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"In medias res": Alice Major's Perilous Invitation to the Anthropocene

The titular poem of Alice Major's volume, *Welcome to the Anthropocene*, invites the reader to a familiar yet unsettling journey through the global technological, environmental, and geological crises now threatening the planet. "Welcome to the Anthropocene" can be read in the context of a growing body of twenty-first-century creative and critical ecopoetic texts, particularly those that emphasize the politically fraught connotations of the term *Anthropocene*. Lynn Keller designates such texts as part of the "self-conscious Anthropocene," a period that, beginning with the new millennium, "identifies a cultural reality more than a scientific one" (2). This is not to say that the scientific reality is ignored, especially in "Welcome to the Anthropocene." Indeed, the poem incorporates many elements of science, even as it shapes these elements in creative, often provocative, ways. With its smoothly regulated form and veiled heroic couplets, "Welcome to the Anthropocene" simultaneously advances and partially deconstructs scientific concepts as it builds toward a compelling conclusion that offers but does not insist upon a way through the current ecological crisis. The poem is both a perilous invitation to and a navigational guide through the troubled waters of the Anthropocene epoch.

"Welcome to the Anthropocene" is a contemporary intertextual "response to Alexander Pope's 10-part 'An Essay on Man,'" a work that "is imbued with 18th-century science" (Major, *Welcome* 117) and that appears almost three centuries earlier than Major's poem.[1] Major's poem interrogates prevalent assumptions from the Age of Reason about science and humankind's place in the world, even as it elucidates current plights that have resulted in large part from historical events

of the Enlightenment era. As Murray Citron puts it, "Pope, writing in the century of Newton, Leibniz, and The Great Chain of Being, could explore his universe and conclude, emphatically, 'Whatever is, is right'" (372). Major, however, "writes in the age of quantum physics and climate change and has her doubts." While Major may have her doubts about some of Pope's self-assured pronouncements, she offers a creative way of reframing them in light of contemporary realities.

Like other Canadian poets such as Margaret Avison, Don McKay, Christopher Dewdney, Tim Lilburn, Christian Bök, and Rita Wong, Major has engaged with scientific and ecological concerns. Over the past three decades, she has incorporated numerous aspects of scientific discourse into her poetry, offering new, often challenging and complex perspectives on topics routinely marginalized or ignored in most poetic texts. Concepts from mathematics, physics, astronomy, chemistry, biology, and ecology inform many of her poems. Through much of her poetry, Major shows the extent to which science is essential to and interpenetrates day-to-day existence, illustrating difficult concepts in illuminating ways, and almost always demonstrating some unexpected connections between the ordinarily esoteric and the ordinary. "Welcome to the Anthropocene" is no exception to this practice.

As much as Major's poem embodies aspects of the ecopoetic, it also makes even closer imaginative connections between poetry and science. In his essay on the Anthropocene, McKay refers to geologist Harry Hess, who coined the word *geopoetry* and argued that the poetic imagination was necessary for people to visualize the process of plate tectonics before it became a widely accepted theory. McKay writes,

> I think that . . . any . . . creative scientist enters a mental space beyond ordinary analysis, where conjecture and imaginative play are needed and legitimate, and that this is a mental space shared with poets. . . . Geopoetry . . . provides a crossing point, a bridge over the infamous gulf separating scientific from poetic frames of mind, a gulf which has not served us well, nor the planet we inhabit with so little reverence or grace. (47)

With its allusion to C. P. Snow's famously controversial contrast between scientists and "literary intellectuals" (4), McKay's claim dovetails with Major's claim that "science and poetry are both . . . central to

understanding how human beings fit into the world" (*Intersecting Sets* xv). As Major weaves scientific truths into the fabric of her verse, she invites some potentially creative responses to them, beginning with the title of her poem.

As I mention above, the term *Anthropocene*—literally, "recent human"—is politically fraught. It was first proposed by chemist Paul J. Crutzen and biologist Eugene F. Stoermer in 2000 to designate the past three centuries, owing to the pervasive influence of the human species on current geological and ecological processes. This unofficial term was floated as a possible successor to the *Holocene* ("wholly recent" or "entirely new") geological epoch, although *Holocene* is still the term officially designated by the International Commission on Stratigraphy to cover the past ten thousand years ("International Chronostratigraphic Chart"). Nevertheless, in many scientific, academic, and, increasingly, popular circles, the term *Anthropocene* has taken hold, but not without controversy. As Kathryn Yusoff puts it,

> given the proliferating debate and institutionalization of the concept in so many disciplines, the Anthropocene cannot be considered a monolithic or even resolute concept; however, there is a common fundamental adherence to a statement of geologic agency . . . How this geologic agency and its subjective modes are thought is the basis of political subjectivity in the Anthropocene. ("Politics" 258)

This political subjectivity is apparent in the arguments of scholars such as Jason W. Moore, who contends that the all-inclusive connotations of the term *Anthropocene* belie the roots of the present global crisis. For example, several scholars, including Moore, propose instead to rename the present epoch the *Capitalocene*, in order to emphasize the past half millennium as one shaped "by relations privileging the endless accumulation of capital" (Moore, "Rise" 94). Without this recognition, according to Moore, the global crisis cannot be solved. Renaming the current epoch the Capitalocene focuses attention on the relentless exploitation of Earth's resources—including much of humanity rendered as non- or subhuman resources—and the concomitant systems of colonialism and imperialism that have been driving and enforcing global capitalism since 1450.

Other names that have been proposed for this epoch include the *Chthulucene*, which derives from the underground spider species *Pimoa cthulu* with its chthonic associations (Haraway 53), and the *Necrocene*—i.e., "new death"—which "reframes the history of capitalism's expansion through the process of *becoming extinction*" (McBrien 116). Kathryn Yusoff's *A Billion Black Anthropocenes or None* emphasizes the necessity of the racially specific modifier:

> The Black Anthropocene (in the singular) indexes an inhuman proximity organized by historical geographies of extraction, grammars of geology, imperial global geographies, and contemporary environmental racism. It is predicated on the presumed absorbent qualities of black and brown bodies to take up the body burdens of exposure to toxicities and to buffer the violence of the earth. (10)

Still others argue for a reframing of the term. Heather Davis and Zoe Todd confront the inherent connotations of the Anthropocene from an Indigenous, anti-colonial perspective. They "argue that placing the golden spike [of the epoch's onset] at 1610, or from the beginning of the colonial period, names the problem of colonialism as responsible for contemporary environmental crisis" (763). A focus on colonial beginnings also sharply contrasts two differing views of a dystopian future. For most settler societies, this future is imminent. However, as Kyle Powys Whyte argues, "in the Anthropocene, then, some Indigenous peoples already inhabit what our ancestors would have likely characterized as a dystopian future" (207). These are just a few examples of arguments characteristic of the "self-conscious Anthropocene." Such alternative names and dates, with their specific political, cultural, and economic connotations, differ from the notions of scientists such as Creutzen and Stoermer who, in locating the Anthropocene at the beginning of the Industrial Revolution, prioritize the technology of energy production rather than the capitalist and colonial forces that have driven it thus far. According to Rob Nixon, "We may all be in the Anthropocene but we're not all in it in the same way." Indeed, a disproportionate number of peoples affected by the current global crisis are non-white, colonized, or otherwise globally disadvantaged.

Although Major's poem does not challenge the connotations of the term *Anthropocene* as directly as the arguments of the above-mentioned critics, it addresses some of these arguments indirectly. Moreover, the poem encompasses not only the past five hundred years of ecological transformation but the past five hundred million as well. "Welcome to the Anthropocene" is by no means a phrase of comforting hospitality. Major's poem takes aim at various human activities and states of being that, as the products of evolutionary millennia, are direct or indirect causes or symptoms of the crises characteristic of this present epoch. The causes go beyond colonialism, beyond race and religion, beyond political systems, to the cosmological, geological, and biological processes that have led to the late appearance of *Homo sapiens* in planet Earth's history. In "The Anthropocene: The Promises and Pitfalls of an Epochal Idea," Nixon argues that

> the Anthropocene hypothesis shakes the very idea of what it means to be human. . . . We're simply not accustomed—maybe even equipped—to conceive of human consequences across such a vastly expanded temporal stage. How can we begin to internalize our role as Anthropocene actors, to inhabit that role feelingly?

This is the essential question that Major's poem addresses.

In the prologue to *Welcome to the Anthropocene*, titled "In medias res," the speaker, styling herself as "just / another figure in the chorus / of greying heads, wringing her hands," addresses her audience as a "poor child . . . born / *in medias res*" (3). This is followed by a depiction of the contemporary world as a staged performance of a "play without an author" (3).[2] Indeed, in today's (social media, post-truth) climate of conflicting political and economic ideologies, it is difficult to discern any single "author" able to bring order and sense to the stage. The "poor child" may have affinities with every human being simply by virtue of inhabiting Earth, although the contrast between the "greying heads" of the chorus and the youth of the "child" suggests a resigned farewell of sorts from those who are soon to leave the stage to the remaining generations, their legacy a battered, suffering home planet. Those who remain have no scripted lines. They cannot expect any

"prompters in the wings" or any redemptive "gods / descending in a basket" (3). "We are writing it ourselves," the speaker says, asking the actors to "just play your part" (3). However, if it is the voice of the speaker that carries over to the titular poem, the child is indeed offered wisdom in the lines that follow, lines that have the potential, to use Nixon's words, to help it "internalize our role as Anthropocene actors, to inhabit that role feelingly."

Major's speaker, who slyly casts herself as just one of the grey-headed choristers, will soon step to centre stage, inviting her audience members to position themselves as participants in the extended lyric poem that follows in order to comprehend more fully who they are and what parts they may have to write for their own survival in the Anthropocene. The implied audience appears to be mainly those readers, likely younger than the speaker, who are interested enough to read the poem for the benefit of its advice and wisdom. But the use of the seemingly all-inclusive "we" throughout the poem may trouble some readers. At times the term may fairly embrace all of humanity, as in the following lines: "We are not atoms in emptiness" (25). Elsewhere, referents of the "we" seem quite circumscribed. The lines "Feckless godlings, we're inflamed / by our capacities, creating mice / in our own image" (8) could apply to only a small segment of geneticists capable of altering murine DNA, although figuratively the "we" could embrace the much larger, albeit not universal, technocratic society enabling and supporting such activity. Overall, however, the poem leans toward general inclusiveness in its use of "we." Regardless, the poem is a perilous invitation, a welcome, but an ominous one, to a virtual tour of the Anthropocene for any interested readers.

A central message of this tour is that Earth does not really care about which of its species survive or go extinct. While life on this planet has undergone many catastrophes since its creation, some form of equilibrium has always been restored. Major remarks with almost apparent dismissiveness that

> the earth still manages
> to maintain its total biomass. That bulk
> may shift from balanced muscle to a pulp

> of sagging flab around the waist; it matters
> not the least. There are as many creatures
> living on the planet as have ever been
> —even if a lot of them are hens. (15)

The qualifying final line of this quotation emphasizes the significance for humanity of the difference between muscle and flab. In other words, although Earth's biomass has always maintained and will maintain equilibrium long after whatever may become of them, human beings should be acutely aware of the difference that they are presently making. While the current crisis will likely not destroy the planet over the next few million years, many of us are indeed imperiling humankind's own immediate survival. Today's almost eight billion human beings comprise only a small fraction of Earth's total biomass. Yet our numerous species of domesticated animals total close to seven billion mammals ("Most Populous Animals") and well over fifty billion domesticated fowl ("How Many Chickens"). As Nixon observes,"humans and our domesticated animals now constitute over 90% by weight . . . of vertebrate terrestrial life" and have collectively exerted over at least the past two centuries a substantially disproportionate effect on the rest of the planet. We have crucially altered the balance of biodiversity at the expense—often leading to the extinction—of non-domesticated species. As the World Wildlife Foundation notes in a recent comprehensive report on biodiversity, "the global Living Planet Index shows an average 68% decrease in population sizes of mammals, birds, amphibians, reptiles and fish between 1970 and 2016" (6). If the problems of the Anthropocene are indeed within the power of human beings to solve, Major's poem offers, if not potential solutions, at least a way of reaching toward them.

The poem offers this in sometimes subtle, sometimes forceful, ways. As noted earlier, Major characterizes her poem as a "response" to the first epistle of *An Essay on Man* (117), in which Pope seeks, with a nod to Milton, to "vindicate the ways of God to man" (Pope 1.16). Each section of Major's poem is preceded by and thematically builds upon an epigraph drawn from Pope's *Essay*, sometimes harmonizing and sometimes contrasting with him. Pope, positioned on the eighteenth-

century edge of the Industrial Revolution, with its many technological and scientific advances, is indeed an ironically appropriate model for Major, living in an age that is heir, for better and for worse, to the scientific, economic, and political consequences of Pope's era. While Major's poem is neither a vindication nor a justification of divine ways, its formal qualities invite close consideration of what forces, particularly human attitudes and actions, have come to shape her times. Pope's *Essay* is marked by its use of heroic couplets, which radiate confidence, wit, and a sense of control. Pope does not doubt the science, theology, and philosophy of his time—an attitude that he expresses, for example, in the famously didactic opening couplet of his *Essay*'s second epistle: "Know then thyself, presume not God to scan; / The proper study of Mankind is Man" (2.1-2). While Major's poem is no less erudite, it is characterized by a more intimate, conversational manner that nevertheless belies its strongly formal qualities, of which the following passage is typical:

> Mown, shorn vegetation.
>
> Chronically impoverished, yet unchastened
> we think the gadgetry we've gained redeems
> our losses. Why should we miss one small, green,
> leaf-shaped frog (14)

The poem's basic metre is iambic pentameter, although minor metrical variations are the rule rather than the exception, and silent elisions will bring a line even closer to the standard ten syllables (e.g., "Chronic'ly impov'rished, yet unchastened," albeit reversing the metre from iambic to trochaic in this instance). Similarly, the lines are organized in sometimes hard-to-discern rhyming couplets, echoing Pope but also definitely departing from him. Half-rhymes ("vegetation" and "unchastened," also encompassing the gap between sections); enjambment ("redeems / our losses"); caesuras ("our losses. Why should"); and uncapitalized line beginnings except for new sentences, among other devices, contribute to the superficially informal, but deliberately tightly-controlled, style. In other sections arguments are ironically countered or diminished by such phrases as "—or not" (18) or

"Mere myth, perhaps" (25). A significant consequence of such techniques is that the poem does not so much preach as attempt gently but firmly to persuade. Unlike Pope's more didactic *Essay*, "Welcome to the Anthropocene" often makes many of its arguments indirectly, sometimes almost casually, in part through the variously mentioned devices, potentially allowing readers more flexibility in their responses.

The ten sections of "Welcome to the Anthropocene" also cohere through statements of welcome to many of Earth's inhabitants and to the planet itself, including domesticated and engineered species: i.e., various dog breeds, "Freckles the goat" implanted with spider DNA, "Black-6 Mouse," "transgenic zebrafish," and the "dumbed-down [*Drosophila*] denizens / of Bottle 38" (7); urbanized feral species including "raccoon, coyote, house mouse, peregrine, / squirrel, red fox, *Rattus norvegicus*," and "Canada goose" (13);[3] "all you entries in the global database / of life" (14); "*Homo sapiens sapiens*" (18); "all you refugees . . . And your descendants" (20); "the billions muddling through" (20); and finally, "you battered, tilting globe" (23). One might reasonably ask, Why welcome all of those who already call this planet home, or, in the latter instance, that which serves as their home? What are they being welcomed *to*? A closer examination of the identities of those being welcomed is unsettling. The genetically altered animals introduced in the opening section were created by members of a species that sees itself superior to and in dominion over them. The poem describes them as

> outré
> artificial creatures, genetic lines
> we've crossed and recrossed far too many times
> in our comprehensive drive to flout
> all natural order. (8)

It is not too much of a leap to see the connections between this hubristic attitude and the notions of racial or ethnic superiority that have led to slavery, colonialism, and other forms of injustice and dominance. The urbanized feral species have been similarly displaced from their natural existence by the encroachment of human beings on their ecosystems. The "entries in the global database / of life" could be a general figure of speech referring to all forms of life, or, more darkly, to the uncontrolled

proliferation of DNA data banks, "this hyperspace / during which humanity has hacked / into the planet's history," unaware of "when we've pressed 'delete' / once too often" (14).

The various welcomes extended to different groups of humanity are also unsettling. The "Homo sapiens sapiens" (modern human beings, having first appeared some two hundred millennia ago in distinction to other subspecies of *Homo sapiens*) are identified with correct biological nomenclature, but here the doubled *sapiens* also serves a highly ironic purpose, as this supposedly wise species is narrowed down to some of its most fanatical members, both religious ("nailed to all the stations / of your crossroads" [18-19]) and military/political ("flanked by flags / of national identity, the tags / of partisan allegiance" [20]), who appear to be freak-show specimens arranged along the walls of a large dystopian museum that suggests the modern world. The welcoming of refugees and their descendants is similarly troubled. Refugees are welcomed but to the "iron gate / and worn-down steps of this repository" (20), suggesting perhaps safekeeping but perhaps also another type of oppression. Further, their descendants are described not as thriving in a land of opportunity but as selfishly "denying entry . . . to all those bobbing in the seas behind" (20). Such a bleak and cynical view is perhaps meant to be deliberately shocking, suggesting that no group, regardless of former oppression, is completely immune to humankind's inherited impulses of selfishness and tribalism.

Indeed, the final and largest group of human beings to be welcomed are "the billions muddling through," i.e., the rest of humanity. Despite the manifold changes to its environment, this group is still "using brains that helped us to survive / millennia ago" (20) but which have not evolved sufficiently to help it deal successfully with its present plight. Overall, the speaker extends little to no sympathy to the creatures and the human groups that the poem ostensibly welcomes. The "welcome" is a perilous invitation to a dystopian world in which humanity finds itself very much *in medias res*. As a text of the self-conscious Anthropocene, the poem refuses to embrace wholeheartedly the new possibilities afforded by science and technology or to take sides overtly against political or economic oppressors as a solution to the current crisis.

What "Welcome to the Anthropocene" does do is to offer the "poor child" of the prologue a different way of conceiving its present reality. The poem achieves this in various ways, but perhaps most significantly through a scientific reconfiguration of the great chain of being. In his definitive work on the subject, Arthur O. Lovejoy writes,

> Through the Middle Ages and down to the late eighteenth century . . . most educated men were to accept without question—the conception of the universe as a "Great Chain of Being," composed . . . of an infinite, number of links ranging in hierarchical order from the meagerest kind of existents . . . through "every possible" grade up to . . . the highest possible kind of creature, between which and the Absolute Being the disparity was assumed to be infinite[.] (59)

As an educated man of the eighteenth century, Pope accepted this concept. But in Pope's case, as in the greater civilization he inhabited, the gradations of the chain often extended with racist assumptions to other groups of humankind as well, as in the poem's reference to "the poor Indian, whose untutored mind / Sees God in clouds, or hears him in the wind" (1.99-100), apparently unaware of a scientific appreciation of the cosmos, and hence lower on the chain than Pope. This myth of the "noble savage" is but one of the ways in which the idea of the great chain of being, whatever it may have done for the advancement of science, also helped to influence imperialist and colonial activities of Pope's time, and indeed still does today, in a variety of forms of nationalist, racist, and religious conflicts. Even though the concept began to fall somewhat out of fashion in the nineteenth century, it still influences other contemporary views, for example, popular conceptions of Darwin's theory of natural selection that erroneously distinguish between "lower" and "higher" forms of life.

Significantly, "Welcome to the Anthropocene" retains the notion of the great chain of being, but it reframes it radically, particularly in light of DNA research that demonstrates that humankind cannot be seen as a higher or lower life form but simply as one of many produced through the laws of natural selection. Major contextualizes her poem's connections to Pope by noting how the microscopes and telescopes of eighteenth-century science supported "Pope's concept of the

Great Chain of Being ascending from the 'microscopic eye' of flies to the supreme being who ordains the Newtonian orbits of planets" (117). While there are correspondences between Pope's and Major's views of the great chain of being, she refashions many of its elements, not excluding flies' eyes and the idea of a supreme being.

Each of the sections of "Welcome to the Anthropocene" opens with a quotation from *An Essay on Man*, which Major subsequently answers from a twenty-first-century perspective. The first section of Pope's poem begins with a warning against the unlinking of the great chain as a result of pride: "In pride, in reasoning pride, our error lies; / All quit their sphere, and rush into the skies" (1.123-24). Major echoes this idea when, following her list of genetically modified creatures, she asks, "But is it not the sin of pride / that we express? Hubris personified? / We will not admit to limits" (8). Inherent in these lines is a sense of an underlying order of things that human beings have disturbed, whether or not this order involves a great chain of some sort. But whereas Pope believed God anchored the great chain of being, Major says, "We don't believe, / these days, that God rebukes presumption"; nevertheless, she continues, "we are not gods / who know the outcomes that we set abroad" (9). In other words, God or no God, the hubristic attitude of some toward the world and its other creatures has precipitated our current perilous state. And the natural order of things continues to be imperilled, as evidenced not only by scientific data, but also, more and more, by our everyday experiences.

Major retains the notion of the great chain of being as an approximation of this natural order, but refashions it in light of modern scientific discoveries. In the next section, whose epigram reads, "All are but parts of one stupendous whole" (Pope 1.267 qtd. in Major 9), the chain is no longer "a ladder to the angels," but "a horizontal loop that rearranges / life repeatedly" (Major 9). In these lines and others, Major weaves through her poem the strands of a more contemporary "chain" of being, that is, the strands of the DNA double helix. When the narrator says, "We have been rattling The Great Chain / of Being," the rattling refers to ongoing experiments in genetic modification (8), experiments that need to be seen in a wider context. Operating unto its own laws, DNA has shaped the natural selection process of all life

over the past 2.5 billion years. While Earth has passed through several geological catastrophes over this time, it only now faces imminent catastrophe as a result of one of the more current manifestations of DNA replication, that is, *Homo sapiens*. Major invites humankind to see itself not as the apex of the evolutionary process but as a species that shares its "box of HOX and PAX . . . with chimp and fruit fly" (9). In a line that bathetically inverts Pope's "stupendous whole," Major situates *Homo sapiens* as not separate from, but as an inextricable part of, this planet's "boiling Petri dish / of life" (10).

Human beings are enmeshed in Earth's essential systems: the atmosphere, biosphere, hydrosphere, and geosphere. Melanie Challenger writes, "The human species is an integrated part of life on our planet, not an exceptional creation by itself" (7). She further notes "the fundamental refusal to accept that we, too, are animals and that being an animal matters to us," arguing that belief in humanity's uniqueness and separation from other animal species "has reached the end of its usefulness" (29). This belief, as many have recognized, is rooted in the fact of human consciousness—a quality that has generally made humans consider themselves closer to the "angels" (10) than to the "fruit flies" of Major's poem. And the poem indeed has much to say about how humanity might best perceive the fact of its collective consciousness and where it might locate human beings in a new configuration of the great chain of being.

Perceptions of what constitutes consciousness have shifted significantly from the eighteenth to the twenty-first century. Pope's *Essay* is no doubt informed by Cartesian dualism, after the seventeenth-century philosopher René Descartes, who posits that the mind and body are distinct yet nevertheless interrelated entities. For Descartes, the mind exists within the body yet is still essentially separate from it. This perspective, which Gilbert Ryle ironically describes a few centuries later as "the Ghost in the Machine" (22), predominated throughout the Enlightenment. For Ryle and the modern materialist philosophers who followed, however, mind—or consciousness—and matter are not really separate, and virtually all of our thoughts, emotions, and actions occur at a level over which we have only the illusion of conscious control. However, these extremes of

dualism and materialism are certainly not the only points of view when it comes to understanding consciousness.

Major's poem invites a view of consciousness from a somewhat materialist perspective, although one modified in a way that is perhaps best expressed by Merlin Donald, who contends that "the human mind is unlike any other on this planet, not because of its biology, which is not qualitatively unique, but because of its ability to generate and assimilate culture. The human mind is thus a 'hybrid' of biology and culture" (xiii). Among the many implications of Donald's statement is one that is central to Major's poem: consciousness is not individual and unique, but, in many ways, collective, and humanity needs to focus on and understand more fully the collective nature of its consciousness in order better to navigate the challenges of the Anthropocene now facing it. Major's deft portrayal of humanity's present troubled relationship with its planet is informed by humanity's continuing failure to recognize and act upon what is necessary for common survival. Its tragic flaw is similar to what Pope identifies as human pride. It rests upon an often implicit assumption that consciousness sets human beings apart from other terrestrial species. As Major puts it,

> our vaulting crania, our vaunted brains—
> these advantages, we feel, explain
> our value, status, function. Thus we stand
> above a mindless landscape, in command.
> From our cloud-capped towers, consciousness
> looks out through window slits, past buttresses. (17)

This image is, I suggest, meant to be read ironically. In other words, many people inhabit, Prospero-like, their individual "cloud-capped towers" (their heads), believing that they have subdued the world ("a mindless landscape") and have dominion over it, everyone looking out from the fortified perspectives of their own "window slits" (their eyes). Each believes in the uniqueness of his or her own consciousness and individual powers, with the resultant endangerment of both themselves and the ecosystem. Set against the great physical laws that have governed the universe since its origin, human consciousness as a means of governance now seems rather inadequate. Further, humans have instinctive awareness of themselves as social

beings, an instinct that has previously helped to ensure their survival: as Major puts it, "recording / angels of our DNA inscribe / commandments for belonging to a tribe . . . [with] our ineradicable love of clubs" (20-21). Such clubs (e.g., social or cultural groups, weaponry, gaming), whatever advantages they may have held in the past, pose problems in the present. Much of humankind's thinking is still too deeply rooted in the self and immediate social groups; as advantageous or even essential as these groups may be, their own well-being depends on the physical survival of our entire species, which is now increasingly imperilled.

Understanding how consciousness has evolved can illuminate humankind's current plight and perhaps offer a way forward. Like every other species, *Homo sapiens* are "partners in the great translation enterprise / from chemistry to useful energies / for living" (11). Unlike other species, however, human beings were able to fill

> —a gap we call
>
> intelligence. Not a separate limb
> or magic faculty inserted in
> our brains. Rather, an elaboration
> (through millennia of tiny, patient
> trials-and-errors) of the skills required
> by any animal that has been wired
> for movement in the world. (11)

However, if this intelligence is a product of natural evolutionary processes, perhaps it has a yet unrealized purpose beyond dominating and subduing Earth and its creatures, and quite possibly destroying them in the process. With an arch reference to slime mould, eukaryotic organisms whose single cells can live separately but which literally pull together when threatened and then disperse for further survival, Major asks,

> Is this perhaps our role? To climb
> the tower of consciousness and then become
> a scatter of gametes, a kind of seed,
> DNA the universe may need

—although she immediately undercuts the possibility with the phrase "—or not" (18). Nevertheless, she does provide an alternative conception

of consciousness that will help to inform her conclusion, a conception that seems to bear affinities to the Jesuit scientist and philosopher Pierre Teilhard de Chardin's somewhat esoteric but nonetheless stimulating idea of the noosphere (from the Greek, meaning the sphere of the mind or intellect). While Major does not address the idea of the noosphere directly in her poem, it overlaps significantly with and informs central images and concepts of the poem's conclusion.

For Teilhard, consciousness is "nothing less than the substance and heart of life in process of evolution" (178).[4] Although not material per se, it is the product of material processes, beginning on this earth with the formation of non-living matter, the geosphere, followed by organic and living matter, the biosphere. Consciousness forms the third and highest level, the noosphere (182). The noosphere is Teilhard's name for the collective consciousness that forms a part of all life and is particularly, especially, manifest in human beings. While often at odds with contemporary material theories of consciousness, particularly in its inclusion of a religious dimension, Teilhard's concept of a collective consciousness arising naturally and inevitably from evolutionary processes is helpful to understanding the conclusion to "Welcome to the Anthropocene." Indeed, it reflects Major's concept of the soul:

> It's not likely to be individual—
> a bodiless homunculus that floats around
> without the laws of physics to impound
> its mini-mind. No, it's far more likely
> that soul is yet another force field, tightly
> coupled to the world (26-27)

Replacing the word *soul* in these lines with the word *consciousness* provides a close parallel to Teilhard's noosphere,[5] which, he contends, harbours the next stage of human evolution. Regardless of the validity of Teilhard's own teleological assumptions, the concept of consciousness as a driving force growing from and enveloping geological and biological forces does successfully illuminate many aspects of "Welcome to the Anthropocene." Bearing this in mind, it is helpful to incorporate two apparently disparate images that will cohere—along with this concept of the noosphere or reconceptualized

soul—in the poem's concluding lines. These images are a fly's eye and, a concept central to Hinduism, Indra's net.

In a note to her poem, Major mentions the "microscopic eye" of flies, an allusion to one of the many memorable couplets in Pope's *Essay*: "Why has not man a microscopic eye? / For this plain reason, man is not a fly" (1.193-94). While the question and answer are essentially rhetorical, their implications are central to Major's poem. Although Pope was surely aware of the early-seventeenth-century invention of optical microscopes, which essentially gave human beings "microscopic eyes," his common-sense argument is clearly grounded in his understanding of the great chain of being. In contrast, Major draws some powerful metaphorical parallels between human collective consciousness and flies' eyes. Major mentions flies a few times throughout the poem, first, as subjects of genetic modification, engineered by humans to be incapable of learning. When Major later wonders about the purpose of human beings, she asks, "Are we just fruit flies batting at the surface / of a lonely bottle?" (22), an allusion, no doubt, to Ludwig Wittgenstein's contention that a central goal of philosophy is "to shew the fly the way out of the fly-bottle" (103). This can be read as a warning that humans may not have *yet* become, like the genetically modified fruit flies, incapable of learning, although they now stand in danger of not learning what is essential to their survival. In another passage, Major recalls what *Homo sapiens* has in common with these same fruit flies, specifically "opsin molecules that line our retina" (9). Opsin molecules are specialized proteins that convert photons into electrochemical signals, allowing humans and flies to see. And seeing becomes central to the poem's final image, which alludes to the arthropod eye: "We are time's derivative. / And for a little while, we are each a lens / in its compound eye" (27). Through such comparisons, it becomes clear that humans have more in common with flies than they may care to acknowledge. In this, Major's poem aligns with Challenger's comment that "human life remains an animal life" (53). Indeed, individual human beings may now be seen, in a stunning inversion of Pope's "microscopic eye," as parts of a macroscopic compound eye. But the image is not complete without a rudimentary understanding of Indra's net.

Most of Major's poem to this point has been informed by scientific imagery and concepts, largely in order to portray how survival in the Anthropocene is vitally dependent on an awareness of human interconnectedness with the planet and its other species, all part of the great DNA chain—or more accurately now, "a horizontal loop" (9)—of being. As Major puts it,

> we are not atoms in an emptiness.
> We're entangled, markings in a palimpsest
> that's written over, time and time again,
> by equations of the universal theorems
> that underpin the cosmos and preserve
> its balance— (25-26)

Major makes few overt religious references or allusions throughout most of her poem. However, near the poem's end, she incorporates an essential Hindu deity and symbol, Indra and his net. For readers familiar with Hinduism, Major's shift from images of flies' eyes to the figure of Indra perhaps causes little interpretive difficulty. For other readers, however, the appearance of Indra likely requires an imaginative leap of understanding. After referring to electromagnetic fields, photons, and the fabric of space-time, Major segues to the following passage:

> Indra's net hangs above the peaks
> of his holy mountain—the shining pleats
> of a tent of stars draped above the world
> where every knot is fastened with a pearl
> and every separate jewel in the mesh reflects
> every other gem at every vertex. (25)

This rather startling and unexpected passage is seemingly at odds with the previous scientific references. While Major follows these lines with the words "mere myth, perhaps," she uses the image to prepare symbolically for the poem's conclusion.

If Indra's net is a "mere myth," it is nevertheless a powerful one, connecting closely both to the idea of the noosphere and to the physiology of the arthropod eye. According to Rajiv Malhotra, "Indra's Net symbolizes the universe as a web of connections and

interdependencies among all its members, wherein every member is both a manifestation of the whole and inseparable from the whole" (4). He further explains,

> The metaphor of Indra's Net originates from the *Atharva Veda* (one of the four Vedas), which likens the world to a net woven by the great deity Shakra or Indra. The net is said to be infinite, and to spread in all directions with no beginning or end. At each node of the net is a jewel, so arranged that every jewel reflects all the other jewels. No jewel exists by itself independently of the rest. Everything is related to everything else; nothing is isolated. (5)

This interrelatedness and interconnectedness are essential to the conclusion of Major's poem, which moves from conceptions of isolated, individually conscious souls to an understanding of souls as integrated parts of a much larger whole. A fly's eye, human consciousness, and Indra's net—images that respectively occupy positions at the bottom, middle, and top of the (traditional) great chain of being—now overlap brilliantly in the final lines:

> We are time's derivative.
> And for a little while, we are each a lens
> in its compound eye. We might not unite
> behind Pope's verse *Whatever is, is right.*
> Still, whatever is, matters, in a wholeness where
> everything is common and everything is rare. (27)

Here Major offers a beautiful gloss of the metaphor of Indra's net, effectively transforming it into the "compound eye" of space-time, while simultaneously alluding to the "microscopic eye" of Pope's fly. The compound arthropod eye normally consists of many thousands of ommatidia, or cone lenses, each with its own light sensitivity. While human beings have neither microscopic nor compound eyes, their individual, localized perceptions combine into a universal "compound eye," which sees the world through the aggregate perspectives of all humanity. Each of these individual lenses reflects every other lens. Indra's net has affinities with Teilhard's noosphere, since it too comprises each individual human consciousness. When Major speaks of "the soul as yet another force field, tightly / coupled to the world" (27),

she echoes both of these concepts, offering a way of seeing that may help to guide the reader through the perils of the Anthropocene.

To return to the prologue to *Welcome to the Anthropocene*: if it is indeed a self-deprecating chorister who goes on to narrate the titular poem that follows "In Media Res," Major's speaker has left her "poor child" with much knowledge of how to play its part, albeit a part whose final lines are as yet unwritten. Although Major's chorister claims in the prologue that she cannot help anyone, "Welcome to the Anthropocene" provides sufficient prompts to lead the child to a better understanding of its world, in the poem's radical reconfiguration of the great chain of being. Seeing a "wholeness where / everything is common and everything is rare" (27) is to see from within "the middle of things" (3), an essential step towards understanding what to believe and how to act in the current epoch, whatever its name. Major invites her readers to a new way of seeing reality, with all its inherent perils, through a collective enlargement of wonder. As Challenger puts it, "our proper place is with our fellow creatures. It's time we told ourselves a new story of revolutionary simplicity: if we matter, so does everything else" (218). In many ways, of course, this is not a new story. Indigenous and other world views have long emphasized the interconnectivity of Earth and its creatures. But it is an old story made new in light of the facts of science, particularly in light of a modern understanding of the great chain of being from an evolutionary perspective. The survival of humanity may well depend on this understanding.

Notes

1. Many scientists equate the beginning of the Anthropocene with the beginning of the Industrial Revolution, for which there have been various proposed dates, but which *Encyclopedia Britannica* lists as 1733 (the same year as the publication of Pope's *An Essay on Man*). See "Industrial Revolution."
2. She most likely alludes here slightly but archly to Luigi Pirandello's *Six Characters in Search of an Author*.
3. It is worth noting that two of these species, *Drosophila* and *Rattus norvegicus*, were among the first animals studied by Thomas Hunt Morgan in his follow-up work on Mendelian genetics (Sauer 201-02).
4. Davis and Todd contend that the concept of the noosphere is a product of colonialism, which has historically separated human thought from nature. It is consequently incompatible with concepts such as Vanessa Watts' Indigenous

Place-Thought, "the non-distinctive space where place and thought were never separated because they never could or can be separated" (21). Following Watts, Davis and Todd argue that "life and thought on earth is animated through and bound to bodies, stories, time and land" (769-70). However, as much as Teilhard himself may have focused on the noosphere as it applies to human beings, he indicates throughout *The Phenomenon of Man* that the noosphere encompasses *all* of life and has been developing since creation. While this is not to be taken as equivalent to Watts' concept of Place-Thought, it is not completely dissimilar to it. This is not to deny, however, that other scholars may appropriate Teilhard's term more within the colonial context that Davis and Todd indicate. (Watts herself does not refer to the noosphere in her article.)

5. This seems to me to be related to but a definite shift from Carl Jung's concept of the collective unconscious. Whereas for Jung, consciousness is individual and private as opposed to humanity's archetypal unconscious, for Teilhard, consciousness itself is collective, an essential part of evolving life.

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