# Lowly Wisdom: An Ecological Reading of Book Eight in Paradise Lost 

by

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## DEDICATION

This thesis is dedicated to all the professors who have taught and encouraged me to write, especially Tim Heath.

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#### Abstract

This thesis offers an ecocritical and rhetorical analysis of the discourse on the limits of human knowledge in Book Eight of Paradise Lost (8.64-178); my argument outlines the connection between a theistic monist ontology and an epistemology of lowly wisdom in John Milton's epic. Examining the moment where Milton uses the archangel Raphael to say to Adam, "Heaven is for thee too high / To know what passes there; / be lowlie wise" (8.172-73), I contend that when Raphael delimits Adam's questions about cosmology, he instead grounds the search for knowledge in ecology. Rather than presenting nature as the object of human analysis, lowly wisdom offers an understanding of nature and the self as contiguous sites of meaning.


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## Chapter 1: Introduction

I am interested in the moment in Paradise Lost where Milton uses the archangel Raphael to say to Adam, "Heaven is for thee too high / To know what passes there; / be lowlie wise" (8.172-73). The phrase "lowlie wise" presents an ideal occasion to analyze Milton's belief that, for human beings, a humble relationship with the rest of the natural world provides the best precondition for the pursuit of knowledge. Raphael's words underscore this point, for their immediate context includes an exhortation to Adam-"Joy thou / in what he gives to thee, this Paradise / And thy fair Eve"-that plainly displays the virtue of knowing the world, the self, and the other by means of choices that condition knowledge (8.170-72). My research focuses on defining this ethic of epistemic humility as it applies to humanity's relationship with nature. Accordingly, this thesis outlines how the concept of lowly wisdom can illuminate an ecological reading of Paradise Lost.

Scholarly work concerning the ecological significance of Milton's epic has been appearing since the early 1990s, but much of the current discussion focuses on Eve's connection to the garden. When critics do invoke the conversation between Adam and Raphael in Books Five to Eight, they tend to emphasize Raphael's discourse on substance, which highlights the continuity between spirit and matter, in Book Five (5.469-490). By situating my argument in Book Eight, where Raphael responds to Adam's questions about planetary motions with the command to be lowly wise, my analysis brings into sharper relief the question of how Adam and Eve arrive at an ecocentric epistemology. I aim to demonstrate that when Raphael delimits Adam's questions about cosmology, he instead grounds the search for knowledge in ecology.

While no one has yet offered an in-depth ecocritical reading of Raphael's discourse on the limits of human knowledge (8.64-178), several critics have noted the ecological import of
this part of Paradise Lost. Stephen Fallon opens his study of Milton's participation in seventeenth century metaphysical debates, Milton among the Philosophers, by quoting Raphael's elucidation of the command to be lowly wise: "Think only what concerns thee and thy being" (PL 8.174). In addition to the overt message of being content with obedience Fallon identifies in this line a lesson on the subject of "ontology," arguing that "Adam's 'know thyself' involves an effort of metaphysical understanding as well as of will" (1). Fallon claims that Raphael asks Adam to ground his self-understanding in the broader metaphysical picture offered by the archangel's earlier discourse on substance in Book Five; in Fallon's view, Raphael demonstrates in Book Eight how a proper sense of self depends on the insight that "[a]ll that exists, from angels to earth, is composed of one living, corporeal substance" (1). My reading of Raphael's discourse confirms Fallon's insight, and it also explores the interplay Fallon identifies between "an effort of metaphysical understanding" and an effort "of will." In particular, I aim to show how these efforts combine to constitute an expression of the desire for knowledge since I am keen to demonstrate that Raphael is promoting ecological consciousness rather than asking Adam to abandon intellectual curiosity.

To unfold the ethical significance of lowly wisdom as a way of knowing and being in the world, I work within the tradition identifying in Milton's prose and poetry a philosophical monism, that is, the idea that everything in the universe is made of the same material, "differing but in degree, of kind the same" (PL 5.488-490). I draw on criticism from this tradition in order to propose that, rather than presenting nature as the object of human analysis, lowly wisdom offers an understanding of nature and the self as contiguous sites of meaning. Focusing particularly on Fallon's Milton among the Philosophers, Karen L. Edwards's Milton and the Natural World, and John Rogers's The Matter of Revolution, my second chapter provides a
foundation for my analysis of lowly wisdom by showing how during Milton's lifetime the medieval idea of nature as a signpost of the divine gives way to the modern habit of viewing nature as an independent mechanism.

Milton's representation of nature in Paradise Lost draws on insights from both of these understandings. Without committing to a strictly idealist or empiricist approach, his monism undermines the tendency on both sides to treat nature as a mere instrument in the search for knowledge. It is telling, however, that such monistic logic goes against the grain of the hierarchy Milton and many of his contemporaries saw in the Great Chain of Being as a necessary ordering of the universe. While he sometimes upholds hierarchy as intrinsic to divine order, Milton just as frequently troubles its importance in Paradise Lost, both by emphasizing the continuity and essential kinship between each created being and by linking evil with the desire to be first: it is this radical egalitarian leaning that is the focus of my research.

My third chapter uses a formalist method and an ecocritical perspective to show that the conversation between Raphael and Adam in Book Eight addresses a central problem in ecological thought: how to establish an ethical connection between being and knowing, between ontology and epistemology. Analyzing some of the rhetorical and poetic devices found in Raphael's discourse on the limits of human knowledge in the first half of Book Eight (lines 1205) I argue that instead of prohibiting Adam's desire to understand how nature works, Raphael urges Adam to recognize himself as a part of nature and to ground his search for knowledge in the context of belonging in the garden and with Eve.

The first critic to suggest the ecological significance of this emphasis on belonging is arguably Wendell Berry. Robert Wilcher notes in his excellent survey The Greening of Milton Criticism that Berry's quotation of lines from Book Eight in an essay entitled "The Gift of Good

Land" represents "the earliest example [Wilcher has] found of Milton's work being read in the light of modern ecological concerns or conscripted into an ecological argument" (Wilcher 1023). Berry's focus on Book Eight in this early essay lends support to my thesis topic, but he presents ideas that are even more relevant to my argument in a second essay that Wilcher also identifies as significant in advancing ecocritical interest in Milton. In "Poetry and Place," Berry examines comments on temperance in Milton's Comus and Shakespeare's Macbeth as sources of ecological insight and observes: "In such allusions to the doctrine of temperance in the old poets there is at work what I think can justly be called an ecological intelligence: a sense of the impossibility of acting or living alone or solely on one's own behalf, and this rests in turn upon a sense of the order upon which any life depends and of the properties of place within that order." The idea of propriety, which Berry also glosses as "decorum" (125), provides a useful key to Book Eight because Adam's opening question about planetary motions is fundamentally an inquiry into his place within a created order.

Berry's argument suggests that the ancient and religious concept of decorum finds a modern and scientific parallel in the concept of ecology, and Diane McColley relies on a similar insight when she advocates for the use of the term ecology in analysis of Paradise Lost-even though it is an invention of nineteenth century biology ${ }^{1}$ —because its root in the Greek word for household, oikos, so aptly captures Milton's vision of the garden in paradise as a community maintained by human responsibility and care (Milton and Ecology 155). McColley acknowledges the anthropocentric perspective of Milton's epic, but she also suggests that the epic is concerned with the idea of life as a complex web of relationships. As Timothy Morton maintains, "Ecology

[^0]includes all the ways we imagine how we live together. Ecology is profoundly about coexistence. Existence is always coexistence" (4). With this definition in mind, what at first appears to be a rather abstract debate about astronomy in Milton's epic proves to be an attempt on both Adam's and Raphael's part to imagine how to live together.

In one of the most recent and sustained critical engagements with Book Eight, Andrew Mattison affirms the possibility that coexistence is the crux of Adam's question about the earth's place within a wider universe: "the problem with Adam's understanding of astronomy is not the scientific principles involved," Mattison claims, "but the anxiety inherent in the human relationship with the Edenic landscape." Mattison's reading focuses on a relationship that is of central concern for ecocritics, the connection between person and place. ${ }^{2}$ He makes the promising argument that Adam's question about the earth's-and by extension Adam's ownplace in the wider universe hinges on a problem that Mattison glosses as "the ethics of imagination: the moral difficulty involved in understanding something inaccessible." But he draws from this statement a conclusion that contradicts his initial synthesis between the aesthetic and the ethical; in the end, he states that "The difficulty of imagining the inaccessible . . . is not ultimately a moral problem in Paradise Lost; it is a problem of description." He attributes Adam's difficulty in grasping his place in the universe to Milton's difficulty in providing "a poetic depiction of prelapsarian Eden" and argues that "the remoteness of Eden renders its description essentially impossible" (41). Yet, while the impossibility of depicting Eden from an

[^1]unfallen perspective is certainly a fascinating problem in Paradise Lost, ${ }^{3}$ the aesthetic aspect of this problem does not, on its own, account for Adam's need to understand order as it is articulated in Book Eight. Adam's question can be more robustly explained in ecological terms because an ecological perspective acknowledges that Adam's act of imagining and making sense of the natural world involves ethical conclusions about the relationships that constitute a created order.

Concern with coexistence is implicit in Adam's questioning of the geocentric model of the solar system, and he applies the idea of decorum to coexistence when he asks why the earth should be "Serv'd by [a star] more noble than her self" (PL 8.34). He also expresses the belief that the web of relationships he participates in should consist in an orderly pattern when he asks concerning the uneven orbits necessitated by a geocentric model how "Nature, wise and frugal, could commit / Such disproportions?" (8.26-27). Adam's assumption, in Berry's term, is that the design of nature is "temperate" rather than wasteful and that this temperance is expressed not only through logical planetary motions but also through relationships arranged in a well-ordered hierarchy. In addition, since Renaissance thought assumes an analogical correspondence between microcosm and macrocosm, Adam's question involves not only the relationship between the earth and the sun, but also a principle of decorum that can apply to relationships across the spectrum of things in existence. In his question's broadest sense, then, he seeks certainty concerning the earth's place within a natural order so that he can have knowledge of how he ought to relate to all other beings, things, and places within that same order.

[^2]Accordingly, Raphael's answer to Adam suggests the archangel's awareness that any statement concerning the earth's relationship to the sun can also apply to a range of other relationships within Adam's cosmology: the relationship between earth and heaven, the human and divine, Adam and the earth, Adam and Raphael, Adam and Eve, and even between humans and potentially undiscovered extra-terrestrial beings. The archangel's discourse on astronomy relies on a profoundly ecological rhetoric because it deliberately addresses the multiple analogies that are at play in Adam's question. Raphael aims to address relationships throughout the created order. By invoking and responding to the full range of relationships that make up Adam's world, Raphael invites Adam to consider himself as part of nature and to base his desire to understand nature on the insight of his belonging within it.

## Chapter 2: Milton's Monism

## and His Representation of Nature in Paradise Lost

When Raphael opens his discourse on the limits of human knowledge by telling Adam that "Heav'n / Is as the Book of God before thee set" he employs a medieval trope that was very popular in the writings of "the new philosophers," or scientists, who were Milton's peers (PL 8.66-67, Edwards 44). "The trope gathers up at least three of the profoundest concerns of the seventeenth century," Karen Edwards explains, "how to know the natural world, how to interpret God's word, and how to assess the authority of antiquity" (44). Each of these concerns is at play in Paradise Lost at the moment when Adam asks Raphael to choose between a geocentric and heliocentric model of the solar system, and the context of Adam's question suggests that Milton, like his scientific peers, uses the trope in an innovative way. ${ }^{4}$

Arguing for "a shift in the metaphor's function" during Milton's lifetime, Edwards explains that the figure was increasingly used "as a rationale for observation of experiment upon the natural world" (64). In her view, this new use of the Book of Nature trope served to establish authority and defend against accusations of breaking with tradition at the same time as it worked to justify what actually did constitute a break with tradition, a new way of interacting with nature that replaced the older medieval practice of extracting allegorical meaning with a systematic process of "observing and 'making experiment of' the natural world" (64). Edwards suggest that

[^3]Milton's use of the trope in Book Eight of Paradise Lost affirms this new form of interpretation: "Raphael commends the process of poring over God's book; he declines to halt the process by providing a solution for Adam" (66). By refusing to "resolve" (PL 8.14) Adam’s dilemma, Raphael aligns himself with the rhetoric emerging in defence of a new mode of interpretation, one that locates "the value of God's other book . . . not in its provision of conclusive answers but in its openness to constant rereading and reviewing" (Edwards 66). In this context, the process of "rereading" nature opens up the possibility that new interpretations may challenge readings that no longer provide a convincing account of how the world appears to work.

While it was common practice for writers to invoke the Book of Nature in order to establish ethos in scientific works, given the topic of astronomy, a specific example that may have been on Milton's mind when he chose to place this trope at the beginning of Raphael's speech in Book Eight is the plea offered by Galilei Galileo in his Letter to the Grand Duchess Christina: "To prohibit the whole science [of astronomy] would be but to censure a hundred passages of holy Scripture," Galileo writes, "which teach us that the glory and greatness of Almighty God are marvellously discerned in all his works and divinely read in the open book of heaven" (196). ${ }^{5}$ Galileo's statement makes a specific plea against the censure of Copernicus's writing, but it also offers a broader justification for astronomy as a science; his defence enlists the Book of Scripture as validating, even insisting on, the study of the Book of Nature; he preserves the medieval purpose of learning "the glory and greatness of Almighty God," but also

[^4]aligns this purpose with—rather than against—a thoroughgoing commitment to scientific investigation.

Galileo and Milton both enlist the Book of Nature trope to articulate openness to a new cosmology because in their lifetimes the development of the telescope enabled discoveries that challenged long-held understandings of how the universe was ordered. And, at the same time, the development of the microscope prompted philosophers to reconsider how life was organized at a more minute level. The ability to scrutinize nature through the lens of a microscope coincided with a "revival of Epicurean atomism" and influenced many intellectuals to question the Aristotelian principles commonly used to explain how matter works, in particular, "the intermixing of the four elements[,] substantial forms, and . . . final causation" (Fallon 20, 30). However, the increasing interest in mechanist explanations of matter also posed a threat religious thought.

In his summary of the milieu that influenced Milton's understanding of matter, Stephen Fallon cites several reactions that were influential in a debate over "one of the central preoccupations of seventeenth-century philosophy: the question of substance" (3). Rene Descartes was a central figure in this exchange because he "offered a way to reconcile mechanist physics with Christian orthodoxy through a radical new dualism." He proposed a separation between essential, thinking self-"res cogitans"-and extended, material self-"res extensia." This separation restricted mechanistic explanations to extended matter and established the concept of a thinking mind distinct from the material and mechanistically determined body in order to preserve the concepts of "personal immortality, the rational soul, and freedom of the will" (24). However, others like Thomas Hobbes insisted that if mechanist explanations could be applied to the body they should logically extend to the mind as well: "Hobbes's philosophy rests
on his certainty that the universe contains nothing other than matter in motion, which can be analyzed mathematically" (32). Two of Milton's contemporaries at Cambridge, Ralph Cudworth and Henry More, also have a notable place in Fallon's study because their thought provides an example of a more extreme critique of Hobbesian materialism. Contending that even Descartes had gone too far in making materialist concessions, Cudworth and More both employed Aristotelian and Neoplatonic arguments to insist that a non-material element was necessary in order to animate otherwise lifeless matter-the soul in the case of the body, and spirit in the case of the wider material world (78).

Through this summary of key figures in the debate on substance Fallon demonstrates that Milton wrote and thought in "a period fertile in [metaphysical] models" (2). While Milton's place in this debate is distinct, he shared his motivation for participating in it with his contemporaries: "If, as Hobbes argued, all is matter in motion-even thought-then our choices are determined by antecedent physical motions, and freedom of the will is an illusion," Fallon explains; thus anyone who wanted to assert freedom of the will had to refute Hobbes's mechanistic thinking "on the ground of metaphysics" (4). Metaphysics encompasses the study of being and substance, ontology, and the study of knowledge, epistemology, but the assumptions established through these two studies serve as the foundation for more practical branches of philosophy such as ethics. Fallon's reasoning reveals that Milton and his contemporaries were motivated to argue about metaphysics because of the implications that their competing ontological models produced in epistemology and then in ethics. ${ }^{6}$

[^5]According to Fallon, Milton's ontology was distinct from his contemporaries at Cambridge, and even Descartes, because Milton did not seek to defend his belief in free will by arguing for a sharp separation between soul, or mind, and matter. Instead, he affirmed the materialist and monist idea that everything in the universe is composed of one substance, and he adapted his understanding of this substance to include the animating power that traditional theological and emerging rationalist thinking would locate in a non-material realm. The claim that Milton was a monist is a subject of ongoing critical debate but, as Phillip Donnelly notes, "Milton's materialism has recently found broader critical currency [and] Fallon's work has done much to shape a new consensus regarding how Milton's position engages seventeenth-century debates over materialism and determinism" (79). My reading of Paradise Lost does not engage the breadth of criticism on this topic. ${ }^{7}$ Instead, I build on the argument for Milton's monism provided by Fallon and others in order to point out how Milton's account of ontology in Paradise Lost-which these critics have thoroughly discussed-provides the basis for a related account of epistemology. In particular, I draw a connection between a passage often cited by these critics, Raphael's discourse on substance and the continuity of body and spirit in Book Five ( $P L$ 5.469-90), and the archangel's later discourse on the limits of human knowledge in Book Eight (8.66-178).

[^6]The most explicit evidence for Milton's commitment to monism is found in The Christian Doctrine, his most comprehensive theological treatise. ${ }^{8}$ In it he rejects the orthodox doctrine of creatio ex nihilo-creation out of nothing-and makes an etymological and textual argument that the original Hebrew as well as the translated Greek and Latin verbs in the Genesis narrative "uniformly signify to create out of matter" and that therefore "matter . . . must have originated from God at some particular point of time"-an interpretation that places Milton in the heterodox tradition of creatio ex Deo (975). ${ }^{9}$ While Renaissance Neoplatonism asserts that matter is an inferior and corrupt derivation of spiritual substance, Milton argues that the original matter of creation derives from God and is to be understood "as intrinsically good, and the chief productive stock of every subsequent good" (976).

In The Christian Doctrine Milton also distinguishes his view from the emerging rationalism at work in Cartesian philosophy by explicitly rejecting any form of dualism when it comes to the relationship between the mind and the body: "man is a living being, intrinsically and properly one and individual, not compound or separable, not according to the common opinion, made up and framed of two distinct and different natures, as of soul and body" (980). John Rogers calls this an "egalitarian image of human bodily organization" (113), and his comment highlights how Milton's philosophical framework allows for an ontological continuity

[^7]between spirit and matter. In the context of Milton's heterodox understanding of creation, this continuity also extends beyond the individual to the rest of the material world, granting innate value to place and non-human beings, since they also derive from the intrinsically good first matter.

Stanley Fish argues that in Paradise Lost Milton's monism "generates above all a theory of value [which claims that] since everything proceeds from God, everything is intrinsically valuable and nothing is to be rejected as if it were, in and of itself, the bearer of evil and error; this includes snakes, apples, trees, minerals, wine, women, and song" (xx). ${ }^{10}$ Within the epic, the tenets of Milton's monist ontology are outlined by the archangel Raphael, who represents the Great Chain of Being as a fluid hierarchy of forms all deriving from "one first matter" that proceeds from God:

O Adam, one Almightie is, from whom All things proceed, and up to him return, If not deprav'd from good, created all Such to perfection, one first matter all, Indu'd with various forms, various degrees Of substance, and in things that live, of life; But more refin'd, more spiritous, and pure, As neerer to him plac't or neerer tending Each in thir several active Sphears assignd, Till body up to spirit work, in bounds Proportiond to each kind. (5.469-479).

According to this model, matter, as it extends out through the created world, is variant but also contiguous, "Indu'd with various forms, various degrees / Of substance, and in things that live, of life" (5.473-74). Raphael packs his explanation of ontology full of paradoxes: he asserts that matter and spirit exist on a hierarchical continuum but he also claims that the "various forms" are

[^8]"perfect[]" even in their differing degrees; yet, in typical Miltonic fashion, this "perfection" is not guaranteed or static—it must be proved and even improved through trial; ${ }^{11}$ beings and things only return "up" to God "If not deprav'd from good," and as the archangel shortly makes clear, it seems to be possible for Adam and Eve to augment their already faultless state "if [they are found] obedient" (5.501).

Raphael introduces this discourse on substance in the context of the meal he shares with Adam and Eve. After they finish eating, Adam remarks that the food he and Eve have shared with Raphael cannot "compare" with what Raphael is used to tasting at "Heav'n's high feasts" (8.466-67). This comment betrays Adam's concern that the cosmological difference in rank between humans and angels, evident in the material difference between their bodies, will mean that their sharing of food functions as a merely symbolic gesture. In response, Raphael turns to the topic of transubstantiation or "the changing of one substance into another" in order to reassure Adam of Raphael's own ability to enjoy and draw nourishment from earthly food (OED "transubstantiation"). Several scholars have remarked on how this meal functions as an allusion the Christian ritual of the eucharist and Ann Torday Gulden argues that, for Milton, "the idea of transubstantiation, explained at length by Raphael, illustrates the inextricability of the link between the material and immaterial" (139). Using the process of digesting food as an analogy, Raphael seeks to assure Adam of the continuity between "body" and "spirit" by highlighting transformation as an innate characteristic of nature.

The act of explaining his ability to consume human food leads Raphael to speculate that Adam's own body might change over time so that one day, if he is "found obedient," Adam may

[^9]"wingd ascend" to visit heaven and "participate" in consuming angelic food (PL 5.498, 5.494). Raphael is aware of Adam's concern with the rank of different kinds of beings in relation to each other, but he addresses this concern by focusing on the degrees of substance within individual beings and the ability of each being to "convert . . . To proper substance"-that is, to digest one material and turn it into another (5.492-493). This digestion-like process of conversion also becomes an analogy for the active obedience that could enable a human to ascend from an original place in the hierarchy, as Raphael imagines Adam might, or an angel to descend and "participate" at a lower level in the created order as Raphael is currently doing by consuming material food and "converting" it into form that can nourish his "more spirituous" body.

There is a clearly defined order expressed in this explanation of cosmology and ontology, but the hierarchy is essentially fluid, not fixed, and Fallon argues that "the affinities with the tradition of the chain of being should not obscure the distinctive features of this passage" (103). While some substances and beings, those "neerer to [God] plac't or neerer tending," like Raphael, are in essence "more refin'd, more spiritous, and pure," they are not arrested in their place (PL 5.476, 475). And those situated farther down on the continuum, such as Adam, are afforded a place, "in thir several active Sphears assigned," only until a proper time for their conversion or change: "Till body up to spirit work, in bounds / Proportiond to each kind" (5.477479). On this view change is an innate feature of creation, albeit an incremental and ordered one.

Indeed, Raphael goes on to use an analogy from nature, the growth of a plant, to help Adam imagine not only the organic order that the world and creatures within it currently embody, but also the organic process of development and ascent that they can individually and collectively undergo over time: "So from the root / Springs lighter the green stalk, from thence the leaves / More aerie, last the bright consummate floure" (5.479-481). As Fallon puts it, "The
relation of plant to the one first matter is synechdochic. The plant not only represents in its root and flowers the poles between grossly corporeal and relatively incorporeal matter, it also enacts the process of digestion by which individuals ascend the chain" (103). Fallon's comment highlights how Milton's poetry insists on accommodating order and change. Raphael represents the created order as a "dynamic" process rather than a "static" scale (Fallon 103, Edwards 125); order is manifest as a process at the minute level of the degrees of the substance within a single being and also at the vast level of cosmology. ${ }^{12}$ Milton places matter and spirit on a hierarchical continuum that affirms the essential continuity between varying degrees of substance in order to celebrate the intrinsic potential for mobility, change and growth within the created order.

Yet if change is an essential aspect of Milton's cosmology, the process of change still moves in a traditional direction. Fallon argues that "the chain is dynamic" because "direction is more important than position" (Fallon 103), but the preferred direction is clearly up. Raphael assumes that all beings naturally aim to ascend toward God, just as plants naturally grow up toward the sun, and this emphasis on upward movement is not unique to Milton's model. The goal of ascent is also essential to a Neoplatonic understanding of the created order, and Renaissance Neoplatonists imagine this ascent in terms of the ability to transcend and escape an inferior material existence (Fallon 79).

Thus, I would add to Fallon's observation, "direction is more important than position," that Milton's emphasis on direction is not one-way. Raphael imagines Adam and Eve ascending to visit him in heaven, but he imagines this ascent as a response to his own descent to earth; Adam and Eve's hypothetical visit to heaven would provide an opportunity for the angel to

[^10]reciprocate their hospitality and for the human pair to emulate his ability to travel. While ascent will require Adam and Eve to undergo a transformation whereby their "bodies at last turn all to Spirit, / Improv'd by tract of time," the ultimate goal, for man and angel, is not a fixed transcendence but rather the freedom to travel at will (PL 5.497-498). Raphael's vision of a created order perfected through "obedien[ce]" is one where man or angel "may at choice / Here [on earth] or in Heav'nly Paradises dwell" (5.501, 5.499-500). The implication of this statement is that paradise extends from earth to heaven, and that perfection consists in the free exercise of choice; the cosmology involved presents creation as an intrinsically good whole animated by creaturely freedom.

Edwards affirms the idea of an intrinsically good creation and connects it to the trope of the Book of Nature in her analysis of Adam's response to Raphael. When he is admonished to be patient and obedient in the process of attaining a new body, Adam expresses the idea that this obedience can be demonstrated and ascent achieved through "contemplation of created things" (5.511). Edwards sees Adam's idea enacted in Raphael's earlier use of an organic image: "As Raphael's plant does, so each creature in itself offers the contemplator the means to ascend step by step to God. This reformed scala releases 'place' from fixity, in the sense both of habitat and social position" (126). Edwards's analysis suggests that this "release[] from fixity" loosens value judgements that are normally fixed to particular places, whether social or physical, in the created order. She earlier acknowledges that "Because creatures occupy a 'lower' or 'higher' place in relation to other creatures, comparisons of worth are inevitable, though usually disguised." But she goes on to argue that these comparisons are misguided: "Adam's response to Raphael draws a new picture of the scale of nature, one which assigns absolute rather than relative worth to each creature'" (125). According to this new scale, the absolute worth assigned to each creature is a
consequence of divine life and goodness continuing throughout the entire order. Raphael's affirmation that all created things "proceed" from God and "up to him return" implies that any created thing, even the most ordinary plant, "offers the contemplator the means" to understand and experience the divine (PL 5.470, Edwards 126).

In its traditional form the Book of Nature trope treats creation as a signpost of a heavenly reality, but Milton's heterodox theology of earth's creation goes further than treating things, beings, or places as signs that merely point beyond earthly existence. If creation derives ultimately from God's being, then it is also animated by his life. Fallon reinforces this point when he argues that "For Milton, soul, and the life which springs from it, are not anomalies in a dead material world; instead, life is the usual condition of matter" (107). From an ecocritical perspective, this insistence on the independent life of a material world goes a long way toward challenging the idea that human beings have a natural right to objectify nature. If life is diffuse throughout the created order and an ontologically separate soul or mind does not set human beings apart from the rest of the world, then the ability to embody and create meaning often associated exclusively with being human might also extend throughout creation. Milton's materialism provides an alternative to orthodox theological as well as emerging scientific understandings of nature that imagine the world as a passive object.

The radical implications of Milton's perspective on creation invite materialist interpretations of his representation of nature in Paradise Lost. As Fallon reflects on the way that "movement is presented in Paradise Lost in metabolic language," he suggests that Milton's poetry portrays a kind of agency in the created order as a whole (103). Looking closely at the images of metabolic transformation in Raphael's description of the great chain Fallon writes, "The logic of the plant simile asks us to see man as digested by the world. From crude material
to odorous spirits in the metabolism of the plant, from human being to angel in the metabolism of the animate world" (106)—Raphael's simile, as Fallon observes, depicts "the animate world" as a living creature; the humans and angels in this simile represent the varying degrees of substance that interact to animate it. Rogers makes a similar argument for the poetic embodiment of the autonomous life of nature through his analysis of Raphael's account of creation. Rogers reads this account in Book Seven of Paradise Lost in light of the heterodox theology of creatio ex Deo outlined in The Christian Doctrine, reasoning that since chaos is the raw material from which the earth is formed, "Milton renders [the matter of chaos], and all its subsequent productions inherently good" (113). ${ }^{13}$

According to Rogers, "The only God whose ways Milton would be capable of justifying is a God who was willing even before the Creation to share his goodness and his power with this disidentified body that becomes the matter of chaos" (113). The poetry in Book Seven depicts a world able to autonomously emerge and transform (125) because, according to Milton's imagery, it has been impregnated with divine life (PL 1.22). Rogers characterizes the description of animals springing fully-formed from the ground-"The cattle . . . in broad Herds upsprung / the grassy Clods Calv'ed" (7.460-462)—as one "of the poem's [several] scandalous expressions of creaturely self-generation" (125). His analysis relies on the idea that Milton's understanding of creation emphasizes creaturely autonomy and characterizes this autonomy as an expression of God's goodness. But Rogers goes on to argue that Milton's celebration of autonomy is also constantly threatening to undo any orderly or natural hierarchy that Milton sets out to justify: "from the depths of the vitalist ontology of creation, we see the hesitant emergence of the Satanic
${ }^{13}$ Although, as previously mentioned, the opening lines of Raphael's discourse on substance also reveal Milton's belief that such goodness is tenuous and automatically on trial; the initially flawless creation can be "deprav'd from good" (5.471).
ideology of self-possession and self-authorization, an affirmation of creaturely autonomy from which the poem, in its more theological register, will be forced to distance itself" (126). The creaturely independence that Milton values and insists on is always in tension with the hierarchy between creature and Creator that he also seeks to uphold; this hierarchy implies obedience, and therefore does set limits on individual autonomy.

In Paradise Lost, Milton enforces these limits on autonomy not only by insisting on the authority of a Creator but also by preserving aspects of the hierarchical order expressed in the traditional Renaissance cosmology of the Great Chain of Being. Raphael warns, and the poem as a whole proposes, that gradual change may be achieved by remaining obedient within this order but not by seeking to transcend it. While both Fallon and Rogers emphasize the flexibility of creation's hierarchy as it is presented by Raphael in 5.469-490, they also offer readings of this passage that link the stratification of different kinds of substance and different types of beings to a conservative tendency in Milton's politics. "The scale that both unites and holds apart the refined spirits and the clotted and imbruted dregs is the metaphysical counterpart of a political vision of republican rule of and for all the people by the chosen few," Fallon claims (110). Rogers makes a similar argument that "Inflexible stratification is as much the focus of Raphael's vision as ontological mobility." He links the inflexibility in the ontological model to a sense of disappointment on Milton's part with the political ideals of most of his countrymen and claims that "Milton had been driven by the late 1650s to reconfigure the political state as a rude multitude governed from above by a 'rational' elite that one critic [Merritt Hughes] has properly identified as an 'aristocracy of grace'" (111). For Fallon and Rogers, Milton's hierarchical cosmology is related to his realization that, while individual autonomy might be a necessary
condition of political virtue, it was, in the case of his fellow citizens, by no means a guarantee of such virtue. ${ }^{14}$

The possibility that Milton's ontological model in Paradise Lost might reflect his understanding of politics reinforces the idea that seventeenth century debates about ontology were partially motivated by the political conclusions that their proponents wanted to reach. In these debates political arguments and ethical norms derive from a particular understanding of epistemology, and that understanding in turn depends on conclusions about ontology. The hinge that connects ontology to epistemology in seventeenth century metaphysical debates is the will. Fallon identifies a direct equation between will and thought in the formulation that Milton quotes from Aristotle in Areopagitica: "reason is but choosing" (Fallon 97, Areopagitica 733).

According to this logic, thought is contingent on-even equivalent with-the act of choosing. Fallon's argument as a whole shows how Milton offers a unique defence of freedom of the will by participating in a debate between figures such as Descartes, Cudworth, and More, who were all seeking to refute Hobbesian determinism. All of these philosophers also assume that the exercise of reason-which they cherish as the means to arriving through thought to actiondepends on a will that is free to choose. But Fallon suggests that unlike these other thinkers, "with Milton, freedom of the will might be the key to the development of animist materialism" (96-97). In other words, Milton is compelled to argue for the autonomy of matter so that he can affirm the autonomy of the material mind and person.

[^11]In the contrast with the thinking of other opponents of Hobbes, the unique features of Milton's free will defense ensure that a greater degree of autonomy and value is inherent in the non-human world. Descartes, Cudworth, and More all assume that a part of the human-either the mind or the soul-ultimately transcends the body, and by locating the will's freedom in this transcendent part, their theories set human beings above the non-human world. These theories also locate the highest aims of human life in an ontological space—rational and spiritual-that the natural world does not participate in. Milton's materialism connects and mixes rational and spiritual substance with the material in the human person, but also in the world at large. His monism undermines the possibility of imagining nature as a mere instrument in the attempt to understand humanity's place in this order. Because of the ontological continuity Milton establishes between spirit and matter, beings and things function neither as a code forever pointing beyond themselves, nor as objects of experiment that yield a merely rational meaning. Instead, the world possesses its own intrinsic value and the beings and things within it participate in its dynamic material life through a process of continual change and growth.

## Chapter 3: Ecology in the Rhetoric of Book Eight

Book Eight of Paradise Lost opens with Adam asking Raphael to explain whether the earth or the sun is at the centre of the known universe. Raphael's response deserves a central place in the ecocritical discussion of Milton's epic because it connects the ontological and epistemological aspects of Adam's question by exploring Adam's need for an ecocentric epistemology, but the archangel's argument comes into sharper focus when considering his purpose in Milton's poem as a whole. Raphael plays several parts in Paradise Lost: as "the sociable spirit" (5.221) his role is first and foremost to befriend and converse with Adam and Eve; as "the affable Arch-angel" (7.40) he acts as a mediator between heaven and earth, not just explaining but also embodying a monist ontology - he serves as a living sign that the two places are connected; and as a "Divine Interpreter" (7.72) he also has a job to do, to equip Adam and Eve to stand rather than fall by addressing their need for knowledge in advance of the temptation that is on the way. During the conversation that spans books Five to Eight, Raphael helps Adam work his way from a particular kind of ontology-a perspective on being, or what exists, to a particular kind of epistemology—a perspective on knowledge and how the act of knowing works. More precisely, I think the conversation shared between Raphael and Adam outlines the connection between a theistic monist ontology and an epistemology of "lowly wis[dom]" (8.173).

Ontology is the subject that animates Raphael's discourse on substance in Book Five as well as his account of creation in Book Seven. Raphael gives the discourse on substance to explain his ability to share Adam and Eve's food and he offers the account of creation in response to Adam's questions about how and why the world began (7.84-86). The leap from ontology to epistemology is the subject of Book Eight. After hearing about how the world was
created, Adam goes on to inquire anxiously about whether the earth is really at the centre of the known universe (8.15-28), but the more basic questions underlying his interchange with Raphael involve understanding and situating himself within the order that has been revealed to him: What is my place in this world? And, more particularly, what do I do with this intense desire I have to know things?

As the epic progresses, Adam's recurring appetite for knowledge drives his dialogue with Raphael, and Milton characterizes this desire for knowledge as an appetite because his theological subject invites the analogy. The fruit of the tree of knowledge is a symbol that perfectly conflates physical and intellectual appetite. ${ }^{15}$ In Milton's poem, as in the biblical tradition, the fruit functions as a theological prop where material and mental substance are commingled; the act of eating this fruit not only has the usual physiological consequences-it is broken down and becomes part of one's body-it also enters and alters one's consciousness. Raphael's discourse with Adam tries to trace the connection between being and knowing because that is precisely the problem that the fruit presents to Adam, Eve, and all readers of the poem.

The archangel's education of Adam includes affirming the desire to understand what it means to be in the world, but it also involves teaching Adam how to regulate curiosity. When Adam asks for an account of creation in Book Seven, Raphael graciously offers "to answer [his] desire of knowledge within bounds" and follows up this moment of assent with the immediate and sharp warning, "beyond abstain / To ask" (7.119-121). This pattern of permission and restriction is a recurring feature of Raphael's responses to Adam's questions. Milton goes on to

[^12]establish an explicit link between physical and intellectual appetite as Raphael exhorts Adam to control his hunger:

But Knowledge is as food, and needs no less
Her Temperance over Appetite, to know
In measure what the mind may well contain,
Oppresses else with Surfet, and soon turns
Wisdom to Folly, as Nourishment to Winde. (7.126-130)
Raphael's elevated diction dresses up a less than decorous analogy as he defines the consequence of over-indulgence in learning as the intellectual equivalent of a fart, but his argument is subtle at the same time as it is comic: he suggests that in order to consume knowledge Adam needs a prior and distinct kind of knowledge about "temperance"-_"to know / In measure what the mind may well contain." ${ }^{, 16}$ By counseling Adam on the need to learn how to approach knowledge, Raphael raises his second subject of epistemology, and by using the bodily activity of eating as an example he aligns his rhetoric with the problem that the fruit of the tree of knowledge presents to Adam-the challenge of connecting being and knowing.

The emphasis on temperance in Raphael's warning concerning the desire for knowledge (7.126-130) provides an intriguing parallel with Berry's observation that "ecological intelligence" is often expressed through "allusions to the doctrine of temperance" and that this
${ }^{16}$ Thomas Luxon notes in his commentary on this line that "Aristotle explicitly denies any such analogy" between appetite and knowledge, and goes on to quote from the Nicomachean Ethics 3.10: "'But we do not speak of men as either temperate or profligate in relation to the pleasures of ambition and of learning. Nor similarly can these terms be applied to the enjoyment of any of the other pleasures that are not bodily pleasures'" (Milton Reading Room). Luxon's example highlights Milton's departure from classical philosophy in affirming a comparison between intellectual desire and physical appetite. This affirmation concerning epistemology necessarily follows Milton's departure from Platonic idealism in the realm of ontology, a departure that is most evident in Raphael's discourse on substance in Book Five (5.469-490); as he outlines a vision of natural order based on a monist understanding of matter Raphael takes great care to demonstrate that appetite is good, that there is no firm distinction between spirit (or mind) and matter, and that creatures have a degree of freedom in moving up or down in the order of things because the categories of matter and spirit are contiguous rather than finally separate.
intelligence consists in "a sense of the impossibility of acting or living alone or solely on one's own behalf, [an insight that] rests in turn upon a sense of the order upon which any life depends and of the properties of place within that order" (125). Read alongside Raphael's warning Berry's statement suggests, once again, that Milton's assumptions about ontology might serve as the basis for his treatment of epistemology in Paradise Lost - and close attention to Raphael's reasoning confirms this correlation. Part of what Raphael and Adam attempt to work out in Book Eight is how the temperance that exists in the natural order can be translated into Adam's attitude toward knowledge. Raphael's discourse assumes that Adam's epistemic ethic, his response to the limits of his knowledge, can mirror the order that he sees at work in nature. But before they can define this ethic, Raphael and Adam must first come to an agreement on how nature is actually ordered.

Raphael's discourse on the limits of human knowledge in Book Eight is rhetorically designed to refute a central flaw that the archangel perceives in Adam's understanding of order. The angel's response to Adam follows the structure of a classical oration, with an exordium introduction, narratio - statement of facts, partitio - division, confirmatio - proof, refutatio refutation, and peroratio - conclusion (Burton, "Canons of Rhetoric: Arrangement"). In the exordium (PL 8.66-71) Raphael explains that he will demonstrate how Adam's desire for certainty about the earth's place in the natural order "Imports not" next to the task of learning to "reck'n right" (8.71). The exordium signals that through this speech Raphael aims to correct Adam's understanding of "decorum" and offer an alternative understanding by exploring and enacting the labour of learning to think rightly (Berry 125). In the narratio (8.71-85) Raphael confirms that the context for his critique is early modern astronomy through reference to the attempts of Adam's "ofspring" to "scan[]" God's "secrets" (8.86, 8.74). In this section the angel
also introduces a tension between two different attitudes toward knowledge-one epitomized in the act of scanning that emphasizes comprehension and treats knowledge as a means to control and another epitomized in the act of "admir[ing]" that emphasizes wonder and treats knowledge as a means to service (8.74-75).

In the partitio (8.85-90) Raphael hones in on the flaw he perceives in Adam's reasoning concerning the relationship between the earth and the sun; the archangel uses the "logic of monism" (Fish xxi) and alludes to the theology of the incarnation to show that the value judgement Adam makes concerning the superiority of the sun over the earth is flawed, and as a result so is the corresponding ethic that Adam imagines should govern the relationship between these stars. The confirmatio (8.90-122) unfolds the epistemic implications of a theistic, monist understanding of nature. Raphael first highlights the idea that knowledge is readily available to Adam because meaning is immanent throughout creation-even in the lowliest parts of the order, but he offsets this argument with the claim that a comprehensive understanding of the natural order is transcendent and that God has made this understanding deliberately inaccessible to Adam and his descendants in order to prevent them from "err[ing] in things too high," or, in my reading, using knowledge as a means to dominate nature (8.90). The peroratio (8.167-178) concludes Raphael's speech by calling Adam to adopt an ethic that is grounded in an understanding of belonging in nature so that he will be able to "reck'n right" by choosing wonder and service over the impulse to anatomize and control.

Raphael opens his speech in the exordium (8.66-71) by affirming a degree of curiosity about the wider world that Adam belongs in: "To ask or search I blame thee not, for Heav'n / Is as the Book of God before thee set / Wherein to read his wondrous Works, and learne" (8.65-68). The angel fashions his ethos by presenting himself as permissive toward Adam's question.

Raphael employs the medieval trope of nature as book-a source of revelation that sits alongside scripture and asks to be interpreted, but he goes on to delimit the kind of interpretation that is profitable to Adam. The archangel proposes, in a thoroughly Puritan fashion, that it is especially appropriate to study the heavens in order to understand time and the seasons because this kind of learning enables the agricultural labour of tending the garden (8.68-69). Raphael's proposal reinforces Milton's striking idea that a productive work day is a central feature of life in paradise.

The archangel includes this affirmation of work in his declaration of "the subject and purpose of [his] discourse" when he states that "whether Heav'n move or Earth / Imports not, if thou reck'n right" (Burton "Exordium," PL 8.70-71). This statement explains that his speech will prove the relative inconsequence of determining a clear planetary hierarchy, and instead of answering Adam's question the discourse will serve the purpose of teaching Adam how do the work of thinking virtuously. The phrase "reck'n right" speaks directly to the activity of choosing a single view of planetary motions with its meaning of "judg[ing]" correctly but the verb reckon also puns on the labor of counting "Hours, or Dayes, or Months, or Yeares" that Raphael recommends to Adam, and on the effort of "giv[ing] an account" that Raphael is engaged in through the act of answering Adam's question (OED "reckon" Def. 6c, PL 8.69, OED "reckon" Def. 1a). Milton's diction draws attention to the multiple and simultaneous acts of interpretation proposed and performed as result of Adam's question. The centrality of reckoning in Raphael's argument introduces the idea that labour, whether physical or intellectual, answers the purpose of Adam's and Raphael's existence, and this insight complicates the more overt prohibitions on the pursuit of knowledge that occur later on in the archangel's speech. Rather than suggesting that
rigorous intellectual labour is off limits, Raphael's introduction proposes that Adam's virtue must be proved through the act of thinking.

The next stage of Raphael's speech, the narratio (PL 8.71-85), or "statement of facts," "provides a narrative account of" the situation that prompts Adam's question and "explains the nature of [Raphael's] case" (Burton "Narratio"). Raphael draws attention to the early modern context of Adam's question by depicting the attempts of astronomers in Milton's day to "scan[]" God's "secrets" as foolish and impertinent; the archangel's tone grows more openly critical as he mocks the self-importance of these scientific "scribbl[ers]" (PL 8.74, 8.83). If "they list to try" explaining God's secrets, the angel imagines that the astronomer's erratic attempts may serve a much humbler purpose than they intend, "perhaps to move / [God's] laughter at thir quaint Opinions wide" (8.75, 77-78). Puns on planetary motions proliferate-"list," "move," "wide"to highlight the instability and inaccuracy of the astronomer's endeavours "to save appeerances" a phrase that Thomas Luxon notes was a "traditional term[] for the attempts of astronomers to explain the movements of the heavenly bodies systematically" (PL 8.82, Milton Reading Room).

Yet the archangel's mocking is gentle. The puns are playful and the key word is "perhaps." Raphael imagines that God laughs, but he does not actually know. In order to portray the astronomers' work as a matter of arbitrary conjecture, the angel must make a conjecture about how God perceives the astronomers. Furthermore, at the moment when he launches into his critique of the astronomers' hubris Raphael states that God, "the great architect," has chosen not to "divulge / His secrets" on this subject "to Man or Angel" (PL 8.71-75). In other words, Raphael admits that he is now dealing with the limits of his own knowledge as well as Adam's. ${ }^{17}$

[^13]Because Raphael has to rely on guess-work, the very thing that he mocks Adam and the astronomers for, his speech's narratio ends up affirming an underlying epistemic equality between angels and humans as created beings who share the task of working toward a better understanding of their world.

However, this brief admission of equality does not prevent Raphael from lecturing Adam on how best to respond to the limits of one's knowledge. The angel argues that instead of trying to solve the puzzle of planetary motions Adam and the early modern astronomers "ought rather to admire," that is, they ought to choose worship of their creator over intellectual inquiry (8.7273). Mattison claims that in these lines Raphael "poses what becomes a central question in Book Eight: is praise sufficient, or is knowledge needed distinct from praise?" (35). Raphael's caution seems to oppose admiration of God's world with the act of questioning, but Adam's initial request does the opposite by emphasizing admiration as an act of inquiry. Milton's use of "admire" to express Adam's question in the formulation, "reasoning I oft admire" (PL 8.25), highlights a combination of awe and inquisitiveness as the natural product of exercising one's mind. As Raphael's speech progresses its argument expands to agree with the scope of Adam's question. The archangel's movement into a thorough and ambitious consideration of the implications of both geocentrism and heliocentrism in his speech's partitio and confirmatio works against an interpretation of the injunction to admire as a flat prohibition against inquiry. The broader scope of his speech indicates that the admiration he has in mind does not exclude attempts to consider the best explanations possible through reason.

[^14]Mattison agrees with this conclusion when he maintains that "for Milton's readers to take sides, as it were, in the conflict between praise and ambitious knowledge would be beside the point; Milton includes both because the two are inseparable" (40). This observation applies to Milton's project in writing Paradise Lost as much as it does to Adam's attempt to find a model that explains the order of the universe. As Ewan Bleiman observes, "Paradise Lost, like the various models of the universe proposed by astronomers, seeks not to represent directly but to present an abstracted model, a system for understanding God, the universe, and everything" (On Wonder n. pag.). This claim entails that if the astronomer's models are both impressive and incomplete, so is Milton's attempt to "justify" God (PL 1.26); readers can glean from Raphael's speech an awareness of the limitations and inadequacies of Milton's own project.

As Milton and the astronomers build their models, Bleiman suggests, "misunderstanding becomes wonderment, and the act of striving to understand, of looking and wondering, is ultimately far more important than the truth of the model." This statement celebrates the work inherent in the act of thought as a worthwhile end in itself, but it also resonates with one of Milton's most progressive political claims, expressed repeatedly in Areopagitica, that this act of striving to understand, the "free and open encounter" between various explanations, is the necessary process by which better knowledge emerges (746). In line with Mattison's argument for a union between knowledge and praise, Bleiman's assessment of Milton's epic is summed up in his claim that "the success of Paradise Lost can be said to be in its success as a system, deftly marrying detailed and often controversial doctrinal argument to a sense of sheer, bewildered wonder." Understood in the terms of this appraisal, Raphael's assertion that Adam and the astronomers "ought rather to admire" does not preclude the building of models to make sense of
the universe, but it does include recognizing the inherent limitations of those models as well as celebrating a world that exceeds them.

In fact, Raphael's argument in the narratio suggests that his critique of early modern astronomy is aimed not so much at the desire to build a model but more at an attitude that ignores wonder and treats the search for knowledge instead as a means to dominion. At this stage in his speech the archangel justifies the inaccessibility of an explanation of planetary motions as a deliberate and "wise[]" act of "conceal[ment]" on God's part (PL 8.73). Raphael alludes to the possibility that by seeking a more comprehensive explanation of the natural order human beings might overstep their place in that order and begin to compete with God; as the angel's argument progresses it becomes clear that this act of overstepping includes wanting to control other parts of nature. At this point in his speech, Raphael's critique functions as an apt response to ambitions commonly expressed in early modern scientific works. For example, in his 1611 treatise on optics, the astronomer Johannes Kepler praises the possibilities opened up by the development of the telescope by exclaiming, "O telescope, instrument of much knowledge, more precious than any sceptre! Is not he who holds thee in has hand made king and lord of the works of God?" (from Dioptrice, qtd. in Campbell 123). Kepler's rhetorical question directly links discovery and dominion: knowledge, on this view, confers the right to rule.

Similarly, in Novuum Organum (1620) Francis Bacon relates knowledge to power and allies science and religion to justify dominion when he writes, "let man recover the right over nature which belongs to him by God's gift, and give it scope; right reason and sound religion will govern its use" (101). Bacon's argument suggests that the degree of privilege human beings have in the created order is somehow wanting, and knowledge is the means to address this want. He also believes that humans have all the tools necessary at their disposal "right reason" and "sound
religion" to use knowledge well. By contrast, Milton's insistence on the need to admire suggests that when intellectual inquiry is motivated by the desire to gain control within the natural order human beings are likely to misuse whatever knowledge they gain.

The idea that the desire for control is linked to the misuses of knowledge becomes more explicit in the third stage of Raphael's oration, the partitio (PL 8.85-90), which "outlines" the argument he is about to make. According to Quintilian this portion of an oration often opens with a proposition that "concisely puts forth . . . charges or [an] accusation" (Burton "Partitio"). Here, Raphael charges that Adam's original question can be proved irrelevant because his "reasoning" is faulty (PL 8.85). Raphael is able to "guess" the behaviour of Adam's "ofspring," the presumptuous astronomers, based on the faulty reasoning at work in Adam's assumption "That bodies bright and greater should not serve / The less not bright" (8.87-88). In what might be read as an uneven chiasmus, "bright" and "not bright" correspond, as do "greater" and "less." However, the awkward construction of "less not bright"- not quite a double negative, because the adjectives are not cumulative-sounds almost as if it is self-cancelling and leads readers to question Adam's valuation of the earth as "less[er]" in a way that anticipates Raphael's first counter-argument: "Great / Or Bright infers not Excellence" (8.90-91).

Although Adam and Raphael are speaking specifically about the earth and the sun, the bodies in question, with their contrasting degrees of brightness, might well be Adam's and Raphael's. As the argument progresses into the confirmatio the reproductive metaphor of a "fruitful" earth and a "vigour[ous]" sun also suggests an analogy with the bodies of Adam and Eve (8.94-97). Raphael's argument in the confirmatio challenges Adam's attempt to codify a greater and a lesser body in either relationship, but the angel's charge in the partitio also suggests that where hierarchies do exist they do not operate in the way that Adam expects. When
considering Raphael's relationship to Adam, the hierarchy between a heavenly and earthly body takes on a theological significance in light of Raphael's role in the poem as a mediator between heaven and earth; in the biblical narrative that informs Milton's epic, God mediates between himself and humanity through the incarnation-becoming "embod[ied]" or "made flesh" (OED Def. 1)—in the person of Jesus. While Raphael's description of an organic, contiguous, and divinely ordered universe in Book Five imagines creatures reaching upward "by gradual scale sublimed" (PL 5.483), the archangel's visit to Eden enacts a downward mobility within the divine order that prefigures the incarnation.

A reading of the propositio that takes the concept of incarnation into account reinforces my argument that Adam's request for understanding is not the focus of Raphael's critique.

Instead, Raphael sees the assumption of an inflexible decorum as the flaw in Adam's question. Adam equates higher status in the divine order with being absolved from the obligation of service, but Milton's use of the word serve to describe how greater and lesser beings interact echoes the words of the gospel of Matthew: when Christ's disciples argue about who will be "the greatest" in his future "kingdom"-a status symbolized by sitting at his right hand-he responds by telling them that although in the Roman empire rulers "lord" their power over their subjects and "exercise authority . . . It shall not be so among you. But whoever would be great among you must be your servant" (Matt. 20.25-26).

This New Testament passage has particular relevance for Paradise Lost because Milton draws on it to invent an explanation for Satan's fall. In Milton's epic, Satan becomes offended when the Son is begotten and elevated to the place of head over all the angels; Satan rebels because he is "fraught / With envie," consumed with the question of someone else taking priority, and unwilling that his own status should be "impaird" (PL 5.661-62, 5.665). Ultimately,

Satan rejects the idea of serving the Son, let alone anyone further down in the divine order, declaring that it is "better to reign in hell than serve in heav'n" $(1.263,9.163)$. Satan is repulsed by the idea of a flexible order where his status might change and by the idea of a decorum that highlights his obligation and connection to God or to other creatures.

By contrast, the logic at work in Christ's message to his disciples suggests that virtue is expressed through a willingness to serve, and Milton's treatment of decorum in Paradise Lost indicates that this ethic of service is based, as Berry maintains, on "the understanding that one lives within an order of dependence and obligation superior to oneself" (125). Raphael's critique of Adam's reasoning repudiates an obsession with status. After all, according to a monist understanding of the universe, status-or one's current place in a hierarchy-is not fixed, and is therefore not a reliable indicator of worth. The archangel's critique also rejects any desire to elevate human beings to a level where they are no longer bound by dependence, not just on God, but also on the rest of the order they belong to. Knowledge, according to this outlook, is not a tool for transcending or controlling nature. Instead, it is a means to greater awareness of one's participation in nature through service. Status may change in the fluid hierarchy that Raphael and Adam participate in, but the expression of virtue through service remains the same no matter what place they occupy in it. If Adam accepts this logic he can no longer judge whether the earth or the sun is at the centre of the solar system based on which "body" ought to serve the othersince either one could honourably fill this role (PL 8.87-88).

Once Raphael has established the flaw in Adam's reasoning as an inflexible understanding of decorum he is able to move into the "main body" of his discourse. In the confirmatio (8.90-122), he "offer[s] logical arguments as proof" of the claim that if Adam learns to "reck'n right" he will no longer see his concern with status as "import[ant]" (Burton
"Confirmatio," PL 8.70-71). First, Raphael warns against judging by outward appearance, arguing that,
. . . the earth
Though, in comparison of Heav'n, so small,
Nor glistering, may of solid good containe
More plenty than the Sun. (8.99-94)
Rather than promoting a distinction between the earth and the sun that determines worth based on superior appearance, Raphael urges Adam to expect value in what is close at hand and ordinary. This first argument emphasizes a monist understanding of meaning and value as immanent throughout creation. The archangel seeks to assure Adam that knowledge is available to him and that his place in the universe is significant—Raphael even goes so far as to suggest that the Sun and other "bright Luminaries" exist specifically to serve Adam (8.99). But Raphael also highlights the opposite idea, that knowledge and worth are transcendent, in order remind Adam that his understanding can never be absolute and that the ability to control nature remains far beyond his reach.

In order to emphasize transcendence while also defending his inability to answer Adam's question directly, Raphael reverts to the medieval method of reading the Book of Nature, treating the limits of creaturely understanding as signs that can be decoded in a way that offer insight about the divine. The angel suggests that if Adam adopts a geocentric model of the universe he can understand "Heav'ns wide Circuit" as a sign of God's "magnificence," a reminder that Adam is not alone in the universe but shares it with one who is large enough to create and inhabit such a wide space (8.100-106). Likewise, the impossible "swiftness" that would seem to be necessitated by the sun's journey around the earth in this model serves as evidence of God's "omnipotence" (8.108). Speaking of "distance inexpressible / By Numbers that have name," the angel uses the device of adynaton, "a declaration of . . . the impossibility of expression," to
affirm the challenge that the sheer extent of time and space presents to Adam's understanding whenever he contemplates outer space (8.113-114, Burton "Adynaton").

Emphasis on the vastness of the universe is necessary in order to warrant the ambivalent reading of the heavens that Raphael gives. Even though he criticises Adam's reason for considering the heliocentric model, the archangel ultimately refuses to openly endorse the geocentric model (PL 8.116). However, he does affirm that God is responsible for the distance that troubles Adam's perspective, and he even goes on to argue that this troubling is deliberate; its purpose is to prevent "earthly sight" from "presum[ing]" (8.120-121). According to this logic it is better to "erre in things too high"-in other words, to be unable to reconcile or calculate heavenly motions-than to "gaine advantage" (8.121-122). The language here recalls Satan's obsession with superiority, his ambition to "gain advantage," and Raphael links this ambition with the desire for a comprehensive and completely accurate understanding of how nature works.

Yet if speculation about a more accurate model is inherently presumptuous, Raphael cannot seem to resist the transgressive curiosity that he accuses Adam and Milton's contemporaries of indulging in. The fifth section of his speech, the refutatio, is "devoted to answering the counter-arguments of one's opponent" and gives the angel a rhetorical excuse to thoroughly consider the consequences of a heliocentric system by asking, "What if the Sun / Be Centre to the World?" (Burton "Refutatio," PL 8.123-157). Once it becomes permissible to speculate about an entirely different cosmology, it also becomes possible to imagine ecosystems existing on the moon as well as the earth. Raphael employs anadiplosis to highlight how one conjecture inevitably leads into the next as he imagines life on the moon: "spots" on the moon's surface are interpreted as "clouds," clouds imply "rain," and rain suggests "fruits" and inhabitants who eat the fruits (8.145-148).

For Timothy Morton, Raphael's speculation "that there may be liveable worlds beyond Earth" represent "an extraordinary moment in the history of ecological thought" because it "offers a negative image of human location, suggesting that humans shouldn't think that their planet is the only important one" (22). ${ }^{18}$ While a traditional Renaissance understanding of cosmology insists on humankind's centrality and dominion over the non-human world, Milton holds out the possibility that this order might be disrupted. Raphael seeks to affirm that humans matter and are worth focusing on, but he also wants to remind Adam and Eve that the earth is not the only point worthy of focus in the universe. Morton comments that Raphael's speculation helps to equip Adam and Eve for the trial they are about to face because "if they refrain from thinking that they are too important, humans will resist Satan's setting up of humanity at the center of a Universe that, like the apple, is there for the taking" (22). This comment underscores how any argument that places humanity at the top of a hierarchy or at the centre of a universal order tends to assume an instrumental view of nature.

Raphael's diction hints at this instrumental view as he imagines the alternate possibility to life on other planets; he speculates that perhaps "such vast room in Nature [exists] unpossest / By living Soule, desert and desolate" ( $P L$ 8.153-154). The archangel concludes that the question of extra-terrestrial life is open to "dispute," but the way he speaks of possessing space suggests a colonial outlook; these lines call to mind the ambition expressed by Francis Bacon to "extend the power and empire of the human race itself over the universe" (110). The unsettled cosmology that Raphael articulates in the refutatio threatens to unseat humans from a place of privilege at

[^15]the centre of the cosmos, and thus his speculation expresses anxiety about, and, perhaps, alludes to potential greed for, humanity's dominion over an expanding universe. Raphael's warning in his speech's conclusion-"Dream not of other Worlds" (PL 8.175)—in part concerns itself with whether Adam will respond to a new cosmology in a manner similar to Bacon, by treating the universe's vastness as an invitation to conquest rather than a cause for wonder and joy.

Raphael guards against the possibility of greed for control throughout the refutatio by layering his speculations with admissions of his uncertainty. He transitions to the conclusion of his speech by rendering all the speculations of the refutatio relative-"whether thus these things, or whether not" (8.159) he says, echoing the equivocation of his earlier claim that "whether Heav'n move or Earth, / Imports not" (8.70-71). Raphael attempts to sum up in these final lines the insights that he believes apply to humanity's place in the universe whether or not the traditional, geocentric cosmology proves false. The peroratio (8.167-178) concludes Raphael's discourse by calling Adam to recognize himself as part of nature. Milton uses asyndeton, "the omission of conjunctions between clauses" (Burton "Asyndeton"), to lend force and focus to the string of commands that sum up Raphael's speech by expressing Adam's need for an ecocentric epistemology:

Sollicit not thy thoughts with matters hid, Leave them to God above, him serve and feare;
Of other Creatures, as him pleases best, Wherever plac't, let him dispose: joy thou
In what he gives to thee, this Paradise
And thy faire Eve; Heav'n is for thee too high
To know what passes there; be lowlie wise:
Think onely what concernes thee and thy being;
Dream not of other Worlds, what Creatures there
Live, in what state, condition or degree,
Contented that thus farr hath been reveal'd
Not of Earth onely but of highest Heav'n.

The repeated imperative structure of Raphael's syntax highlights a series of exhortations to Adam: "Sollicit not," "Leave," "let," "Joy," "be," "Think," and "Dream not." Each command corresponds to a choice that Adam can make in order to approach knowledge based on an understanding of himself as belonging within, rather than above, the natural order. The final phrase in this conclusion turns what could have been an imperative statement, Be content, into an adjective denoting a state that has already been achieved, "contented," in order to enact Adam's arrival at the insight that he has access to knowledge through the relationships that also constitute his belonging within nature.

Raphael's exhortation in the peroratio "appeals through pathos" by focusing on the attitudes that condition Adam's understanding (Burton, "peroratio"); the archangel presents a series of choices to Adam, asking him to abandon particular emotions in favour of others. This approach makes acts of the will primary where knowledge is inaccessible. Raphael's first command, "Sollicit not," underscores the anxiety underlying Adam's question as the wayward aspect of his desire for knowledge. The angel uses the term solicit in the sense of "trouble" or "make anxious" and puns on the Latin root of the word which means to "put a whole in motion"-likening Adam's anxious and wandering thoughts to the earth that once seemed fixed but is set wandering as a result of the speculations of early modern astronomers (OED "solicit"). Raphael also addresses Adam's desire for greater control by insisting that it is God's role, not Adam's, to "dispose" or "to place (things) at proper distances apart and in proper positions with regard to each other" (OED "dispose"). The reverence that Raphael recommends enables Adam to maintain an awareness of belonging within, and depending on, an order that exceeds him and that he honours above himself. Raphael suggests that an ontology where Adam recognizes
himself as a part of nature can condition Adam's epistemology, causing his search for knowledge to become ecocentric in addition to being self-focused.

Instead of seeking understanding out of a desire to dispose or order the world around him, Raphael recommends that Adam seek knowledge out of an attitude of joy and wonder toward the world as it is immediately present to him, through relationship with a specific place, paradise, and a specific person, Eve. The colon that follows "fair Eve" leads into the command to "be lowlie wise" by "think[ing]" on "what concerns thee and thy being" (PL 8.173-174). This command invites Adam to ground his search for knowledge in ecology by choosing joy in his relationships over anxiety about his inability to escape the need to serve and to depend on others. Choosing joy over anxiety can lead Adam into wisdom; it can offer him ethical insight rather than knowledge in the form of an explanation, and wisdom will help him to reject the impulse of control that seems to be inherent in his desire to select a model that will definitively explain the universe.

Identifying this impulse to control as the flaw in the search for knowledge is essential to interpreting the tone of Raphael's discourse as anything other than anti-intellectual. Without the idea that the emotions and desires informing intellectual activity matter, the commands, "joy thou" and "think only what concerns thee and thy being" can be reduced to keep in your place and don't ask too many questions. On this view Raphael's entire speech comes across as an unconvincing bait and switch where ingratiating piety is offered as a poor substitute for satisfied reason. But if Milton affirms the inseparability of "knowledge and praise," as Mattison puts it, then Raphael's attempts to redirect Adam's desires do not come at the expense of the pursuit of knowledge. Instead, Raphael wants Adam to reflect on how to approach knowledge and to
recognize that knowledge offers the opportunity to be amazed and to enact belonging rather than to be assured and to enact control.

But while a critique of control is certainly prominent in Book Eight, a hierarchical cosmology still serves as the foundation for Milton's perspective on ecology—his understanding of nature as an ordered system. According to a modern understanding of what good, just, and healthy relationships look like, Milton's perspective on ecology is deeply problematic. The designation of Eve and Paradise as gifts from God to Adam in the command "joy thou / In what he gives to thee" (8.170-171) in addition to highlighting the dependence on God's generosity that Adam shares with all created beings also implies that woman and place are man's property. Yet, although this patriarchal idea is implicit in Milton's theological and cultural framework, the peroratio as a whole ultimately challenges and complicates Adam's privileged place in the social hierarchy. The movement toward humility and joy that Raphael recommends to Adam includes a radical re-assessment of Adam's place in the universe based not on the exercise of rank or the will to dominate, but rather on the realization that, as C. Q. Drummond puts it, "[Adam's] ontological being is complete with Eve, as it had been incomplete without her" (125). The pairing of Eve and Paradise in the command to joy suggests that this ontological continuity also extends to place, and this possibility is strengthened as the epic progresses.

The connection between Eve and Paradise in Raphael's command to Adam will be mirrored for Eve in Book Eleven when the archangel Michael offers comfort during her lament over the loss of Eden by telling her that Adam can be her memory of the garden: "where he abides, think there thy native soil" (PL 8.173-74, 11.292). While the fall cuts Adam and Eve off from their relationship to the garden, they retain the memory of belonging in Eden through relationship with each other. Both Adam and Eve are associated with place by their angelic
mentors, and taken together, the angelic commentary on their connection to the garden suggests that the path to true self-knowledge for each of them is in recognizing the humanity and the home in the other. McColley refers to this mutual mode of perception as "the hearkening to God's voice and the voices of God-in-others with which each being exercises liberty and responsibility, and by which each knows the happiness of both magnanimity and gratitude" (Milton's Eve 35). Her description suggests that the act of recognition between Adam and Eve becomes an encounter not only with the human other, but also with the divine. Thus, the beginning of lowly wisdom, according to Raphael, is to recognize in other creatures God's image incarnate, the source of knowledge, ${ }^{19}$ and to shun questions of dominance in favour of delight. Seen in this light, lowly wisdom can become a useful tool in a feminist reading of Milton that seeks to draw, out of what C. S. Lewis describes as "not the writing of a man who embraces the Hierarchical principle with reluctance, but rather of a man enchanted by it" (80), an ethic that promotes equality and undermines gendered claims to priority.

But a reading that emphasizes the egalitarian tendencies of lowly wisdom, with its emphasis on the virtue of humility, or the importance of not over-valuing the self, is complicated by the remainder of Book Eight, which offers a lesson on "self-esteem" (PL 8.572), or the importance of not undervaluing the self. Adam responds so enthusiastically to the prospect of delighting in Eve-nearly tripping over himself in his attempts to praise her when he declares that "what she wills to do or say, / Seems wisest, vertuousest, discreetest, best" (8.549-50)- that Raphael feels obliged to hastily adopt new tactics. The archangel begins to work very hard at convincing Adam not to abandon his place of authority over Eve or any of the other creatures in

[^16]the garden. Instead of being overcome by Eve's beauty and stupidly agreeing with her on everything, Raphael advises Adam to "weigh with her thyself; / Then value" (8.570-71). Despite the frequent re-assertions and celebrations of hierarchy peppered throughout Raphael's speech in the latter half of Book Eight, the underlying logic in this command is not necessarily offensive to feminist readers: after all, we do not want Adam to value Eve's opinions primarily on the basis of his attraction to her, while he passes over the actual content of her thought. But what is noticeably lacking in the overarching argument of Milton's poem is a corresponding lesson for Eve about the danger of idolizing Adam and unquestioningly relying on him as a source of knowledge.
E. M. W. Tillyard picks up on this imbalance in Milton's moral estimation of Adam and Eve when he writes, "fear of standing alone or gregariousness . . . is a sin only in the man, for it is not women's function to stand alone. Uxoriousness is a purely masculine failing" (450). In other words, Tillyard argues that Eve is prone to fall into sin by wanting to stand alone but not by admiring Adam too much, while Adam is prone to fall into sin by admiring Eve too much but not by wanting to stand alone. While I agree that this reasoning is present and even typically dominant in the text, I think Tillyard goes too far in implying that it is absolute. Raphael's elucidation of lowly wisdom, "joy thou / In what he gives to thee, this Paradise / And thy fair Eve" (PL 8.169-71), not only instructs Adam to stand with Eve rather than seeking knowledge apart from her, but also invites him to admire and learn from her. The outcome of Adam's conversation with God prior to Eve's creation underscores the idea that while Adam stands alone he is yet incomplete and imperfect. Unlike God, who "in [him]self [is] perfect," Adam needs "conversation with his like to help, / Or solace his defects" (8.415, 8.418-19). The shared being emphasized in Book Eight unfolds throughout the epic in an ongoing conversation by which

Adam and Eve continually work toward a more complete understanding of the world and their place in it. The ethic of interdependence that characterizes their relationship extends outward to encompass their relationships to the other beings, things, and places that make up their world.

In the peroratio of Raphael's discourse on knowledge, this ethic of interdependence even extends to hypothetical relationships with extra-terrestrial beings. Raphael's earlier warning concerning the danger of worrying about rank and seeking to "[gaine] advantage" in the natural order is repeated not only in "Wherever plac't, let him dispose," but also in what appears to be a rather withering condemnation of curiosity about other worlds, "Dream not of other Worlds, what Creatures there / Live, in what state condition or degree" $(8.122,8,170,8.175-76)$. Here, again, the preoccupation with "state, condition or degree" can be read as evidence of an attitude focused on rank, betraying a desire to maintain a place of control and privilege within nature. Although Adam never directly asks about the existence of aliens, Raphael's insertion of this possibility into his discourse suggests that Milton may be addressing the colonial hubris present in emerging enlightenment narratives concerning the potential for science, and astronomy in particular, to elevate humans over other beings and places.

In the place of the equation between knowledge and power that such narratives rely on, Raphael offers an equation between knowledge and humility. The emphasis on coexistence implicit in the command to "joy" is conditioned by a particular attitude toward knowledge, the attitude that Raphael glosses as "lowlie wis[dom]" (8.173). In early modern parlance, the phrase lowlie wise typically denotes a manner of humility before a sovereign rather than an attitude of humble discernment. ${ }^{20}$ The popular meaning encourages Adam to see himself as a subject of

[^17]God rather than a ruler of his own world. This meaning enables Adam to situate himself as a part of nature, rather than lord over it. But as Milton applies the phrase to the act of thinking he creates a pun that also implies an approach to knowledge that recognizes belonging to the earth not as an experience that fences the mind in, but rather as an experience that connects the whole person to a world of meaning; this view embraces all of the ordinary things and relationships in life as sources of knowledge. The possibility that wisdom, or "the capacity of judging rightly" $(O E D)$-hearkening back to the act of reckoning-could be expressed through attention to what is lowly, what most directly concerns Adam's ordinary life, serves to unite a monist understanding of being with an ecocentric mode of knowing.

Understood in terms of a monist ontology, Raphael's seemingly harsh prohibition against knowledge, "Heav'n is for thee too high / To know what passes there" is clarified as the angel concludes his argument by reasoning that Adam should be "Contented that thus far hath been reveal'd / Not of Earth only but of highest heaven" (PL 8.171-72, 8.178-79). In other words, the prohibition that Raphael appears to give is not against understanding heaven. Instead, the imperative of lowly wisdom serves to clarify the proper way of knowing heaven, reminding Adam of the paradox that knowledge can be gained through attention to what is low as well as what is high within the order of things. If what 'thus far hath been reveal' $d$ " is "Not of Earth only but of highest heaven," then Adam does know heaven, because he knows earth. Heaven and earth are, after all, "of kind the same" (8.178-79, 5.490). In order to communicate this continuity in the context of Adam's question about early modern astronomy, Milton begins to develop and employ an ecologically conscious rhetoric that culminates in the command to be lowly wise. When it comes to approaching knowledge, Raphael encourages Adam to start by assuming
how to approach knowledge-all the other instances denote an attitude of deference toward someone who is socially superior.
interdependence between self and other, self and world, and to see knowledge as the fruit of this mutuality.

## Chapter 4: Conclusion

Raphael's discourse on the limits of human knowledge in Book Eight draws on a Miltonic monism emphasizing material and spiritual substance as contiguous and convertible rather than separate and incompatible. The archangel relies on the rationale of material continuity inherent in the theology of the incarnation to ground his assurance that Adam can know one place, heaven, by means of another, earth (PL 8.178). Earlier, in Book Five, Raphael also expresses this "logic of monism" through the analogies of plant growth and animal metabolism in his discourse on substance (Fish xxi, PL 5.469-490). Here Milton capitalizes on the theological resonance of these analogies by introducing them in the context of a proto-eucharistic meal that Raphael shares with Adam and Eve. Both analogies employ natural processes of change to highlight transformation as an innate characteristic of nature.

In the context of a world where an inherent potential for change underlies order, the humility that Raphael recommends to Adam in Book Eight becomes an expression of the insight that all forms of life are connected and characterized by their capacity for transformation. For Milton, this insight does not dismantle hierarchies in nature, but it does undermine an understanding of those hierarchies as fixed; in fact, by mediating between heaven and earth, Raphael embodies and articulates an understanding of decorum that suggests order serves to promote creaturely mobility. The archangel's discourse on the limits of human knowledge demonstrates that coming to terms with and even celebrating nature's potential for change means rejecting the possibility of pride concerning one's place in its order.

Raphael's discourse also highlights the connection between the tendency toward pride and the desire for a comprehensive and fixed explanation of nature. In this context, lowly wisdom involves coming to terms with the idea that, because human perception is limited,
explanations of how nature works are always approximations. Raphael goes to great lengths in his speech to highlight the absurdity and the necessary inaccuracies that characterize the astronomers' attempts to map the universe (8.71-85), and Milton thus suggests that humility in the context of knowing nature means recognizing the inevitable gap between explanations and reality.

As Raphael guides Adam to embrace a world that exceeds his own ability to perceive, the archangel encourages Adam to reject the impulse to control nature and instead to recognize belonging within nature through wonder and service. In my view, the limitations of human thought that Raphael emphasizes and the prohibitions he articulates in Book Eight are not intended to dissuade Adam from attempting to understand. Instead, the archangel seeks to ground Adam's search for knowledge in the relationships that make up his ecosystem. As Adam accepts the imperative of lowly wisdom-to seek knowledge in the things that concern his being (8.173-74)—he makes good Northrop Frye's observation that, "although we may know in part . . . we are also part of what we know" (16). For Milton, this means that the limits of Adam's knowledge also constitute the necessary grounds of his belonging in the world.

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[^0]:    ${ }^{1}$ According to the Encyclopedia Britannica "The word ecology was coined by the German zoologist Ernest Hackel" (Smith). It first appeared in 1876 in his book A History of Creation (OED).

[^1]:    ${ }^{2}$ Mattison's argument ultimately eschews an ecological approach, however, because it too frequently relies on an understanding of place as merely an environment or a landscape-a peripheral context or an aesthetic backdrop for the drama of Adam and Eve's self-discoveryrather than a space with its own inherent value, belonging to a network of relationships that Adam and Eve also participate in.

[^2]:    ${ }^{3}$ The challenge of depicting a prelapsarian Eden has been explored particularly thoughtfully by Ian Robinson through a Blakean lens in "Milton's Justification of the Ways of God, or The Fall into Language." Robinson characterizes the aesthetic problem of representing Eden in distinctly ethical terms, as one of experience attempting to imagine innocence.

[^3]:    ${ }^{4}$ Edwards argues in Milton and the Natural World that "when it was inherited by early modernity from antiquity and the Middle Ages, the [Book of Nature] trope had hardened into a cliché," adding that by the seventeenth century the analogies in this allegorical tradition had become highly predictable and the interpretive process proscriptive: "the reader [knew] beforehand that hares always mean fearfulness; sparrows, lustfulness; turtle-doves, chastity" (45). While a broad study of the tradition would no doubt reveal more ambiguity than these examples suggest, Edwards nevertheless provides a compelling explanation for why the Book of Nature trope was ripe for re-imagining in the early modern period.

[^4]:    ${ }^{5}$ Milton references Galileo's theories several times in Paradise Lost, so he was certainly familiar with the astronomer's writings. In Areopagitica he also mentions visiting Galileo while in Florence from 1638-1639: "It was there [in Italy] I found and visited the famous Galileo grown old, a prisner to the Inquisition, for thinking in Astronomy otherwise then the Franciscan and Dominican licencers thought" (737n, 737-738).

[^5]:    ${ }^{6}$ Choosing an ontological model lays the groundwork for a theory on how people have access to knowledge, and belief about how one accesses and handles knowledge determines how ethical action is possible, ultimately making the implications of any ontological commitment deeply practical and political. Thus Milton presents an understanding of ecology in Paradise Lost-a view of the practical and political relationships between human beings and everything else in the

[^6]:    natural world- that depends on a particular epistemology, or understanding of knowledge, and that understanding of knowledge in turn depends on a particular ontology, or understanding of being.
    ${ }^{7}$ For a nuanced critique of Fallon's treatment of Milton's monism see Phillip Donnelly's "'Matter' Versus Body: The Character of Milton's Monism." For an earlier introduction to the topic of monism in Milton's writing see Bentley Hart's "Matter, Monism, and Narrative: An Essay on the Metaphysics of Paradise Lost."

[^7]:    ${ }^{8}$ The Christian Doctrine was not published in Milton's lifetime. The manuscript was discovered in the Record Office in London in 1823, and the first English translation was made in 1825 (The Christian Doctrine 900).
    ${ }^{9}$ Critics who argue in favour of a materialist reading of Paradise Lost all agree that Milton arrived at a monist outlook over time and only began to overtly argue for continuity between matter and spirit toward the end of his career; Fallon acknowledges that "the young Milton's poetry is dualist, that is to say it presupposes a relation of body and soul traceable to Plato and Renaissance Neoplatonists" but he argues that "by the end of the 1650s Milton had worked his way to the unequivocal materialist monism of The Christian Doctrine (c. 1656-60) and Paradise Lost" (79, 96).

[^8]:    ${ }^{10}$ For a summary of how Fish's method of reading Paradise Lost fits within the critical discourse on Milton's monism, see pages xv-xxiv in the preface to the second edition of Surprised by Sin. In this preface Fish claims that "the centrality [of monism] to Milton's thought . . . cannot be overestimated" (xix).

[^9]:    ${ }^{11}$ Using the idiom suggested by daily labour in the garden, Barbara Lewalski argues that "in Milton's unique representation of the state of innocence, Adam and Eve are both expected to grow, change, and develop in virtue by properly pruning and directing their erroneous apprehensions and perilous impulses" (468).

[^10]:    ${ }^{12}$ Edwards notes that the dynamic nature of Milton's cosmology is "frequently observed" in scholarship, and she draws special attention to Alastair Fowler's claim that Milton's flexible vision of the created order is "as dynamic as any evolutionary system of more recent times" (Edwards 125).

[^11]:    ${ }^{14}$ Both critics see Milton's politics reflected in his ontological model, but they imagine the motivation for his political stance in different ways. Rogers summarizes sympathetically, "pained political resignation to a doomed politics of minority rule finds a sanguine cosmological justification in Raphael's hierarchical continuum of body and spirit" (111). Fallon paints a less appealing picture of Milton's elitism when he reasons that "in the descent along the graded scale of animate matter we witness the metaphysical version of Milton's distaste for the unruly material of the mass of his countrymen" (110).

[^12]:    ${ }^{15}$ Christopher Ricks remarks that in Paradise Lost Milton frequently references "the Latin [word] sapere," through its English equivalent, "taste," and cognate, "sapience." The conflation of savour and sense in the Latin root "is important to Milton because it links knowledge and the fruit" (Milton's Grand Style 135, 71n). Ann Torday Gulden cites Ricks when she states that "eating and the pursuit of knowledge are linked activities in the epic" (Milton's Eve and Wisdom 138).

[^13]:    17 The archangel's overt message suggests that he is refusing to answer Adam's question on principle, yet this admission of ignorance reveals that Raphael's refusal to give a straight answer is also a matter of necessity. Of course, what we really encounter here are the limits of Milton's

[^14]:    knowledge; Milton's choice unapologetically to include his own uncertainty in the drama of his epic reinforces the possibility that this passage portrays intellectual inquiry as a permissible, worthwhile, and ongoing process.

[^15]:    ${ }^{18}$ In his most recent work, The Ecological Thought, Morton aims to replace the concept of nature with an understanding of life as "a vast, sprawling mesh of interconnection without a definite centre or edge" (8). While this book focuses on theory rather than the "green close reading" Morton is also known for (13), when he does turn briefly to literary analysis in his first chapter he chooses to examine the refutatio section of Raphael's discourse on the limits of human knowledge in Book Eight of Paradise Lost.

[^16]:    ${ }^{19}$ Stanley Fish argues that Milton articulates "a theory of value" in Paradise Lost where properly assessing the worth of any created thing depends on recognizing the relationship between sign and source ( xx ). In his words, creatures are "oriented from the beginning toward the origin of value," their Creator (xvi).

[^17]:    ${ }^{20}$ A search for the phrase "lowly wise" through the Early English Books Online database yields 48 results, and of those results only Paradise Lost employs the term in a context that discusses

