by Jones, labeled "The Richebourg Sector," where most of Part 4 takes place. Part 4 contains what are arguably the poem's most sustained representations of homosocial bonding. As Ball's platoon approaches the sector, they sense the community of soldiers who have already been in Richebourg for some time, "[you] sense here near habitation, a folk-life here, a people, a culture already developed, already venerable and rooted" (49). Despite the title of this section of the poem, which evokes the waste land of Arthurian legend, Part 4 also contains the strongest sense of immersion, of connection to place, of any sequence within *In Parenthesis*. The emphasis on locality is strengthened by Jones' employment of place names. Most sections of the poem avoid naming the specific towns and villages they describe. Here, however, the reader knows that it is specifically Biez Wood that prompts Pte. Ball's reflections on the centrality of forests within various mythologies, religions, and folk traditions. The speaker ironically remarks that "Draughtman at Army [HQ] made note on a blue-print of the significance of that grove as one of his [the Germans] strong-points (66). In a connected passage, men on fatigue duty tasked with reconstructing trenches pass a point where the fire-trench cuts through a paved road. It is a useful waymark for memorizing the layout of the sector. It is also a place that requires extra defenses: "[it was] a place of significance to drawers up of schemes, a pin-point of the front-system known to the Staff. They typed its map reference on their orders in quadruplicate" (76).

Jones' ambivalence toward the question of maps and mapmaking is most focalized in his representations of the Richebourg Sector. This section of the poem in particular presents the reader with contradictory modes of mapping. Prior sections of *In Parenthesis* that align military grid maps with other forms of numerical data used by the military to designate personnel and war ordnance show the capacity of maps to erase the particularity of location in much the same way

that dehumanizing technical language can enact a kind of linguistic violence against individual identities. Jones' map in Part 4 shares commonalities with the maps created by men employed as map-drawers for Army H.Q. Its purpose, however, is not to serve as a tool for military strategists but rather to illustrate the locality occupied by a close-knit community of soldiers who found a momentary "folk-life" during a particularly dehumanizing historical moment. The place names and local markers featured on the map are striking within the context of a poem that, in keeping with the experiences of many soldiers during the war, casts the reader into a world that purposefully obfuscates locality and particularity.

The theme of community emerges at the start of Part 4 by the emphasis that this portion of the poem places on routine interactions between soldiers. The reader is presented with the morning routine of those at the Richebourg Sector. There is morning Stand-To; the eucharistic division of food and supplies; and phatic exchanges of varying relevancy to the war. Part 4 does not feel entirely quotidian, there is an instance where men die during incoming barrage, but there is a sense that the men are settling into routine rhythms of existence, particularly when compared to earlier portions of the poem that described their mobilization toward the front.

Interestingly, though Part 4 signals its dedication to particularity, it is also marked by a tendency to expand its historical gaze to account for evolutionary time. When Ball observes the rat "carrying parties," for example, he imagines them as the birds that fed on carrion in medieval battlefields and remarks that the rats are birds who have "naturally selected to be un-winged" (54). This curious evocation of evolutionary time is met with other nods to prehistory in later Richebourg passages. The aforementioned reference to pterodactyls also arrives during the Richebourg segment (97). The central chapter of the poem occurs in a sector where the rats seem like evolved crows and kites; the bombed-out landscapes call to mind scenes of prehistory and extinction; and the vocalizations of mules at the sight of distant flares ring as "palaeolithic [sic]" (92).

In the Richebourg passages, Jones makes reference to the evolutionary past of humans as well. The keeper of the supply dump, Pioneer Keep, is described as a relict human ancestor who feels at home with the paleolithic surroundings. Jones describes him as moving with "animal caution" (90), and as the men depart the dump, they observe him "vanish, mandrill fashion, into his enclosure" (91). With language inflected by Darwinian thought, the troops ponder the amount of time necessary to "become so knit with the texture of this country-side, so germane to the stuff

about, so moulded by, made proper to, the special environment" (91)—a passage that layers the ideas of Darwinian adaptation onto a discussion of an individual's acclimation to an inhospitable environment.

The man is characterized not only by his resemblance to human ancestors but also by his connection to his pet dog, Belle, whom he is concerned will be harmed by the men if she finds her way into the trench. Ball assures the man that the troops would treat her warmly: "They'd give her half their iron rations—Jesus—they'd let her bite their backsides without a murmur" (90). Through the relationship with this man and the dog, Jones invokes the histories of human evolution and the domestication of dogs that he explores more fully in *The Anathemata*.[56]

The humans and nonhumans present in the Richebourg are all marked by similar "kindly" constitutions that Jones traces back through generations. Though the poem explores the overlapping emotional and physical needs of humans and nonhumans throughout all of its chapters, it is in the Richebourg portion of the work, a section focused on particularity, that *In Parenthesis* assumes an expansive scope to give a broader view of a particularized moment that accounts for a range of timescales, including prehistoric and evolutionary. The interplay of differing scales accomplishes a number of things. For one, it suggests the mutability of species and the similarities, particularly emotional similarities, between a range of different forms of life. It also highlights the unnaturalness of modernity by throwing it in relief against the needs of different species. Both the keeper of the supply dump and the mules, with their primordial cries of fear at distant flares, exist in a historical moment that runs counter to their natures. The nods to prehistory act as a sideshadowing that pulls attention from the conflict at hand to direct our focus to other historic potentialities, begging questions, for the contemporary reader, of how technological modernity and modern war might be understood within the context of deep time as well as how our own embodiment and "kindliness" helps us to know the threat that modern processes pose to our own lives as well as the lives of other species.

In Parenthesis provides an interesting model for the kinds of thinking that the Anthropocene engenders. Through the complex interplay of various scales—personal action and historical progress, an individual's lifetime and deep time—Jones shows how embodiment, particularly one's emotional makeup and connectedness to a range of species, can provide

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[56] "Rite and Fore-Time" traces the domestication of dogs from the Mesolithic Period (79-80).

knowledge of the present moment and the threat that it poses. The particular dangers of the present also become clear when the accelerative processes of technological modernity are compared to the relatively slow developments of evolutionary and geologic time. For the modern reader, the poem suggests that forms of knowing that involve recognizing similarities to other species as well as one's placement within larger timescales can provide insight into modern processes that resist articulation or prevent one from recognizing one's own agency within them. These ideas feel refreshing during the time of the Anthropocene, and Jones' emphasis on positive interspecies community provides a refreshing counter to deterministic outlooks on historical progress that prevent imaginative forms of positive intervention—outlooks that have gained traction within discussions involving climate change and species loss.

Early Time, Late Modernism:

Reclaiming Prehistory

in Eliot's *Four Quartets* and Woolf's *Between the Acts*

Virginia Woolf's *Between the Acts* (1941) and T.S. Eliot's *Four Quartets* (1943) were composed during a time when humankind faced extinction from the growth of fascism and the outbreak of World War II. The diary entries from Woolf's final few years reflect her mounting anxiety as British forces mobilized, the nation suffered regular bombardments, and the possibility of a German invasion became increasingly likely. Leonard's Jewish heritage made them especially vulnerable targets, and in a diary entry from May 15th, 1940, Woolf writes: "[W]e discussed suicide if Hitler lands. Jews beaten up. What point in waiting? Better shut the garage doors" (*Diary* V, 284). Eliot similarly dreaded the encroachment of Nazism. Following the declaration of war in 1939, he supported the national defense effort by serving as an air warden in the Kensington area, an experience that is explored directly in "Little Gidding" and alluded to in "East Coker" and "The Dry Salvages." Even prior to 1939, however, both Woolf and Eliot were quite aware of the situation in Europe and the events that led up to the Chamberlain-Hitler pact.[57]

Considering the extent of Nazi atrocities, it is understandable why the topic of extinction is brought up so frequently in discussions of civilian war literature. This is particularly true of *Between the Acts*. John Batchelor frames the novel as an elegiac work written for a nation "threatened with extinction by a second European conflict" (147). While national extinction is not the same as species extinction, it holds a similar sense of unquantifiable loss. Gillian Beer goes a step further than Batchelor and draws attention to the "apocalyptic imminence" (*Arguing* 172) that looms over the proceedings of the plot—due in no small part to the hints of global

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[57] Other scholars have outlined a number of other reasons to consider *Four Quartets* and *Between the Acts* in conjunction with one another. In an introduction to a 1992 edition of Woolf's novel, Gillian Beer remarks on the reciprocal intertextuality of the works, for example. Likewise, Peter Lowe draws attention to the shared interests of *Between the Acts* and "East Coker" (the second *Quartet*) in conceptual models of time, English cultural heritage, and the threat to the social and historical order posed by the encroachment of fascism. Moreover, Lowe traces biographical intersections, often through Eliot and Woolf's direct correspondence, that illuminate the development and composition of their respective projects. Even when they are not discussed in conjunction, however, arguments that might be put forward regarding one could often apply to other, as both are marked by their attentiveness to history, cultural continuity, and time.

violence looming ever closer to the English manor house that serves as the novel's setting. Even aside from the historical context out of which the novel emerged, *Between the Acts* prompts this semi-eschatological discourse in part because it refers so frequently to extinction itself.[58] Themes of Darwinian conflict drive the novel's movement and Woolf presents a world where, as Beer has argued, the remains of the prehistoric past exist alongside the present in the natural elements of the landscape and in the subconscious impulses of the characters. Alongside its apocalyptic fears, it is also a novel interested in prehistoric extinction—iguanodons and mammoths find their way into the plot almost immediately. Woolf's juxtaposing of prehistory and twentieth century England suggests that an understanding of the deep past might have some bearing on the present. The prehistoric provides a captivating foil to the future-oriented gaze that typifies early WWII discourse and the fears reflected in writings from the time period.

It is more difficult to make the case for the primordial or the Darwinian in Eliot, particularly in his post-conversion work following 1927. His retreat into conservatism puts him at odds with many facets of Darwinian or even Lyellian science. However, there are outright allusions to prehistory in *Four Quartets*. One of the most direct nods occurs in "The Dry Salvages" when Eliot refers to the "backward look behind the assurance / Of recorded history [...] towards the primitive terror" (ii.53-5). Beer uses these lines to differentiate *Four Quartets* from *Between the Acts*, noting that Woolf's reflection on prehistory "does not result in terror" but a kind of assurance (*Arguing* 179). *Four Quartets* is a slippery text, however, and while prehistory may provoke terror in one instance, it takes on different valences in others. It is certainly true that Eliot and Woolf use the past in ways that are different from one another in several respects, but I do not think that Eliot is as unwilling to engage with the prehistoric as he may at first appear. My case for Eliot is helped by the work of Lois Cuddy and Donald Childs, who have provided detailed overviews of Eliot's exposure to Darwinism and Lamarckism during his time at Harvard as well as his continued (and troubling) engagement with biological science later in life, as reflected in a series of commentaries published in periodicals like *The Criterion*.

[58] The question of extinction in Woolf's writing is not exclusive to *Between the Acts*. For another example, consider Louis' comments from *The Waves* (1931): "'But listen [...] to the world moving through abysses of infinite space […][W]e are gone; our civilisation; the Nile; and all our life. Our separate drops are dissolved; we are extinct, lost in the abysses of time, in the darkness'" (173).

"The Dry Salvages" is, after all, a poem that largely operates by bringing together asymmetrical time scales.

In analyzing the theme of deep time in *Four Quartets*, I am approaching the question of temporality in Eliot in ways that are different from other studies. For the most part, my own perspective in this chapter will not intersect with arguments regarding Eliot's mystic reflections or the poem's emphasis on transcending human temporality. Paul Kramer offers one such thesis when he proposes that "*Four Quartets* contemplates, through idea and word, how timeless moments—of redeeming reciprocity, of graced consciousness—shine through physical landscapes and release the poet from temporal enchainments" (xii). While I recognize that *Four Quartets* certainly concerns itself with the kinds of metaphysical questions Kramer takes up in his analysis, I maintain that the poem is still quite engaged with material realities and conditions. The early movements of "East Coker" and "The Dry Salvages" in particular raise environmentally minded concerns, even surprisingly pragmatic ones such as soil erosion and ocean pollution. It is for these reasons that my argument will largely focus on these two *Quartets* as opposed to "Burnt Norton" or "Little Gidding." I also center my analysis on the early moments of these *Quartets*, which portray their respective landscapes using ecopoetic language rather than later movements in each *Quartet* that attempt to reincorporate these portrayals back into the poem's overarching, theological aims. In choosing a method that foregrounds the material problems that *Four Quartets* raises, I adopt several of Nancy Gish's claims regarding the overall structure of the text. Like Kramer, Gish acknowledges that the poems explore "timeless moments" but recognizes that each quartet operates with a different conception of time. As she rightly points out, "[The] meaning [of the timeless moment] varies with the conception of time and eternity 'entertained' in each poem" (96). From Gish's perspective, the goal is not so much the leaving off from human temporality but the deployment of different temporal conceptualizations to understand whatever meanings heightened, spiritually-charged moments might hold for those inextricably bound to sequential, human time. The temporal frameworks taken up in "East Coker" and "The Dry Salvages" are largely linked to deep time and natural, cyclical change, rather than eternity or mystical ideas of atemporality. It is within these temporal frameworks that Eliot engages with ecological conditions most fully.

There is much to say regarding Eliot's frequent departures into the natural world, which break from the ideas of Christian mysticism so central to the actual poem—though Christian

eschatological frameworks ultimately win out in the final poem of the sequence. As I demonstrate, for all of Eliot's metaphysical postulating, he is still very much concerned with the imposition of human history on natural systems, as well as the extent to which humankind may be extending itself beyond certain natural limits. Robert Pogue Harrison has encouraged readings of Eliot that recognize the fact that the images of natural destruction he relied on to articulate concerns regarding cultural or spiritual decline were pulled from actual ecological disturbances. There would be no unnatural deserts without desertification. There would be no *Waste Land* without wastelands. In my own approach to Eliot, I keep these "true 'objective correlative[s]'" (Harrison 149) in mind. It seems likely from Eliot's own comments that he often did as well.

This chapter is divided into two sections. The first explores the primitivist elements at the heart of Eliot and Woolf's output from the late 1930s. In attempting to locate a particularized British cultural tradition (at the time that England came under threat from European fascism), *Four Quartets* and *Between the Acts* point to the fact that the root of many of the ecological crises within modernity can be found in the uneven social relations of the past. Both works also gesture toward reproduction and other future-oriented practices that tend to devalue prior historical moments in favor of a future-focused gaze. The second portion of the chapter argues that both *Four Quartets* and *Between the Acts* propose an expanded view of history, one that recognizes the ongoing processes of deep time and speciation, as part of a larger effort to provide a widened ethical framework that accounts for humans, nonhumans, and the ecosphere itself. Both texts, to varying degrees, indicate that acts of observance, particularly the careful observation of nature and non-human animals, can help one see the products of deep time within the present and to see oneself as deeply enmeshed in natural systems. Though Eliot stops short of considering the political and social dimensions of this kind of careful observation, *Between the Acts* links it back to an ethos of responsibility and cooperation that might be used to address the negative scripts of the past. Woolf and Eliot's connected works of late modernism provide a grammar of ethical consideration grounded in the prehistoric that contrasts with future-oriented ideologies that operated with a telos of violence and extinction.

Though both authors draw from Victorian science to consider expanded ethical interconnection, their works end at very different places. *Between the Acts* uses the deep past to imagine the possibility of futures that break from established social and cultural scripts. These futures, the novel suggests, rest in positive social collaboration and the willingness to imagine

new directions. In contrast, Eliot's *Four Quartets* ends with "Little Gidding," which folds its scientifically-charged temporal considerations into a more familiar eschatological script that reifies the kinds of backshadowing logics that other apocalyptic modernist works resist. The ways in which these texts utilize scientific insight to very different poetic and narratological ends is important to consider during the Anthropocene, a time when the public understandings of science, understandings partially shaped by the cultural representations of it, hold crucial important for the lives of species and the future of the biosphere.

"The Scheme of Generation": Reproduction and the Re-Presentation of History

Both "East Coker" in *Four Quartets* and La Trobe's pageant in *Between the Acts* can be understood in relation to England's late-imperial moment in the 1930s. Like much of the literature of the 30s and 40s, they are marked by an anthropological interest in England's native practices. It is no coincidence that Anglo primitivism arose at the very moment that England's global reach began to contract. The research of Jed Esty in particular argues that the late writings of Woolf and Eliot attempt to locate an insular and particularized English cultural tradition. Esty claims that many British modernists used cultural particularity and prominence as a substitute for national power while simultaneously preserving these traditions against the threat of Nazi encroachment. Along similar lines, one can see within the literary modernism of the 1930s and 1940s a withdrawal from the urban, international, and mechanical themes that are typically associated with the movement, a tendency that Esty terms "demetropolitanization" (14). From this vantage point, the rural and atavistic themes of *Four Quartets* and *Between the Acts* are indicative of the intermediary role such literary projects assumed in reinvigorating a threatened cultural tradition within a country that was quickly losing its status as an industrialized world power—even as both texts self-consciously call attention to some of the troubling aspects of these traditions. While I agree with many of Esty's points, though I think they hold more water with Eliot than Woolf, an idea I explain more fully below, I would add that late-modernist attempts to revive native or pastoral traditions often brush up against the fact that the very environmental conditions they wish to return to have already been compromised by the processes of modernization they seek to escape. Moreover, in examining atavistic traditions, late-modernist works sometimes highlight the seeds of modern and imperialist practices and mindsets that had led to contemporary environmental crises, particularly in relation to normative attitudes regarding reproduction and the forward-looking ideologies they helped engender.

Esty identifies the rural village pageant-play, which gained peculiar prominence around the outset of WWII, as central to modernist attempts to engage with Anglo ur-cultures. The revitalization of the village pageant genre was partly a reaction to the popularity of Nazi theater—a corresponding attempt to promote communal solidarity and national pride. The pageant performed the important ideological function of "gaug[ing] the vitality of native rituals. As a village rite, the pageant could produce a pastoral, apolitical, and doughtily cohesive version of national identity" (Esty 55). Of course, Woolf's pageant in *Between the Acts* puts pressure on the supposed stability of British national identity. Like many rural pageants, La Trobe's restages a large span of British history, but reveals the unequal power dynamics driving its course. While it fosters a sense of national belonging in some members of its audience, the pageant is also, as I discuss more fully below, engaged with patterns of inequality that reproduce themselves throughout history. Marlowe Miller suggest that Woolf's primitivist explorations do not so much uncover the continuity of an insular culture as the seeds of fascist instincts within native traditions. This can be seen in the class and gender divisions they reinforce as well as their call to nationalist feeling through the evocation of valorized national figures. This is quite different from traditional rural pageants. As Madelyn Detloff puts it, Woolf's play prompts the audience in the novel as well readers in the current moment to "react to national history in ways that promote political accountability rather than patriotic identification" (34). Ecological concerns are also inextricably tied to many of the same power relations and ideologies that La Trobe's play takes to task.

One of the primary ways that the pageant (and the novel itself) exposes uneven power dynamics is through its historiographic layering of local, national, and global histories atop each other. Like most rural pageant-plays, La Trobe's work depicts England's past centuries. The play ends in the contemporary moment after cycling back through time to the first settlements in the British Isles. It assumes the same geologic conditions offered by *An Outline of History*, the study of deep time and Earth's development Lucy Swithin reads near the opening and closing of the novel; the play dramatizes the book's claim that the first humans arrived in Britain through a prehistoric stretch of land connecting England to the European continent.[59] From its very outset, the play presents the influence of natural history on the progress of human society, thus serving

[59] Woolf's imagined text, *An Outline of History*, combines H.G. Wells' *The Outline of History* (1919-1920) and G.M. Trevelyan's *History of England* (1926).

not only as a history of the country but also a record of the natural systems that shaped the physical boundaries of the land itself—and, therefore, the conditions under which its human communities formed. It likewise alludes to England's gradual transition to an energy regime dependent upon fossil fuels. A casual reference to a "sea-coal fire on a brisk morning" (104) in the pageant's Restoration scenes escalates to elaborate resource extraction by the nineteenth-century sequence, with villagers in Victorian garb belting out lines such as, "Let 'em sweat at the mines; cough at the looms; rightly endure their lot. That's the price of Empire; that's the white man's burden" (117). Woolf layers these references to coal extraction and industry with the audience's own reflections on the abusive labor relations enabled by steam energy and the technology it fueled. Even Etty Springer, who takes issue with La Trobe's overall characterization of the Victorian era, has a moment of admission when she admits the inequalities that undergirded bourgeois Victorian life: "Yet, children did draw trucks in mines; [and] there was the basement" where household workers labored (118). In its sensitivity to changing material and environmental conditions—not to mention social relations—across the centuries, the pageant does not necessarily satisfy its audience's desire for a sense of historical stability, even if there is continuity between pasts and presents, particularly in power relations. It is, however, consistent with actual rural pageants in that it attempts to condense national history into a single text, a sort of historic singularity. This is important to the way in which the pageant sets environmental concerns alongside the social.

One of the remarkable features of Woolf's pageant is the consistency with which natural voices interject themselves into the proceedings. Since La Trobe's work is staged in the English countryside, both biologic and abiotic sounds work themselves into the play's very texture. Birds twitter. Cows low. Wind rustles leaves in the trees surrounding the set. It all suggests intricate continuities between the human history unfolding on stage, the natural world that surrounds it, and the nonhuman animals that assert themselves despite it. If the pageant represents the singularity of British history, that history is interpenetrated with an array of vocalizations from both wild and domestic animals. There are moments when nonhuman emotive calls actually intensify the emotional weight of the pageant's plot. A primary example of this occurs during a lull in the action of the pageant. When La Trobe feels the emotive energy of the play beginning to ebb, the poignancy of the moment is preserved through the mournful vocalizations of a cow who has lost her young:

> Then suddenly, as the illusion [of the scene] petered out, the cows took up the burden. One had lost her calf. In the very nick of time she lifted her great moon-eyed head and bellowed. All the great moon-eyed heads laid themselves back. From cow after cow came the same yearning bellow. The whole world was filled with dumb yearning. It was the primeval voice sounding loud in the ear of the present moment. [...] The cows annihilated the gap; bridged the distance; filled the emptiness and continued the emotion. (101-2)

One might be tempted to offer a cynical reading of this passage, especially since in the sentences immediately following the herd's outburst Woolf apposes the lowering of the cows' heads as they "beg[in] browsing" with the lowering of the audience's heads as they "read their programmes" (102). However, the novel is not entirely dismissive of the cow's reaction and the herd's empathetic echoing. Indeed, it suggests that there is something universal in the "primeval voice" that lends it a profound compatibility with the human emotion of the play. The term "dumb yearning" does not suggest that the cries are senseless but rather non-linguistic and, perhaps, all the more inclusive for it.

The simultaneous head movements might also be understood as an extension of the novel's interest in the coevolution of humans and domestic animals (rather than simply an ironic comment on herd mentality). Woolf's characters often compare themselves and others to nonhumans, both ironically and earnestly—Lucy is a bird; Isa is both a bird and a mule; Bartholomew is a dog.[60] The point in these comparisons is not always to gesture toward a larger point regarding the individual personality of the character in question (though this is sometimes the case). Often, the novel uses these associations to hint toward the similarities in the expressive makeup and physiological movements present between the human and the nonhuman. We are like one another, physically and emotionally. *Between the Acts* quite regularly elicits the complexities of coevolution between humans and their domestic "companion species," to use Donna Haraway's term.[61] This is perhaps best embodied in the nursery of Pointz Hall, which

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[60] See Bonnie Kime Scott's discussion of how Woolf used animal names to refer to both her friends and family members throughout her life. She also extends this biographical note into an analysis of Woolf's writing (155-7).

[61] In *The Companion Species Manifesto*, Haraway notes how thinking about companion species allows humankind to consider the bidirectional implications of co-evolution: "Co-evolution has to be defined more broadly than biologists habitually do. Certainly, the mutual adaptation of

Lucy intimates is "[t]he cradle of our race" (52), where a toy horse is in the center of the carpet and an image of a puppy, titled "Good Friends," hangs prominently and evocatively on the wall.[62] The presence of these companion species in the symbolically charged space calls to mind histories of coevolution that date back to the earliest human civilizations. As I discuss more fully below, animal histories are as central to the novel's historiographic interests as any record of human progress.

Along with La Trobe's play, which enacts a diachronic rendering of the English past, *Between the Acts* incorporates a bevy of other local and national historical models ranging from familial lineage to place names that offer alternative genealogies. Rather early on, for example, readers are told that a delivery boy sent with fish for the afternoon meal has a surname included in the *Domesday Book* and that four of the other customers he will visit that day do as well (23). The *Domesday Book*, or the "Great Survey," was commissioned by William the Conqueror in 1085.[63] It attempted to survey the population and land holdings within England and parts of Wales following the conquest in order to determine the taxes owed to the kingdom, the systems of land management in various regions, and the distribution of power and holdings among the populace. Thus, the novel places the delivery boy within a centuries-old family lineage even as it evokes early attempts at patriarchal record keeping and population management.

In addition to records of family descent, Woolf makes reference to English guide books that provided the history of manor houses throughout the English countryside. The novel offers a fragmented entry for Pointz Hall in the fictional "Figgis's Guide Book" that demonstrates the tendency of local place names to be constituted of surnames (similar to those she already indicated were included in the *Domesday Book*), thus entwining local natural history and genealogy: "[Pointz Hall] commanded a fine view of the surrounding country…The spire of Bolney Minster, Rough Norton woods, and on an eminence rather to the left, Hogben's Folly, so

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visible morphologies like flower sexual structures […] is co-evolution. But it is a mistake to see the alterations of dogs' bodies and minds as biological and the changes in human bodies and lives, for example in the emergence of herding or agricultural societies, as cultural, and so not about co-evolution" (31).

[62] It is a Newfoundland puppy, no less. This is perhaps in reference to Lord Byron's love of the particular breed. (Byron is mentioned throughout the novel). It might also be because of the breed's general reputation for companionability.

[63] It is worth noting that Virginia Woolf had a copy of Frederic Maitland's *Domesday Book* and *Beyond: Three Essays in the Early History of England* in her library (Hussey 178n).

called because…" (38). The novel indicates the impermanence of place names in the span of deep time even as it gestures toward their longevity within the span of human history. Near the end of the novel when La Trobe surveys the same view as night falls, the narrator remarks: "There was no longer a view—no Folly, no spire of Bolney Minster. It was land merely, no land in particular" (151). Regardless of the history it evokes, natural histories, genealogies, or census records, the novel asserts the entwinement of natural history and human development, often alluding to practices of land management and sectioning. In its early pages, it combines its overviews of the geological features of the countryside with remarks on the littered traces of Roman roads, for example. Even certain character names suggest such similar relationships, such as "Swithin"—which Hussey notes is a Middle English term for "land cleared by burning" (164n).

Woolf's historiography highlights the fact that many historical models are essentially histories of breeding. Within the context of human lineage, genealogical records might be thought of in these terms. Analogous historical models are likewise concerned with breeding in the context of nonhuman populations. Even the *Domesday Book*, for example, was interested not solely in England's human subjects but also in the nation's cattle holdings and the value and size of herds throughout the realm. *Between the Acts* similarly alludes to the selective breeding practices used with dogs, horses, and livestock that initially arose out of the British Agricultural Revolution and gained additional traction in the hunting culture that figured prominently in the eighteenth and nineteenth centuries. Harriet Ritvo notes that selective breeding and stockbreeding prompted a "reconceptualization of the kind of property that an animal constituted" (*Noble* 174), shifting the emphasis from the animal's present traits to a future-oriented emphasis on the animal's reproductive potential and the projected quality of its offspring. The popularity of breed books, publications that mapped the history and pedigree of specific animals and breeds, is indicative of this shift. When Giles enters the Pointz Hall library during the pageant's intermission, his eyes are drawn to a number of literary texts, Irrigation Officers' Reports (likely holdovers from his time in the Colonial Service), as well as "Hibbert on the Diseases of the Horse" (84). Hussey notes that this text is likely William Hibbert's *New Theory and Practice of Medicine: A Treatise on the Nature, Cause, Cure, and Prevention of Disease in Animals* (1870). Though Hibbert's text is most concerned with treatable ailments, it cautions readers against the breeding of animals that might possess certain inheritable conditions.

One example can be found in its entry on "phthisis," or tuberculosis, in sheep. The entry warns that "[t]he flockmaster should beware of breeding from suspected animals; for phthisis is almost certain to reproduce itself" (96).

The hints of selective breeding in Hibbert's text are thematically aligned with Bart's assessments of a horse earlier in the novel during a conversation regarding a portrait of an Oliver ancestor that hangs in Pointz Hall. When Mrs. Manresa asks after the horse on the painting, Bartholomew is only able to observe that "the hind quarters were not satisfactory" (36). This exchange suggests Woolf's unease with selective breeding and the kinds of epistemic frameworks they provided for thinking about and evaluating nonhumans. The passage also highlights the arbitrariness of human genealogies; Woolf refuses to disclose the ancestor's name, confirming only, "He had a name," as though she does not wish to indulge Bartholomew's habit of seeking meaning in national and ancestral lineage (26). The fact is driven home even further by the fact that another portrait of a stranger hangs near the first; in reality, it is an outside portrait that Bartholomew bought simply because he favored it, but visitors might as readily assume it is another ancestor. The portrait is a kind of false genealogy.

The selective breeding of domestic animals is alluded to not only in texts and artwork but in passing moments of conversation. In one instance between scenes of the pageant, audience members are heard making comments such "Did you see it in the papers—the case about the dog? D'you believe dogs can't have puppies?" (88). The remarks refer to an actual 1939 legal suit filed by a dog breeder, Jeanne Marie Elizabeth Nicholas Josephine Harper, against the estate of Lord Rothschild. Harper claimed that before Rothschild's death he promised Harper that she could continue to breed from a female Pyrenean Mountain Dog, named Monne, that she had sold to him so long as the dog had reached, using the language of suit, "a perfect state for bearing puppies" (qtd. in Hussey 216n). The estate sold the dog to Lady Sybil Grant without consulting Harper. The defendants claimed that Monne had never reached a "perfect state" for carrying puppies and that two veterinary surgeons found her unlikely to ever be a "suitable animal for breeding" due to her "rather Charlie-Chaplin like walk," her lethargic nature, and her tendency to "run away from cows" and become frightened by other dogs, even smaller breeds (217n), The court sided with the defendants.

The inclusion of this episode is rather strange. Even the formulation of the question itself, "D'you believe dogs can't have puppies," is peculiar. It is not suited to the particulars of the

case, which was not concerned with Monne's ability to carry puppies at all but rather her suitability as a specimen for breeding. If the question is taken as generally as it is posed, the speaker could have found the answer to whether or not dogs can have puppies simply by observing the stray dog that had taken shelter in the barn where the audience met during the pageant's intermission (73). Perhaps the phrasing is meant to evoke other questions such as "Do you think all dogs should have puppies?" or maybe even "Which dogs should be allowed to reproduce?" The question also calls to mind other moments in Woolf's *oeuvre* where she evokes dog breeding. One example is her sardonic handling of the Kennel Club and Spaniel Club in *Flush.*[64] It seems that she is staging a similar critique of selective breeding within *Between the Acts*. The practices are most closely associated with Bartholomew and seem like an extension of his imperialist tendencies toward dominance and mastery—a mindset enacted in the behaviorist methods he uses to train Sohrab, his Afghan hound.[65] It is worth noting that Woolf's critical stance on such breeding practices and training models is found not only in her fiction but also in the way she engaged with animals in her own life; Scott notes that her "treatment of companion animals [was] rarely hierarchical, and [that] her control of her own pets [was] sufficiently lax" (166). In addition to her own interactions with companion species, Woolf's essay "On a Faithful Friend," a commemorative reflection on the Stephen family dogs, condemns the act of buying purebred animals "for so much gold and silver" and then training them to "forego their nature for ours" (12).

There are interesting parallels among Woolf's handling of selective breeding in her novels, discussions of variability and breeding in Darwin, and current-day histories of the Agricultural Revolution. In his work on Tennyson's *In Memoriam*, Jesse Oak Taylor observes how speciation might be thought of as an aesthetic category in the sense that it is a sort of "formal experimentation" on the part of evolution to locate the most effective "forms and formal

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[64] The narrator catalogues the physical criteria the Spaniel Club outlines for evaluating individual animals belonging to the breed: "By that august body [the Spaniel Club] it is plainly laid down what constitute the vices of a spaniel, and what constitute its virtues. Light eyes, for example, are undesirable, and curled ears are still worse; to be born with a light nose or a topknot is nothing less than fatal" (7).

[65] Even Sohrab's name is an example of imperialist appropriation. It is similarly seen in the name of the Oliver family's cat, whose "drawing room name" is Sung-Yen. Mrs. Sands, the family cook, who has a fondness for cats, seems to find the name distasteful and opts to use his "kitchen name," Sunny, instead (23).

arrangements [to] enable or inhibit the transfer of energy" (277). Darwin indicates how agricultural breeders literalized the connections between speciation and aesthetics throughout *On the Origin of Species*, particularly in early chapters that attempt to map the blurred boundaries separating artificial selection from natural selection. After mentioning that many breeders "habitually speak of an animal's organisation as something quite plastic, which they can model almost as they please," Darwin describes the aesthetically minded techniques breeders deploy in quite literally shaping future generations by the careful selection of specimens (a practice that resulted in the erasure of certain breeds). As an example, he describes how breeders in Saxony place sheep on tables and examine them "like a picture by a connoisseur" when deciding which members to breed (31). Ritvo notes that these practices emerged rather early in the eighteenth century, when the advanced breeding methods Britain used with its livestock highlighted the malleability of non-human species and the susceptibility of speciation to human influence (*Noble* 132). Interestingly, Ritvo also discusses how an acceleration in human population growth initially prompted the need for new agricultural technologies and "improved" livestock, a historical fact that is relevant to the associative connections between human reproduction and nonhuman breeding present in both Eliot and Woolf. Work by ecofeminists such as Karen Davis calls attention to many of these parallels, noting a range of connections between patriarchal discourses surrounding female bodies throughout the centuries and contemporary rhetorics involving the domestication and reproduction of nonhuman animals.[66]

It makes sense for Woolf to weave these topics together in a work that is a history of Britain and, therefore, a history of empire. Imperial frameworks appropriated Darwinian thought into ideologies surrounding Britain's national progress. Along similar lines, Peter J. Bowler discusses how positivistic historical models used Darwin to reinforce a "philosophy of cosmic

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[66] By taking up questions of human reproduction, I am nearing arguments concerning eugenic thought in the writings of both Eliot and Woolf. Donald J. Childs' work has explored the question of eugenics in both figures. Others like Lois A. Cuddy and Juan Leon offer connected arguments on Eliot and Linden Peach has extended Childs' arguments regarding Woolf. I think that the perspective I take is distinct enough to not require me to wade into this discourse. I am not attempting to say that either *Four Quartets* or *Between the Acts* furthers a eugenic agenda, even in the sections where I discuss speciation. I am simply saying that both seem critical of normative and normalizing ideologies that construct heterosexual relationships as necessarily bound to processes of reproduction and futurity.

progressionism in which white Anglo-Saxon Protestants were seen as the goal of creation" (237). Britain's imperial project required the use of animals with a wide variety of capacities and therefore Britons had a vested interest in overseeing their reproduction and "improvement." As Anne McClintock has argued, parallel discourses also surrounded women's bodies. The celebration of maternity and domestic gender identities in women were essential to "breeding a virile race of empire-builders…[and] controlling the health and wealth of the male imperial body politic" (47). The imperial focus on domesticity, marriage, and breeding reinforced an evolutionary discourse oriented around the future of the nation. Woolf rather explicitly links these ideas during the nineteenth-century sequence in La Trobe's play when a conversation regarding the arrival of a new clergyman, Mr. Sibthorp, hilariously erupts into a song asking whether or not he is married (120-1). The song is reminiscent of the tongue-in-cheek opening from *Pride and Prejudice*: "It is a truth universally acknowledged that a single man in possession of a good fortune must be in want of a wife" (Austen 1). The song also stands in stark contrast to the social ills so directly alluded to earlier in the scene (particularly child labor) and ironically gestures toward the gender dynamics represented in sequences from past eras in the play. For careful observers, the song highlights the future-oriented mindsets that solidified during the imperial moment and the ways in which its attitudes toward reproduction were already active in prior periods.

While his critique of the past is not always as direct, Eliot's late-modernist writings overlap with Woolf's in critical ways. In *The Idea of a Christian Society*, written around the same period as "Burnt Norton" and "East Coker" (and therefore around the start of the war), Eliot proposes that English society revive the traditions of early Christian communities that were present in the British Isles from the time of the Roman conquest while retaining certain aspects of modern knowledge. His ideal model of culture and society draws from other points along the timeline of British history as well—particularly pre-Revolution England—in its economic, agricultural, and religious arrangements. *The Idea of a Christian Society* is largely backwards-looking but aims to reconcile its primitivist romanticizing with modern ecological dilemmas. Eliot draws attention to the fact that farming methods used as early as the Agricultural Revolution accelerated soil erosion and relegated most of the country's food production to its fields overseas (thus presenting earth as a kind of non-renewable resource). Even if England were to restore the social arrangements of its past, material realities and natural limits would

present profound difficulties for a nation based largely in local, agrarian social relations. Eliot would again thematize this problem in “Little Gidding,” with the eerie image of “parched eviscerate soil” that “[g]apes at the vanity of toil” and “[l]aughs without mirth” (ii.13-5). While he does not offer a solution for England’s lack of arable land, it’s clear that he remained perplexed by the potentially intersecting problems of agriculture and social relations. In a commentary for *Criterion* from October, 1938, he writes:

> To understand thoroughly what is wrong with agriculture is to understand what is wrong with nearly everything else [...] What is fundamentally wrong is the urbanization of [the human] mind [...] To have the right frame of mind it is not enough that we should read Wordsworth, tramp the countryside with a book of British Birds and a cake of chocolate in a rucksack, or even own a country estate: it is necessary that the greater part of the population, of all classes (so long as we have classes) should be settled in the country and dependent upon it. (qtd. in Esty 124-5)

Despite recognizing the problem of erosion, Eliot maintained his belief in agrarian social relations.

Of all of the *Quartets*, “East Coker” most closely examines the question of Christian primitivism and agrarian heritage within a modern setting. The poem draws from Eliot’s personal visit to the titular, ancestral village in 1937, and the first movement culls language from his collateral ancestor, Sir Thomas Elyot, a Tudor author and diplomat. The poem opens with imagery that aligns human time with the successive, cyclical time of nature in language that echoes Ecclesiastes:

> [...] In succession
> Houses rise and fall, crumble, are extended,
> Are removed, destroyed, restored, or in their place
> Is an open field, or a factory, or a by-pass.
> Old stone to new building, old timber to new fires,
> Old fires to ashes, and ashes to the earth
> Which is already flesh, fur and faeces[...] (1-7)

Eliot immediately does away with the transcendent, mystical temporality that characterizes the preceding *Quartet*, “Burnt Norton,” to focus on the materialist “time of the seasons and the

constellations" (II.i.43). The cyclical patterning also resists the linear progression of positivistic historical progress, opting instead for a model of time based on recurrence.

The early movements of "East Coker" emphasize corporeality and physical matter in a way that "Burnt Norton" does not. This is particularly clear in the emphasis on soil.[67] In "Burnt Norton," soil is rarely mentioned outright. Its presence is suggested in the garden and there is a mention of "mud" during the discussion of the axle-tree (ii.1). While soil underlies many of the images at play in the ecstatic, mystical passages, particularly those involving the roses and the yew, it is mostly hinted at as a kind of generative material supporting the poem's more numinous figures. In "Burnt Norton," soil is imagined as a repository of dead matter and waste. The passage imitates the language of Ecclesiastes, but it highlights processes of decay while ignoring, for the most part, systems of renewal.

From the opening stanza, the speaker of the poem approaches an open field near the village. The setting is contemporary; there is a mention of an automobile and "electric heat" (19). The day is ending, and in the dim light the speaker imagines a matrimonial dance enacted by villagers in a time prior to the English Civil War. A rustic tradition is re-presented in a mechanized present. Due to the conflation of the two historical moments, the passage feels like a poetic experiment that tests the viability of agrarian modes of life in a modernized moment. It can be partially understood as a thought experiment in keeping with the social model Eliot proposes in *The Idea of a Christian Society*. At the outset of the passage, the sounds of a previous historical era (in particular, the music driving the wedding dance) find their way into the present. In the lines following this, the speaker sees the participants in a wedding celebration participating in a dance around a bonfire:

> Two and two, necessarye coiunction,
> Holding eche other by the hand or the arm
> Whiche betokeneth concorde. Round and round the fire
> Leaping through the flames, or joined in circles,
> Rustically solemn or in rustic laughter

[67] Much like *The Waste Land*, each of the poems in *Four Quartets* is framed around a classical element. The imagery and themes of "Burnt Norton" are centered around air while "East Coker" tends to thematize earth. Water is the organizing conceit of "The Dry Salvages" and fire of "Little Gidding."

Lifting heavy feet in clumsy shoes,
Earth feet, loam feet, lifted in country mirth
Mirth of those long since under earth
Nourishing the corn. Keeping time,
Keeping the rhythm in their dancing
As in their living in the seasons
The time of the seasons and the constellations
The time of milking and the time of harvest
The time of the coupling of man and woman
And that of beasts. Feet rising and falling.
Eating and drinking. Dung and death. (32-47)

There is some critical disagreement on how to interpret the overall tone of the passage. Kramer emphasizes the sense of harmony between the dancers, their connection to the religious and even Frazerian past through sacrament, and their sensitivity to the cyclic, seasonal time that shapes their lives (73-6). In contrast, Nancy Gish considers the passage to be about the emptiness of human interpersonal connections and the fact that any fulfillment they might provide in the moment ultimately ends in death (104).[68] My own interpretation falls somewhere between these two. While it's true that the general vitality of the passage ends in "dung and death" (47) I do not think that Eliot is entirely dismissive of the communal bonding he presents. The villagers' sense of happiness, though transitory, is markedly different than the emotional inertness that overhangs most of Eliot's metropolitan scenes. Despite the fact that Eliot's attempt in "East Coker" to provide a poetic experiment in reviving agrarian social relations in the modern world may fail in the closing lines of the first movement, it still presents a way of life that seems preferable to the vexed (to put it one way) social relations one navigates in an urban poem such as *The Waste Land*.

In my reading, I mark two distinct tonal shifts in the flow of the stanza that are worth noting. In both content and rhythm, the early lines present the exuberance of the celebration and stress the commonalities between the regularity of song and the consistency of seasonal cycles. Death is presented as meaningful in the sense that it renews the soil (the dead "nourish[...] the

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[68] Gish contrasts this with the sense of transcendent experience in "Burnt Norton" which "provided a symbolic context for an apprehension of ideal order[...]" (104).

corn") (40) and thus sustains the agrarian social configurations. At the beginning of "East Coker," the soil is "flesh, fur, and faeces," but in the village it is imbued with meaning through the communal relations that it sustains. The rhythm of the passage picks up in line 40 with the phrase "Keeping time," suggesting an intensified theme and an intensification of the song itself. There are no end stops for five lines. Eliot rapidly places the villagers' lives alongside the cyclical systems that structure their existence—the change of seasons, the regular progression of seasonal asterisms, and the labor of planting and harvesting. The quickening pace of the poem is sexually-charged and the passage rather tellingly ends with the "coupling of man and woman / And that of beasts" (45-6). The tone shifts at this moment. While the preceding five lines included no punctuation, there are four periods in the concluding two. The attitude quickly reverts to the grim stoicism of the poem's opening stanza ("dung and death") (47) from its exaltation ("Feet rising and falling") (46).

It seems fitting that the dialectical turn occurs with the symmetrical reproduction of humans and nonhumans. It is in keeping with Eliot's critique of the Agricultural Revolution and the impact that increased crop production, necessitated by a corresponding increase in humans and cattle, ultimately had on England's arable land. More generally, as with Woolf, it shows how the future-oriented outlooks that influenced popular ideologies were present in past ages in both social customs and even sacramental rites. Eliot's attempts to return to the past uncover different configurations of the systems of thought and action that animate the present moment, an ideology related to what Eliot terms "the scheme of generation"—a condition that has to be overcome before the speaker in "Little Gidding" is able to arrive at a spiritually meaningful engagement with time (IV.i.18). Like Woolf, Eliot was not opposed to evolutionary ideas in general. He was, however, opposed to positivistic frameworks that attempted to devalue the past by privileging the present and future:

> It seems, as one becomes older,
> That the past has another pattern, and ceases to be a mere sequence—
> Or even development: the latter a partial fallacy,
> Encouraged by superficial notions of evolution,
> Which becomes, in the popular mind a means of disowning the past. (III.ii.37-40)

"East Coker" *gestures* toward the problems that arise when human ideology is naturalized through truncated natural timescales. If one aligns natural patterns with the relatively short

timespan of a national history, they appear stable. The second section of "East Coker" offers a widened view of natural progress, however, that expands beyond the time of English agrarianism. Eliot describes a broader, cosmic time that ends with the apocalyptic image of the world being consumed by a "destructive fire / Which burns before the ice-cap reigns" (16-17). While this image could be a reference to Christian eschatology, considering the broader timescale it evokes, it could also refer to models of geologic change proposed by nineteenth-century scientists like Lyell and Cuvier (the image fuses Cuvier's catastrophism with elements of Lyell's expansive deep time, which emphasized climate change). Either way, it undercuts the assumptions regarding the stability of the natural world and begs the question of humankind's possible impact upon it. Woolf suggests a similar conclusion during La Trobe's pageant when villagers singing about agricultural cycles ("Digging and delving, ploughing and sowing") and the stability of natural cycles ("for the earth is always the same") are rendered inaudible due to a sudden wind that "blew their words away" (90). It is clear that both *Between the Acts* and *Four Quartets* engage with the progress-oriented mindsets that characterized the historical moment of the late 1930s and ultimately find their ideological roots in the national past. It is also worth observing how both propose an observational stance as a means of engaging with the present in a more ethically-responsible way.

Despite similar temporal and ecological concerns, *Between the Acts* and *Four Quartets* ultimately suggest very different worldviews. Though Eliot's work is more ecologically oriented than critics often acknowledge, its concerns with issues like erosion and selective breeding ultimately function on an anthropocentric scale. In contrast, *Between the Acts* gestures toward a kind of posthuman animacy to broaden the stakes of its concerns beyond the human while also considering the place of humankind alongside other geologic and biologic histories. "Little Gidding," the final movement of *Four Quartets*, imagines a historic transcendence that would bring reason to historical tragedy—there is a divine reason for the war, even if it exists beyond human understanding. *Between the Acts* provides more dynamic ways for thinking about the future that promote social collaboration and imagination. "East Coker," with its backward gaze toward agrarian relations, operates with an insular turn that is out of keeping with Woolf's work. Eliot's solution seems to be not to look outward, but to turn within. Though it has compelling ecological ideas, *Four Quartet*'s agricultural nationalism recalls Mussolini's isolationist

measures to block food importation and facilitate the "ruralization" of Italy, to borrow a term from Jon S. Cohen.[69]

"Tour[s] of Imagination": "One-Making" and the Deep Past

The characters in *Between the Acts* who are the most highly inculcated with the norms of reproduction are also typically the most ideologically constrained. As I have discussed above, Bartholomew, who is interested in the pedigree and training of animals, is also entrenched in imperialist mindsets. His heavily-racialized memories are comprised mostly of his youth spent in the Civil Service—memories that reveal the same violent tendencies he exhibits toward his Afghan hound throughout the novel. His daughter-in-law, Isa, has to will herself into compliance with the wifely and maternal role that is expected of her. When she sees her son during the pageant's intermission, she assumes a maternal performance that is reflected in her very demeanor. William Dodge, who notes the shift, thinks to himself that it is "as if she had got out of one dress and put on another" (77). Immediately following this, Isa puts on a different metaphorical dress when she sees her husband, Giles; Dodge decides from her expression that it must be something akin to a strait waistcoat. To preserve her marriage with the unfaithful, emotionally absent, and potentially abusive Giles, Isa finds it necessary cognitively to rehearse empty truisms regarding romantic love, which Woolf refers to as "cliché[s] provided by fiction" (10). With perhaps the exception of her husband, she is the character most alienated from a sense of connection to the natural world. A recurring moment in the novel has Isa tapping on her bedroom window in an attempt to gain the attention of family members who are outside; the sounds of nature that she is shut off from indoors repeatedly drown out her tapping and verbal calls.

The characterization of Bartholomew is similar to that of Giles. It is worth noting that Woolf also regularly affixes Isa's husband with the terms that might be used of a breeding specimen; Dodge refers to him as "hirsute, handsome, [and] virile" (77), for example, when he observes Isa's reaction when she notices him during the pageant's intermission. That Giles also sees the world in reproductive terms is reflected in the language he uses to represent behaviors in human and nonhuman others. One odd example arises when Giles sees a snake eating a toad and disgustedly refers to it as "birth the wrong way round – a monstrous inversion" (72) (an odd way

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[69] Cohen's work provides an insightful overview of Mussolini's agricultural policies and their impacts. Many of the policies resonate with the ideas outlined in Eliot's essays and poetry.

to sum up a relatively common sight in nature) before crushing both creatures with his foot. Detloff notes how the use of the word "inversion" calls to mind the "sexological description of homosexuals as 'inverts'" (48), an allusion that conceptually links the snake to Dodge. The killing of the snake is a psychologically charged act that "appears temporarily to relieve Giles of the psychic threat posed by Dodge's homosexuality." The act also betrays fascist inclinations if Giles' act is seen as a defense of the heteronormative family, an image closely tied to fascist nationalism. Giles' fascist impulses are arguably reflected in his dislike of Lucy, which is pronounced throughout the novel. Most of his aggression seems to stem, consciously or unconsciously, from his consciousness of her gender as well as perhaps the inclusive ethical worldviews she holds and her general disinterest in the political developments that obsess him. If Bartholomew and Giles reflect an insular, semi-fascist worldview, then Lucy offers a broader, universalizing outlook that straddles temporal and national boundaries.

Lucy is one avenue through which Woolf articulates an expansive way of tracing kinship that encourages one to consider affinities between oneself, other humans, and nonhuman others through creative acts of patient observation. These affinities extend beyond identities based in geographic location or nationhood. Moreover, the novel offers a creative engagement with the world that encourages one to recognize connections that are not always apparent. Detloff has argued for the ways that the novel encourages its audience to imagine new ways to engage with the present that resist the negative cultural scripts of the past (and the sense of historical inevitability that accompanies them). She notes that this meaning is present throughout La Trobe's pageant and driven home a final time in the closing paragraph of the novel, which presents human history as an unacted primordial scene that "suggest[s] that the course of the drama that ensues will depend on the willingness of the audience, 'ourselves' to imagine a 'new plot'" (52). Lucy's engagement with deep time, as I argue more fully below, and her approach to the human and nonhuman other are in keeping with the kinds of creative imperatives Detloff outlines. Lucy exhibits this mindset throughout the novel, but it is encapsulated in a striking moment in the final pages of the novel when La Trobe's pageant nears its conclusion: "Mrs. Swithin caressed her cross. She gazed vaguely at the view. She was off, [Isa and William] guessed, on a circular tour of imagination—one-making. Sheep, cows, grass, trees, ourselves—all are one. If discordant, producing harmony—if not to us, to a gigantic ear attached to a gigantic head" (125). Those around her are dismissive of her attempts to locate a sense of

oneness, particularly attempts that do not necessarily privilege humankind (harmony is not necessarily audible "to us") by identifying it as a product of her presumed senility. "Well, if the thought gave her comfort [...] let her think it" (126). William and Isa say to themselves as they watch her thinking.

Other characters and the narration itself, however, echo Lucy's imaginative vision. In his speech after the play's end, Reverend Streatfield locates a similar message within the play when he suggests to the audience that humankind not "limit life to ourselves" and the swallows fly around him as though "cognisant of his meaning" (138). "I thought I perceived that nature takes her part," he remarks, in the same speech. The narration itself suggests that La Trobe's work provides quite a similar outlook in moments that are unattached to the consciousness of any particular character. When the fragmented mirror reflects the audience members back at themselves, it does not represent only the humans. What occurs is a kind of roll call of being: "And Lord! the jangle and the din! The very cows joined in. Walloping, tail lashing, the reticence of nature was undone, and the barriers which should divide Man the Master from the Brute were dissolved. Then the dogs joined in…[H]ere they came! Look at them!" (132).
Lucy is set apart from both Giles and Bartholomew, as well as other men in the novel, such as the cowman, Bond, who all offer demonstrations of power. Though scholarly arguments tend to suggest that acts of patriarchal violence and dominance embodied in these male characters are meant to represent the continuation of a presumably violent past into the present, Woolf actually resists such a reading in several moments. It is difficult to imagine a character like Giles performing "skilful operations on the brain" or producing false teeth, for example (22); it is also unlikely he would have an appreciation for the elaborate prehistoric jewelry and art evoked in conversation as the audience disperses at the close of La Trobe's play (143).

Eliot offers a similar take on unity in certain moments of "The Dry Salvages." Like "East Coker," "The Dry Salvages" reflects upon a conceptualization of time informed by natural history. It also similarly reinforces the claim from the preceding *Quartet* that the unfolding of human history cannot bring the past into any sort of teleological order with the present since "every moment is a new and shocking / Valuation of all we have been" (II.ii.36-7), a stance Eliot retreats from in "Little Gidding." But it departs from the cyclicality of "East Coker," which emphasizes (and deconstructs) notions of recurrence, to consider time as sheer accumulation ("There is no end, but addition: the trailing / Consequence of further days and hours") (III.ii.7-8).

"The Dry Salvages" is the *Quartet* most attuned to the difficult questions that deep time raises in the present moment and to the larger sense of unity one might arrive at through a consideration of the place of humankind within natural history.

In keeping with the fact that *Four Quartets* is touted as a culminating moment in Eliot's post-conversion thought, most readings of "The Dry Salvages" emphasize its relation to the larger religious concerns of the *Quartets* as a whole and tend to ignore Eliot's rather extensive use of nonhuman figures, sounds, actions, and processes. A. David Moody has made a case comparable to my own for why "East Coker" and "The Dry Salvages" might be thought of a continuous, extended entry, a double quartet, but unlike my argument, his does not highlight the nonhuman. The difference in approaches speaks to the layered, complex affinities between the two poems. Moody's view is based largely in the fact that the closing lines of "East Coker" clearly prefigure "The Dry Salvages" ("Through the dark cold and the empty desolation, / The wave cry, the wind cry, the vast waters / Of the petrel and the porpoise[...]") (II.v.36-8) and that, more importantly for Moody, Eliot takes up a religious perspective that attempts to locate the traces of English religious traditions in America: "'The Dry Salvages" might be called Eliot's New World Quartet, not only because it returns to his American sources, but because it discovers a new meaning in them, a meaning which goes back to the religious origins of New England" (qtd. in Kramer 239). More recent work, William Kevin Penny's in particular, has begun to examine the role of nonhuman imagery in the *Quartets*. As insightful as Penny's work is, it still tends to reinscribe the nonhuman within theological frameworks that emphasize hierarchies of being. "Dialect of the Tribe: Modes of Communication and the Epiphanic Role of Nonhuman Imagery," for example, casts Eliot's nonhuman elements as enunciative mediaries between the human and the divine that are able to act as signifiers in contexts where human language and reason would come up against their limits. While I agree that the nonhuman in *Four Quartets* can be read in a way that is not at odds with the ethical or even the religious goals of the project, I hope to show that the expressivity of Eliot's nonhumans points toward concerns that are relevant to humankind without being fitted exclusively to human interests.

"The Dry Salvages" is framed around Eliot's childhood memories of the Mississippi River in St. Louis, and the coast of Cape Ann, Massachusetts, where he spent many of his summers between 1893 and 1911. The opening lines of the poem explore the importance of the river to everyday human life with a kind of animistic awe:

> I do not know much about gods; but I think that the river
> Is a strong brown god—sullen, untamed and intractable,
> Patient to some degree, at first recognised as a frontier;
> Useful, untrustworthy as a conveyor of commerce;
> Then only a problem confronting the builder of bridges.
> The problem once solved, the brown god is almost forgotten
> By the dwellers in cities—ever, however, implacable.
> Keeping his seasons and rages, destroyer, reminder
> Of what men choose to forget. Unhonoured, unpropitiated
> By worshippers of the machine, but waiting, watching and waiting.
> His rhythm was present in the nursery bedroom,
> In the rank ailanthus of the April dooryard,
> In the smell of grapes on the autumn table,
> And the evening circle in the winter gaslight. (1-14)

This passage returns to the themes of technology and human experiences of time that were approached throughout "East Coker." In this instance, human reliance on technology ("the machine") is likened to a sort of faith itself, a faith that leaves one epistemically closed off from the very natural features and cycles that make urban human community possible—and also susceptible to destruction, as later passages in the *Quartet* illustrate in their allusions to natural disasters. The animism of the passage presents an ontological counterpoint to human experience under urban modernity; the river's protracted "waiting, watching and waiting"—which puts one in mind of Lucy's epistemic approach to understanding the natural other—is juxtaposed with the shock experience of modern life. In "East Coker," the agential power of the villagers within the natural world was limited by their very intimacy with cyclical time and their belief in the fallacy that natural cycles are permanent; here, human awareness of vast natural timescales is constrained by economic and technological systems that actually operate, in part, thanks to natural features and products at play in deep time (such as the river, which acts as a "conveyor of commerce" or the fuel needed for the combustion of machines or the lighting of a gasolier).

Despite the animistic language of the passage, the first movement of "The Dry Salvages" adopts a highly materialist viewpoint that allows it to approach the question of "oneness" that Woolf presents in *Between the Acts*. While the river and especially the ocean—the focus of the

remaining stanzas of the first movement—might be understood as stand-ins for eternity or the atemporality of a divine presence, the poem typically refrains from any kind of theistic language until its later sections. Instead, Eliot focuses on the material ubiquity of the water of the river and the ocean both aurally and palpably. The final lines of the opening stanza rotate through the yearly seasons to illustrate the persistent presence of the river within day-to-day life. The sounds of the river are present to the speaker from the time of infanthood. The water nourishes the rank ailanthus—a tree known for the foul smell it emits when its leaves blossom. The river is responsible, then, not only for the sounds, but also some of the smells that structure the speaker's sensory life. Eliot pushes the implication further when he reflects on the scent of grapes on the "autumn table," a line that alludes to the fact that the river—or water more generally—constitutes the very food that the speaker eats. This line of reasoning is taken to its limit at the start of the next stanza when Eliot states quite plainly: "The river is within us" (15). In the opening passage, Eliot points to the fact that water can be located at every point along the hierarchy of sense and then moves beyond the boundary of the body itself. Though it is "almost forgotten," water not only surrounds the human form but constitutes it, even as it also makes up the stimuli that shape its experience.

Like Eliot (in the opening of "The Dry Salvages," anyway), Woolf presents a sense of oneness that is not grounded in theological thought but a materialist understanding of being. Within the context of *Between the Acts*, it is arguable that Lucy's understanding of oneness operates through her interest in earth sciences more than her Christianity. In fact, Lucy has a much more active understanding of evolutionary history than her atheistic brother and nephew, whose historic gaze encompasses only the short duration of national development. Woolf imbues Lucy with the sense of ethical obligation that religious faith would ideally instill but does away with aspects of religious dogmatism that would reject scientific understandings of time and species development. When the reader first encounters Lucy with *An Outline of History*, her "favourite reading" (6), she is entertaining the fact that, "the entire continent, not then, […] divided by a channel, was all one; populated […] by elephant-bodied, seal-necked, heaving, surging, slowly writing, and […] barking monsters; the iguanodon, the mammoth, and the mastodon; from whom presumably […] we descend" (7). When Grace, the maid, enters the room it takes Lucy a moment to distinguish her from the prehistoric creatures she had been imagining in her mind. From a certain perspective, however, this conflation of species is insightful because,

as Lucy notes in the prior moment, humankind and, by extension, all present species, descended from beings quite physiologically distinct from themselves—even single-celled organisms, if one goes back much further than the time of mammoths and mastodons. Lucy's interest in speciation provides a more straightforward approach to understanding her seemingly metaphysical claim that "we have other lives, I think[…] We live in others [...] We live in things" (51). Lucy tends to be interested in individuals—human individuals, to be sure, but also individuals that represent other conscious and unconscious forms of life (from mammals to plants).

Woolf presents each creature Lucy encounters as a kind of individual history of speciation that extends to the present moment and continues within it, living histories that connect more meaningfully to Lucy's own personal makeup than those grounded in the relatively short spans of family lineage or national identity. From this standpoint, Woolf seems to be reclaiming Darwin from positivistic histories that appropriated evolutionary ideas to justify violent imperial action, both in the past and in the present. When one divorces evolution from the deterministic ideologies that attached themselves to it, the plasticity of species, a plasticity that calls into question the very category of species itself, provides an ethical imperative for all life across the continuum of being—all humans, undomesticated animals, domesticated animals whose speciation has been altered by human intervention, and other lifeforms that are dependent on an ecosphere increasingly compromised by human action. Lucy's approach to understanding individuals in this manner anticipates the ethic of care put forward by ecofeminist scholars like Val Plumwood, Donna Haraway, and Karen Davis. The work of these scholars emphasizes practices of careful observation that privilege individual animals, an approach that offers different insights than the consideration of a "species." Woolf offers deep time, then, the time of species development, as a basis for ethical consideration and, therefore, one's action within the present. Individuals are themselves a kind of historical record, one that emphasizes the past rather than devaluing it in place of the future.

One can also detect a corresponding method of careful observation in *Four Quartets*. Consider this line from the first movement of "The Dry Salvages":

> The river is within us, the sea is all about us;
> The sea is the land's edge also, the granite
> Into which it reaches, the beaches where it tosses
> Its hints of earlier and other creation:

> The starfish, the hermit crab, the whale's backbone;
> The pools where it offers to our curiosity
> The more delicate algae and the sea anemone.
> It tosses up our losses, the torn seine,
> The shattered lobsterpot, the broken oar
> And the gear of foreign dead men. The sea has many voices,
> Many gods and many voices. (15-25)

This stanza appears to engage with a Darwinian chronotope. In the fourth chapter of *On the Origin of Species*, Darwin thinks through the process of natural selection as it operates in nature, building on the arguments he makes regarding humankind's influence over the variation of a range of species though domestic breeding practices. He observes how in isolated freshwater basins, one encounters what are commonly referred to as "living fossils," organisms that have undergone few structural variations through long stretches of geologic time due to the fact that the competition for resources would have been less intense than that among populations with a wider geographical range:

> …[I]n freshwater [we find] some of the most anomalous forms now known in the world, as the Ornithorhynchus and Lepidosiren, which, like fossils, connect to a certain extent orders now widely separated in the natural scale. These anomalous forms may almost be called living fossils; they have endured to the present day, from having inhabited a confined area, and from having thus been exposed to less severe competition. (107)

Eliot inverts the chronotope, however, removing the scene from isolated pools where competition would be at its lowest to the ocean where competition would be at its highest. It is here that one can see in "earlier creation" a high degree of variability along the continuum from simple to complex forms of life. The starfish, an echinoderm, represents a relatively old phylum and an important intermediary stage between vertebrates and invertebrates. The whale, represented metonymically by a literal backbone, is the stand-in for vertebrates and mammals—much newer arrivals in the scale of evolutionary time (and, in the case of the blue whale, the largest animal ever known to have lived). The poem indicates that as one walks along the shore of a seascape, one can mark living (or recently-living) traces of evolutionary flux in the wide variety of life that exists there and the competition that must have driven such variability. Eliot

suggests that this insight requires an attentiveness to vastness of deep time, however, and as the poem has already indicated, modernity does not typically inculcate such cognitive practices—or, using the condescending language of the poem, "worshipers of the machine" are conditioned to overlook the "time [that is] not our time," the "time / [o]lder than the time of chronometers." (i.10; 38; 40).

There are a number of differences between the initial version of "The Dry Salvages" that first appeared in print and versions subsequent to 1945 that further hint at the Darwinian concerns of the passage. One notable change is the substitution of "horse-shoe crab" for "hermit crab" in line 19. In correspondence with both John Hayward (12 January 1945) and Richard de la Mare (6 February 1945), Eliot noted that the inclusion of "hermit crab" had been an editorial oversight and that he had meant to use "horse-shoe crab" all along. It is an intriguing alteration, particularly since horseshoe crabs emblematize the idea of the "living fossils," a term Darwin uses throughout *On the Origin of Species*. The oldest specimens of horseshoe crabs in the fossil record date back to the Late Ordovician period, nearly half a billion years ago. They have survived five mass extinction events, but are not faring well during the sixth. While it is interesting that Eliot failed to notice this mistake until years after the poem's original publication in 1940, more interesting still are the lengths he went in an attempt to address it, even writing the *New English Weekly* (which first published the poem) in order to encourage readers with a copy of the issue to alter the line themselves.[70] In his letter to Hayward, Eliot speculates that he made the mistake because "the wrong crab scans better" and seems frustrated that Hayward likewise overlooked the error during the editorial phase: "How could one find the remains of a hermit crab on a beach? All there could be would be the shell of some other crustacean. I am surprised that neither you nor anyone else has spotted this" [qtd. in Ricks and McCue 967].

Much like *Between the Acts*, "The Dry Salvages" indicates that an observational epistemology can help one notice the profound impact of humankind in the natural world. It also

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[70] Eliot's letter from 25 January 1945 states: "There is...one error in the text which has escaped the observation of any of my friends or critics, and of which I have only just myself become aware. In the first section of "The Dry Salvages," 'hermit crab' should be 'horse-shoe crab.' It was, of course, the horse-shoe crab that I had in mind: the slip must have been due to the fact that I did not want a spondee in that place. What is more curious is that the term 'hermit crab' should have continued to do duty for 'horse-shoe crab' in my mind, in this context, from the date of original publication of the poem until last week. I shall be grateful to any of your readers who may possess the poem, if they will kindly make the alteration" (qtd. in Ricks and McCue 967).

suggests, however, that the very continuation of capitalist processes requires one to overlook natural change, anthropogenic or geologic. Eliot's attempts to return to a prior literary grammar of nature and cyclical time is partially nullified by the ubiquity of modernizing practices. The sounds, scenes, and geomorphic potential of human technologies persistently encroach on the geographies that comprise the work's major movements. From the van that passes the speaker in the British countryside of "East Coker" to the fishing vessels that can be heard and seen in the New England seascape of "The Dry Salvages," *Four Quartets* presents a world wherein any observational account of the environment must also take note of the human influence within it. This is particularly true of "The Dry Salvages" where a walk along the seashore produces not only starfish and horseshoe crabs but also "our losses" (such as torn fishing nets and the "gear of foreign dead men") (i.22; 24). The encounter with the sea acts as a cognitive primer for reflections on deep, geologic time, and therefore speciation, even as it consistently proffers the shock experience inherent in capitalist operations and the violence that their growth necessitates. Eliot also draws attention to the ironic fact that we often have to naturalize the waste inherent in capitalist production in order to assuage the anxiety of environmental loss. One cannot "think of an ocean [that is] not littered with wastage" any more than one could envision "a world that is oceanless" (iii.22; 21). By placing living histories of deep time alongside the traces of human production, the poem gestures toward the accelerated way that humankind has altered the natural world. Like Woolf, it also suggests an evolutionary kinship with nonhuman life and begs the question of what such a connection might mean within the context of capitalist development.

Conclusion

It is interesting that both Eliot and Woolf turned to the deep past in the face of fascism. Resisting doctrines of progress that either devalued the past or integrated it into troubling visions for the future, both *Between the Acts* and portions of *Four Quartets* suggest the insights one can gain through the careful observation of natural others and a reflection of one's connection to other forms of life through evolutionary change. This fact lends a new framework for considering the tendency of late-modernist British works to return to prior moments in the national timeline.

While it seems clear that Woolf's novel maintains its critical gaze, can the same be said for Eliot? Considering his troubling politics, it is hard to imagine anyone arguing that he exhibits an ecofeminist ethics of care, at least not in those terms. In his better moments, there is

something to be said, I think, concerning the links between observation and ethical consideration. Like Lucy, Eliot's poetry is very attentive to the wildlife that inhabits a particular landscape. In his essay "The Influence of Landscape upon the Poet," he reflects on his childhood split between the urban sprawl of St. Louis and the seaside of Massachusetts. He recalls in language that evokes his writings on religious dedication: "In Massachusetts, the small boy who was a devoted bird watcher never saw his birds of the season when they were making their nests" (352). Fortunately, Cape Ann offered its own attractions:

> O quick quick quick, quick hear the song-sparrow,
> Swamp-sparrow, fox-sparrow, vesper-sparrow
> At dawn and dusk. Follow the dance
> of the goldfinch at noon. Leave to chance
> The Blackburnian warbler, the shy one. Hail
> With shrill whistle the note of the quail, the bob-white
> Dodging by bay-bush [...]
> [...]All are delectable. Sweet sweet sweet [...] (*Landscapes*, "Cape Ann," 1-10)

These are among the most joyful lines in all of Eliot's *oeuvre*, and they are simply a catalogue of bird populations and behavior in a specific landscape.

"Little Gidding" does not draw from the fascination with speciation and deep time so evident throughout Eliot's body of work to offer new possibilities for the future. Instead, the poem retreats into more familiar eschatological patterns and the reassertion of divine providence. The repetition of "All shall be well, and / All manner of thing shall be well" (iii.18-9) reiterates the idea of a divine plan beyond the comprehension of humanity. Any historical outcome is a reflection of heavenly will because it is "Love" that "devised the torment" (iv.8). Leaving questions of its poetic value aside and turning to ecological considerations, "Little Gidding" is a disappointing culmination to a work that draws heavily from Victorian science in earlier sections to consider the placement of humankind alongside other species and timescales. As the natural figures fade from site, the focus of *Four Quartets* takes up a well-worn anthropocentric tack that uses backshadowing logics to suggest that the present might be placed within a legible historic trajectory.

While *Four Quartets* ends with backshadowing, *Between the Acts* considers the possibility of futures that break with the scripts of the past. The final chapter examines the

residents of Pointz Hall at the close of day. Lucy reads *Outline of History*. Bartholomew mutters in his sleep. Isa and Giles "must fight" and "after they had fought, they would embrace. From that embrace another life might be born" (157). Woolf does not shed the prehistoric asides that punctuate earlier points of the novel. The closing lines compares the night to a time "before roads were made, or houses." "It was the night that dwellers in caves had watched from some high place among rocks," the narrator continues, "Then the curtain rose. They spoke" (158). These final sentences intimate a collective agency and a sense of possibility for the future. This positive turn is not dissimilar to Tennyson's move at the end of *In Memoriam*, when the poem's speaker suggests that the child conceived on night of the wedding described in the epilogue. The child will be "a closer link / Betwixt us and the crowning race" (127-8)—the race that will be "No longer half-akin to brute" and will find "Nature like an open book" (133; 132). These works are illustrative of the ways that the science of deep time can be integrated into disparate narratives of progress. Though *Between the Acts* and *In Memoriam* adopt similarly positive tones, Tennyson's work proffers the idea of progress through individualism and mastery. Change will come through the headway of individuals that improve the race and delve the mysteries of nature. Woolf offers the possibility of change, but situates its prospects in the possibilities of positive social engagement.

Coda

The articulation of the Victorian and modernist Anthropocene involved turning to the question of species and the meanings of modern extinction. Of course biological registers, in the form of anthropogenic species decline and loss, were not the only avenues that impressed on nineteenth- and twentieth-century writers the stark inroads that humankind was making into natural history. The climatic conditions faced by Britons in cities congested with smog already exposed thinkers to environments where even the air was marked with the byproducts of human 'progress.' While I acknowledge the importance that industrialization and atmospheric pollution had on ecological concepts, particularly in the emergence of the idea of climate change during the nineteenth century, my dissertation has attempted to shed light on accompanying ways of ecological knowing related to the Anthropocene that extended beyond climate. Species loss stood alongside aberrant atmospheric conditions as a key anxiety whereby writers came to express "honest doubt," to rework Tennyson's term, about the progress of humankind. The recurring issue of extinction in both Victorian and modernist literature speaks to the degree that species decline persisted as an important concern connecting both periods.

The fears of anthropogenic extinction expressed in Victorian literature are also a way that literature supplemented science. It would be difficult to overstate the importance of texts like *On the Origin of Species* or *Principles of Geology*. Each played an inestimable role in shaping both scientific thought and everyday perceptions of what it means to be human. Each also obscured the possibility of anthropogenic extinction by instead insisting that species loss played out gradually in the expanse of deep time. Due to scientific partisanship—neither Darwin nor Lyell would give catastrophism any quarter, despite evidence of accelerated mass extinction evidenced in the fossil record—the human-caused extinctions unfolding in their own lifetimes remained undertheorized in their work. Poets and novelists giving voice to early conceptualization of the Anthropocene enacted an important role in representing anthropogenic extinction to public readers. Their insights, from intuition or direct observation, of modern extinction and its meanings provide a counter to other voices from the era that trumpeted narratives of progress (except, of course, when extinction was imagined as a necessary component of that progress).

Literary texts also stood as a popularizing force for Victorian science. Novels and poetry conveyed scientific breakthroughs to the public together with nonfiction writings that explicitly sought to make the emergent science of the day accessible to non-specialists. Literature involved

a secondary level of signification, however, in that it attempted to make meaning of this science for everyday life. Novelists and poets attempted to think through what it meant to be a species with a deep past, particularly when that past was considered in the context of alternate histories of speciation seen in existent animals. What do evolutionary time and species loss mean? And, in the case of writers from Tennyson to Jones and Woolf, how are these insights felt? Victorian science held meanings at both the communal and individual level. It had import for the history of community, but it was also something with ramifications for interior life. The possible ways of understanding what scientific insights meant for human significance came to be an increasingly central feature of literary texts—especially as more creatures began to decline or die off entirely and even the human species itself was faced with the possibility of extinction with the arrival of technological modernity and new war machinery.

Writers of the Victorian and modernist Anthropocene projected notably different outcomes and implications for the incursions of humankind into natural history. These projections are reflected in the ways that authors provide different narrative frameworks for breakthroughs in science. For Tennyson, the science of deep history presented the challenge of reasserting the importance of the individual within a context that decentered the significance not only of the individual but even of entire species. I have discussed the weight that Tennyson assigns individual improvement in his imagined ascendancy of a "crowning race" over the course of evolutionary time in the epilogue to *In Memoriam*. Other sections of the poem attempt something similar. Canto 45 describes the gradual emergence of self-consciousness in a newborn child. The speaker describes the baby's initial lack of self-identity and its progresses toward individuation:

> But as he grows he gathers much,
>   And learns the use of 'I,' and 'me,'
>   And finds 'I am not what I see,
> And other than the things I touch.'
>
> So rounds he to a separate mind
>   From whence clear memory may begin,
>   As thro' the frame that binds him in
> His isolation grows defined.

This use may lie in blood and breath […]. (5-13)

Tennyson remarked that the final stanza posits that "the purpose of the life […] may be to realise personal consciousness" (35 n.1). If this is the purpose of an individual life, then its purpose rests outside of social connections—or connection to any other form of life for that matter. Any evolutionary benefit for the human species more broadly will come as a consequence of the self-development of individuals. The epilogue also performs a similar rhetorical move. When the speaker outlines the development of the baby conceived on the wedding night, it describes the fetus developing "thro' life of lower phase" before becoming fully formed "in man" (125-6). The passage pulls from the theory of recapitulation, the idea that an embryo progresses through stages where it resembles earlier phases (the "lower phase") of evolutionary development. This is another way that Tennyson seems to re-inscribe the importance of humankind in general and the individual more specifically by positioning both as the ultimate goal of an evolutionary trajectory. The final lines of the poem pull away from the focus of marriage and reproduction to once again discuss Hallam, whom the speaker describes as a "noble type" (138). The term "type" in this context cannot help but recall the use of the term earlier in the poem when it was used synonymously with "species"—suggesting the importance of an exceptional man might be on par with a species itself, a sentiment also expressed in a different moment earlier in the poem when the speaker intimates that other species (such apes and tigers) are expendable in humankind's development toward a higher state.

Tennyson's attempts to find positivistic meaning in deep time and extinction find echoes in the literature that followed. Imperial fiction operated with similar discourses to excuse away the loss of nonhuman life, particularly when it came to the deaths that resulted from imperial male identities. That imperial adventure fiction seems attuned to and critical of the reality of anthropogenic extinction even as it suggests it is necessary is one of the more perplexing contradictions of the genre. Many imperial writers tried to have it both ways, in other words—Haggard's writing celebrates the wanton killing of large groups of animals even as it laments their passing. His writing mourns the loss of species, but it never satisfactorily attempts to reconcile the kinds of male identities it celebrates with the losses they produced. There is something offputting about the resemblances between *In Memoriam* and the attitudes of imperial adventure fiction. Though they were produced for different ends and would traditionally be assigned different standings in terms of literary worth, they both forwarded an anthropocentric

worldview and attempted to reaffirm human exceptionalism within scientific frameworks that decentered the human.

Perhaps more relevant to the present moment are the takes on Victorian science that attempted productive outlooks on what scientific thought might mean for the future. Gaskell's *Wives and Daughters* presents a scenario wherein an individual's social development is helped along by her scientific education. Molly Gibson's understandings of natural history and her subtle sensitivity to the natural world and nonhuman life help make her a keen observer of the social behavior of people as well. Her expanded understandings of human life and behavior make it easier for her to assist in the lives of those in her community and, thus, science helps her intellectual as well as her social development, something that could not be said of many of the men in the novel, particularly Lord Hollingford. The novel, along with the author's other works, like *Cranford*, indicate that a feminist ethos is necessary for social progress. *Wives and Daughters* operates with a similar outlook and extends it to questions of science, signaling the benefits of science when it is matched with the feminine values Gaskell extolls. Along the same lines, the novel hints at the impacts for the nation and for nonhuman populations if science is tethered closely with the values of power and commercialism taken up to varying degrees (and with varying levels of self-awareness) by its male characters. Here, again, science is attached to gendered identities. Gaskell represents an important oppositional voice for those who celebrated the close interconnectedness of science and imperial identities—a pairing that has had permanent and ongoing consequences for human and nonhuman populations.

Along lines similar to Gaskell, writers like Jones and Woolf consider what the placement of humankind within deep time might mean for questions of community. Tennyson's reaction to deep time prompted a turning inward. His work questions the role of the individual in evolutionary progress. Using a script close to Tennyson's, writers like Haggard privileged the nation and the imperial project as the key agent driving evolution and futurity. Woolf and Jones take quite a different approach. Both indicate that the positioning of humankind as a species with the power to erase other forms of life (and potentially even themselves) necessitates a turning outward. To make progress in a time that seems hopeless, or even apocalyptic, we have to listen to voices that are often silenced, and we must account for the interspecies stakes of the ecological and political moment in which we are placed.

Where Tennyson found alienation, Woolf and Jones locate grounds for a broader sense of community. Evolutionary time could allow one to recognize the affinities between species as well as their co-evolutionary exigencies. Works like *Between the Acts* and *In Parenthesis* are interesting for the ways that they look backward to consider the implications of the present rather than reiterating the future-driven discourses that were so prevalent during the nineteenth and twentieth centuries. That the narratives of Jones and Woolf—punctuated with apocalyptic fears, species decline, and voices offering appealing, if ill-founded, rallying cries of progress—feel so modern speaks to the fact we have indeed inherited, rather than solved, the problems and questions of deep time, extinction, and human development that captivated writers of the past two centuries. The questions of deep time and extinction are as important now as they were to readers of the first editions of Darwin and Lyell's work. This relates to Jesse Oak Taylor's claim that "Tracing these connections [between the literature of the past and the ecological issues of the present] does not collapse the past into the present but rather illuminates the contingency of the present by way of the alterity of the past" (*The Sky* 9).

The broad assortment of narratives surrounding extinction and deep time that emerged from the literature of the nineteenth and twentieth centuries calls for an expanded set of Anthropocene narratives in our own. Though the rhetorics and frameworks I have explored in this project served different purposes for different authors—and some of the rhetorics certainly operated with abusive worldviews that don't need resuscitating—they are illustrative of how readers in the preceding centuries were offered a wide variety of ways to find "a way in" to science and broader questions of ecological decline. There is an argument to be made that the meanings of climate change, extinction, and other symptoms of the Anthropocene are not as thoroughly explored in the present. This is certainly true of science fiction and disaster films that have not found ways to adequately convey the experience of climate change, a form of "slow violence" Nixon has discussed as being so difficult to represent in cultural texts. Even the overviews of the Anthropocene in popular news sources could do with richer narratives. Coverage can tend to focalize single symptoms of the Anthropocene without discussing them alongside others. Climate change is explored relatively frequently, though it could always be discussed further. The impact of the ecological crisis on humankind, particularly marginalized groups, is alarmingly underrepresented. Extinction is discussed less frequently than climate change, though it is gaining traction. Other topics, such as ocean acidification and geochemical

cycles are rarely mentioned, at least not in the headlines. I am not arguing that issues like climate change need to be discussed less, particularly not when climate denialism has mobilized more aggressively than ever. I am saying that by isolating registers of the Anthropocene, many modern discussions inadvertently suppress the complexity of the situation. This myopic approach also does not confront denialists with evidence of ecological decline that are quite difficult to ignore or explain away, such the rapid loss of species and the changing chemical composition of the oceans themselves.

Some writers of the Victorian and modernist Anthropocene also demonstrate how certain orientations to the deep past can prompt collaboration and creative approaches to social engagement in the present. An understanding of humankind's co-evolutionary paths with other species can inspire broader conceptualizations of community that extend ethical consideration to all humans as well as other species. The Anthropocene gives cause for mourning, but a fuller appreciation of the natural and cultural histories it ruptures can help define what is at stake and, if writers of the Victorian and modernist Anthropocene are correct, prompt creative forms of positive intervention.

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