

THE DEPTH OF MARGARET CAVENDISH'S ECOLOGY

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We examine Margaret Cavendish's ecological views and argue that, in the Appendix to her final published work, *Grounds of Natural Philosophy* (1668), Cavendish is defending a normative account of the way that humans ought to interact with their environment. On this basis, we argue that Cavendish is committed to a form of what, for the purposes of this paper, we call 'deep ecology,' where that is understood as the view that humans ought to treat the rest of nature as something of intrinsic value. The reading of Cavendish we defend in this paper also commits her to a naturalistic account of 'moral facts' about how humans ought to interact with their environment. That is, on our reading of Cavendish, 'moral facts' (i.e., facts about how we ought and ought not to behave, and what it is right or wrong for us to do) are grounded in facts about nature—and, in Cavendish's case, its (ir)regularity. Such facts are hypothetical, rather than categorical: they are facts about how we ought to act if we wish to attain happiness or flourishing. We thus contend that Cavendish anticipates, at least loosely speaking, movements in both deep ecology and in naturalistic meta-ethics that came to prominence well after the time in which she was writing.

Introduction

In this paper we examine Margaret Cavendish's ecological views and argue that, in the Appendix to her final published work, *Grounds of Natural Philosophy* (1668),¹ Cavendish is defending a normative account of the way that humans ought to interact with their environment. On this basis, we argue that Cavendish

1. References to *Grounds of Natural Philosophy* (henceforth 'GNP' or 'Grounds') are to Cavendish 2020. For a full list of abbreviations, see References.

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is committed to a form of what, for the purposes of this paper, we will call ‘deep ecology,’ where that is understood as the view that humans ought to treat the rest of nature as something of intrinsic value.

In parts three to four of the *Grounds* Appendix, Cavendish speculates about a perfectly ‘regular’ world in which the relationships among humans, non-human animals, and plants are very different from our own world.² For instance, she claims that humans in the regular world do not eat non-human animals if it requires killing them or plants if it requires destroying what she calls their “Root[s] and Foundation[s]” (GNP: 205). Cavendish also maintains that the regular world is a “Happy” world, while its opposite, the irregular world, is a “Miserable” one (GNP: 200). We make the case for thinking that Cavendish’s description of the regular world is a normative ideal that ought to be followed if humans wish are to be as happy as possible—or, in more Aristotelian terms, if they are to flourish.³ We also argue against Deborah Boyle’s reading of these passages of the Appendix, which entail that Cavendish’s descriptions of the ecology of the regular world are merely “fictional fancies of the imagination” (2018: 204), comparable to her works of fiction like *The Blazing World*. On our reading, Cavendish’s view is that, as inhabitants of what she calls a “Purgatory World” (GNP: 201, 206, 207)—that is, one which is “partly Irregular, and partly Regular” (GNP: 201)—we are capable of moral improvement. By following the model provided by the ecology of the regular (and thus perfectly happy) world, Cavendish thinks, we can contribute to a greater degree of regularity, and in turn happiness, in our own. We can, in short, make our world a better place.

This reading of Cavendish has ramifications for ongoing debates about her environmental philosophy, and her place in the history of environmental ethics more widely. Aside from Boyle’s reading, there is very little sustained discussion of Cavendish’s ecological views as espoused in the *Grounds* Appendix in the secondary literature on Cavendish’s environmental philosophy. Most commentators instead focus on her poems, such as ‘A Dialogue Between an Oake, and a Man cutting him downe’ (P&F, 66–70) and ‘The Hunting of the Hare’ (P&F, 112–13).⁴

2. By ‘world’, Cavendish means a distinct region of the infinite “Body of Nature” (GNP: 193). That is, nature is infinite but can be broken down (at least conceptually) into distinct regions which we call ‘worlds’ (we might think of ‘worlds’, in this sense, as like planets). Thus, while Cavendish’s use of the term ‘world’ is consistent with contemporaneous uses of the term (see, e.g., Sebastian Munster’s *Cosmographia* [1544], discussed in Smith [2022: 154]), her use of the term differs from Leibniz, perhaps the best-known Early Modern thinker to theorise about other ‘worlds’. This is also very different to modern ‘possible worlds’ discourse, as exemplified in the work of David Lewis, where ‘worlds’ are (spatiotemporally) disconnected *universes* (e.g., Lewis [1986: 72]).

3. It will become clear that we are not seeking to characterise Cavendish as an ‘Aristotelian’ in any robust sense, or draw any causal connections of influence from Aristotle, or subsequent Aristotelians, to Cavendish. Rather, we simply think that construing Cavendish’s normative theory in loosely ‘Aristotelian’ terms can help elucidate our reading of her.

4. See, e.g., Bowerbank 2004: 53–54; Suzuki 2021; Duncan, manuscript.

However, in this paper, we demonstrate that Part 3 of the *Grounds* Appendix is of great significance to such debates since, here, Cavendish goes further than just identifying what is wrong with humans' relationships with their environment and, as we argue, is making normative suggestions about how we can *improve* those relationships. On our reading, Cavendish is committed to a form of 'deep ecology,' where that is understood as the normative position that human beings should establish a relationship with nature that recognizes nature's *inherent* value—and not just its instrumental value in service of our own ends.⁵ We thus substantiate David Cunning's remark that Cavendish's "views and arguments might [...] be interpreted as bearing on contemporary movements in deep ecology and environmental ethics" (Cunning 2022: §1). What's more, the reading of Cavendish we defend in this paper commits her to a naturalistic account of 'moral facts' about how humans ought to interact with their environment. That is, on our reading of Cavendish, 'moral facts' (i.e., facts about how we ought and ought not to behave, and what it is right or wrong for us to do) are grounded in facts about nature—and, in Cavendish's case, its (ir)regularity. Such facts are hypothetical, rather than categorical: they are facts about how we ought to act *if* we wish to attain happiness or flourishing.⁶ We thus contend that Cavendish anticipates, at least loosely speaking, movements in both deep ecology and in naturalistic meta-ethics that came to prominence well after the time in which she was writing.⁷

The structure of this paper is as follows. We begin with an overview of Cavendish's views on nature and how they have been treated in the secondary literature to date. We also provide an initial reason for thinking that increased attention to the *Grounds* Appendix can take such interpretative discussions forward. In §2, we make the case for thinking of the regular world described in the *Grounds* Appendix as a normative ideal and of our 'purgatory' world as one

5. See Devall 1980 for more on this position and its history.

6. One might worry that the claim that facts about how we ought to act are hypothetical (we ought to act in certain ways *if* we wish to flourish) and the claim that nature is something of intrinsic (not instrumental) value, are in tension. However, if we read the first of these claims as the claim that there are facts about how we ought to treat things with intrinsic value, this tension can be alleviated. Like Kant, for example, we might think of Cavendish as holding the view that certain entities or beings ought to be treated as ends, not means. For Cavendish, though, the whole of nature is an end in itself. Thanks to Mark Steen for raising this concern.

7. Naturalism, a meta-ethical position, came to prominence (at least in Western philosophy) in the second half of the twentieth century, thanks to proponents like Philippa Foot, Rosalind Hursthouse, and Alasdair MacIntyre (see Frey 2019 for an overview). More specifically, these thinkers have all come to be seen as 'Neo-Aristotelian' naturalists, due to their commitment to Aristotle's notion that human flourishing is connected to virtuous behaviour. In this paper, we are not suggesting that Cavendish's naturalism is (Neo-)Aristotelian, but simply naturalistic in the broader sense of grounding moral facts in facts about nature. It is worth noting, though, that contemporary neo-Aristotelian naturalists also think of 'moral facts' as hypotheticals: claims about how we should behave *if* we wish to behave in accordance with our nature.

in which we are capable of moral improvement. In §3, we offer an exposition of Cavendish's description of the ecology of the regular world and the ways in which it differs from our own. Finally, in §4, we outline Deborah Boyle's reasons for thinking that the ecological claims in the Appendix are not normative claims pertaining to humans in our world but are, instead, "fictional fancies of the imagination" (Boyle 2018: 204). Boyle's argument relies on the premise that Cavendish could not plausibly have held that predatory non-human animals, like lions and tigers, ought to alter their behavior (and, e.g., cease to hunt prey). We show that, even granted this premise, there are reasons to think that the regular world is intended to serve as a normative ideal for *humans* to follow. We justify this interpretative move by providing evidence that, for Cavendish, human knowledge—and in turn, humans' moral responsibility to their environment—is different to that of other organisms. However, we then identify a tension in this reading of Cavendish; between the claim that the regular world is a normative ideal for humans alone and Cavendish's wider 'egalitarian' approach to humans and their environment. Ultimately, we conclude that, rather than being a problem for our reading of Cavendish, this tension casts doubt on Boyle's claim that Cavendish could not plausibly have held that non-human animals ought to change their behavior. In other words, we provide reasons to think that Cavendish believed that *all creatures* ought to change their behavior in order to flourish.

1. Cavendish and the Environment

This section introduces the reader to Cavendish's views on the environment and provides an overview of scholarly discussions of those views—and what we might loosely call her 'environmental ethics'—in the secondary literature to date. It will become clear that such discussions have so far tended to focus on Cavendish's poetry, rather than the *Grounds* Appendix. However, in the sections that follow, we show that paying attention to the *Grounds* Appendix, especially part three, can in fact shed new light on this aspect of Cavendish's philosophy.

Cavendish's nature poems make it abundantly clear that she put a considerable amount of thought into the relationship between humans and non-human animals and plants—particularly the mistreatment of plants and non-human animals by humans. Poems like 'The Hunting of the Hare' and 'The Hunting of the Stag' (P&F: 110–113, 113–116) recount the experiences of non-human animals that are hunted. Cavendish writes sympathetically about the hare and the stag, describing, for example, the "terror" and "Feare" of the hare as it desperately tries to outrun a hunting party (P&F: 111). In a similar vein, Cavendish's tone in 'A Dialogue between an Oake, and a Man cutting him downe' (P&F:

66–70) is sympathetic. She describes, for example, the experience of a tree that is cut down to provide the wood for picture frames: “And many times with Nailes, and Hammers strong,/They peirce my sides, to hang their Pictures on” (P&F: 69). A recurring idea in these poems is that humans see the rest of nature—whether that be non-human animals or plants—as something for them to use in service of their own ends, including the consumption of meat, the pleasure of the hunt, or the building of picture frames, boats, and houses. Some commentators, such as Mihoko Suzuki, have argued that what Cavendish is especially concerned with is the *wastefulness* of human treatment of, e.g., non-human animals. For instance, Suzuki (2021: 187) picks up on the remark, from ‘A Dialogue of Birds’ (P&F: 70–75), that humans “of our [i.e., bird’s] Flesh do make such cruel waste/That but some of our limbs will please their taste.” This clearly suggests that Cavendish was aware of the pain and suffering inflicted on non-human animals and—so Cavendish seems to think—plants as well.⁸

The secondary literature on Cavendish’s environmental philosophy has tended to focus on two issues. First, scholars have noted that Cavendish takes what we might call an ‘egalitarian’ approach to the relationships among humans, non-human animals, and plants. Second, scholars have argued that, in doing so, Cavendish anticipates more recent developments in environmental ethics.

On the first point, Cavendish’s commitment to an egalitarian understanding of the relation between humans and the rest of nature can be found in both her earlier writings, like *Philosophical Fancies* (1653), and her later works, such as the *Grounds* (1668). As the following passages make clear, Cavendish is especially keen to emphasize that human *knowledge* should not be thought of as superior to that of other organisms.⁹ In the *Philosophical Fancies* she writes:

For had Vegetables and Mineralls the same shape, made by such motions, as the sensitive spirits create; then there might be Wooden men, and Iron beasts And if their Knowledge be not the same knowledge, but different from the knowledge of Animals, by reason of their different Figures ... yet it is Knowledge. (PhF: 54–55)

8. It is worth noting that this acknowledgement of suffering did not deter Cavendish from eating non-human animals herself (Boyle 2018: 200). This suggests that Cavendish’s emphasis in these passages really rests on inflicting *needless* suffering. However, this is consistent with thinking that *ideally* humans should not kill non-human animals. In other words, a real-life failure to live up to an ideal does not mean that Cavendish does not have this ideal in the first place.

9. It will become clearer in section three that this position is compatible with Cavendish thinking that humans have *more* knowledge (see also Boyle 2018: 194–195). That is, these claims are merely about the (relative) value of this knowledge and not its extent, and the latter may play an important role in terms of the (special) obligations it places on its holder.

And in the *Grounds*:

[T]here are different Knowledges, in different Creatures; yet, none can be said to be *least knowing*, or *most knowing* ... As for example, Man may have a different Knowledge from Beasts, Birds, Fish, Flies, Worms, or the like; and yet be no wiser than these sorts of Animal-Kinds. (GNP: 148)

The point that Cavendish is making in both passages is that all organisms (and even minerals like stones),¹⁰ whether human or not, possess knowledge and that the supposition that human knowledge is superior is one that we—i.e., humans—are not in fact entitled to make.

While these passages concern *knowledge*, scholars have argued that, for Cavendish, any suppositions about superiority of humans over the rest of nature are a mistake. As Mohoki Suzuki puts it, for Cavendish, “man’s superiority over other beings is accidental” (Suzuki 2021: 189). That is, there is nothing intrinsically superior about humans. Katie Whitaker (in her biography of Cavendish), similarly writes that:

[Cavendish] was setting herself against the entire Judeo-Christian tradition of man’s superiority over the natural world and his God-given right to use it as he wills. For all we know, she argued [...] beasts, birds, and fishes might have as much intelligence as us, or even more. (2003: 142)

Several scholars have argued that Cavendish’s unorthodox views on the environment anticipate contemporary views in environmental ethics. Sylvia Bowerbank claims that Cavendish’s “intellectual compositions [i.e., her nature poetry] are calculated to intervene in environmental matters” (2004: 53) and later adds that “[t]here is plenty of evidence in Cavendish’s writings that she allies herself with nature, and is originating a sensibility that we might call ecological” (62). Similarly, Suzuki claims that “these poems by Cavendish indicate that she was thinking ecology in the mid seventeenth century” (2021: 199).¹¹ In an unpublished manuscript, Stewart Duncan is a little more cautious but seems to agree with both Bowerbank and Suzuki. He writes: “Cavendish [...] proposes views in moral philosophy, indeed in what we might call environmental ethics” (13).¹²

10. This follows from Cavendish’s view that all parts of nature possess life, knowledge, and perception (e.g., OEP: 15).

11. Suzuki (2021: 196) also claims that Cavendish’s sympathy with the oak, the hare, and the stag “finds its modern equivalent in critical ecofeminism.”

12. Suzuki (2021: 197) and Duncan (ms) both identify a conceptual connection between Cavendish’s environmental views, especially her view that all of nature possesses *knowledge*, and her commitment to panpsychism or vitalism.

In his *Stanford Encyclopedia of Philosophy* entry on Cavendish, David Cunning also notes that “[h]er views and argument might also be interpreted as bearing on contemporary movements in deep ecology and environmental ethics” (2022: §1). Rather than expanding on what Cavendish’s own environmental ethics might look like, though, Cunning then goes on to suggest that “Cavendish does not appear to have the resources to make any normative claims about our impact on nature” (2022: §1). Cunning’s view, then, is that there is no basis on which to attribute to Cavendish any normative claims about how we might *improve* our relationship with the environment. However, this is where we think part three of the *Grounds* Appendix can take the discussion forward. There, we argue (in §3), Cavendish *does* in fact put forward normative claims about how we can improve our relationship with nature. On our reading of Cavendish, doing so involves attempting to emulate the ecological behavior of humans in the perfectly regular world.

Having introduced Cavendish’s views on the environment, her nature poetry, and the reception of her environmental philosophy in the secondary literature, we are now in a position to begin to make the case that an examination of part three of the *Grounds* Appendix can take those discussions forward. In the next section, we briefly introduce the reader to the *Grounds* Appendix before outlining her description of the ecology of the regular world.

2. The Regular World as a Normative Ideal

In this section, we make the case for thinking that the ‘regular world’ discussed in the *Grounds* Appendix is a normative ideal that Cavendish thinks we should strive to emulate in our world. In turn, we argue that we can plausibly attribute to Cavendish the view that there are ‘moral facts’ about how humans ought to act in regard to the wider environment if they are to be happy, or flourish.

To begin, it is worth noting that part three of the *Grounds* Appendix is a somewhat idiosyncratic piece of writing. It takes the form of a dialogue between two ‘Parts’ of Cavendish’s mind: what she calls the ‘major’ and ‘minor’ Parts. This rhetorical device is first introduced by Cavendish in chapter fifteen of the first part of the *Grounds* and used throughout chapters two to five of the Appendix.¹³ By presenting this discussion as a dialogue between ‘two parts’ of her mind,

13. Cavendish’s use of this dialogue form raises interesting questions about which parts (i.e., ‘major’ or ‘minor’) are (more) representative of her own views. This holds particularly in cases where the parts disagree. This question, however, can be put aside for our purposes because the only points of disagreement concern whether there is death in a perfectly regular world (GNP: 201), whether dying creatures could be considered as ‘blessed’ (GNP: 202), and whether ‘production’ or ‘generation’ happens frequently (GNP: 203). While these points are interesting in their own right, they do not pertain to our discussion of Cavendish’s ecological views.

Cavendish is adopting a dialogical set up that she also puts to work in the *Observations upon Experimental Philosophy* (1668) (henceforth ‘*Observations*’). The main body of the *Observations* is preceded by a short section entitled ‘An Argumental Discourse’ where she writes:

When I was setting forth this book of Observations upon Experimental Philosophy, a dispute chanced to arise between the rational parts of my mind concerning some chief points and principles in natural philosophy; for, some new thoughts endeavouring to oppose and call in question the truth of my former conceptions, caused a war in my mind[.] (OEP: 23).

In both instances, Cavendish is taking literally the idea that one can be ‘in two minds’ about a particular issue or question. With that context in mind, we begin with an outline of Cavendish’s claims about the difference between our world and the (perfectly) regular world which are discussed in the third part of the Appendix.

On three different occasions in the *Grounds* Appendix, Cavendish describes our world as a “Purgatory World” (GNP: 201, 206, 207). This term, of course, has theological implications and is typically associated with a realm between our earthly life and the afterlife where souls are purified (e.g., by punishments) in order for them to become ready to enter into paradise.¹⁴ Thus, at first sight, Cavendish’s description implies that our world is a place where improvement is the ultimate goal. This is consistent with Cavendish saying that our world is a “Purgatory” world because it is “partly Irregular, and partly Regular” (GNP: 201).

It is worth pausing to say something about Cavendish’s references to ‘regularity’ and ‘irregularity,’ since this will help clarify how our world, which is partly regular and partly irregular, differs from the perfectly regular world—and the degree to which we might, in our world, be able emulate the regular world. In general, ‘regularity,’ in Cavendish’s writing, can be thought of as roughly synonymous with ‘order’ or ‘harmony’ (see, e.g., Detlefsen 2007: 167). To observe regularities in nature is to observe phenomena that occur in predictable patterns or ordered (and non-chaotic) ways, such as, to use some of her own examples, water “quenching” fire or fire “evaporating” water (GNP: 170) or the recurrence of “ebbing and flowing” in the sea (GNP: 166). In other words, regularities in nature are the kinds of things that, according to many of Cavendish’s contemporaries, could be explained by appeal to *laws* of nature—like the law of

14. It is worth noting that the term ‘purgatory’ was used as an adjective in seventeenth century English, denoting the “quality of spiritually cleansing or purifying” (“purgatory, adj.” *OED Online*. Oxford University Press, March 2023. Web. 28 April 2023). This is line with Cavendish’s insistence that e.g. the elements, air, or food in the perfectly regular world is pure, or purer than in our world, or even most pure (GNP: 205–207).

gravitation. But, unlike her contemporaries, Cavendish does not explain such observable regularities by appeal to laws. Instead, in line with her commitment to a form of 'vitalism' (O'Neill 2001: xxii), Cavendish maintains that observable regularities are determined by the rational and sensitive actions of nature—and its infinite parts—*itself*.¹⁵ Cavendish also maintains that as well as regularities there are *irregularities* in nature (GNP: 117–18).¹⁶

More relevant to our present concerns is Cavendish's view, expressed in the *Grounds*, that certain kinds of human action—including "Treachery, Slander, false Accusations, Quarrels, Divisions, Warr, and Destruction"—are "Irregular Actions" (GNP: 207).¹⁷ Just as we can, she thinks, observe both regularities and irregularities in the operations of nature—the kinds of phenomena explained or, in the case of irregularities, left unexplained by laws of nature—so too can human actions be classed as either regular or irregular; for we are as much a part of nature as anything else, in Cavendish's view. Indeed, in various places, we find Cavendish drawing analogies between human societies and politics and the actions of nature. For example, in *Grounds*, she describes illness in the body, as "when the Corporeal Motions of Human Life are in disorder, and at variance: for, oftentimes there is as great a Mutiny and Disorder amongst the Corporeal Motions, both in the Mind and Body of a Man, as in a Publick State in time of Rebellion" (GNP: 145). Thus, we find Cavendish drawing a connection between (ir)regularities in nature and human (inter)actions. While it is too early to draw a stronger connection between Cavendish's views on regularities and *normativity*, it is nonetheless clear that, just like actions of nature, human actions either fall into the categories of 'regular' and 'irregular' and that Cavendish associates the latter, at least within a human being, with negative states of being such as sickness or madness (e.g., GNP: 121, 127).

In the *Grounds* Appendix, Cavendish also draws a connection between regularity/irregularity, both in nature generally and in human actions specifically, and happiness and misery. For example, having explained in the preamble that the arguments between the parts of her mind concern "Regular" and "Irregular" worlds (GNP: 200), in the subtitle of the first chapter (which immediately follows

15. This is, of course, consistent with her identifying certain 'rules of thumb' which the movements of "Nature's Parts" follow. For instance, we can observe the following to hold: "according to the agilness or slowness of the Corporeal Motions; or, according to the number; or, according to the manner of the compositions, or joynings, or divisions; or, according to the regularity or irregularity of the Corporeal Figurative Motions, so are the Effects" (GNP: 173).

16. On some interpretations of Cavendish, this is because, in her view, nature's actions are always free. There is a considerable amount of debate, in the secondary literature, about the degree to which nature's actions can be called 'free'. See, for example, Detlefsen 2007 and McNulty 2018. We sidestep this issue here, since it is not pertinent to the aims of this paper.

17. Similarly, in the *Philosophical Letters*, Cavendish claims that traits like "Presumption, Pride, Vain-Glory and Ambition of man, [proceed] from the irregularity of nature" (PL: 138).

the preamble) she calls them “Happy and Miserable Worlds” (GNP: 200). That is, the ‘regular’ world is a “Happy” world, and the irregular world is a “Miserable” world. The implication, then, is that we happen to inhabit a world that sits somewhere between perfect happiness and perfect misery by virtue of the fact that it is partly regular and partly irregular.¹⁸ Moreover, by calling this world a ‘Purgatory’ world, as we have suggested, Cavendish appears to view this world as one in which its inhabitants are capable of moral improvement. For, as Cavendish suggests, in the absence of any irregularities, human beings are perfectly happy in the regular world and do not perform irregular actions, such as treachery or war (GNP: 206–207).

Another point worth noting is that despite using a theologically loaded term like ‘purgatory’ and introducing the notion of (perfectly) happy and miserable worlds, Cavendish professes *not* to be engaging in a theological discussion of heaven and hell. As she puts it, the worlds that she is concerned with here are *not* “Worlds as are for the reception of the Blessed and Cursed Humans, after their Resurrections” (GNP: 200). Rather, the parts of her mind are arguing about worlds that are somewhat like our own except that they are much happier or more miserable, while our own world sits between them as a ‘purgatory’. That is, as a place allowing for the improvement of “general happiness” (GNP: 207). What is also important to note is that these worlds, as well as our own, are all part of one “Body of Nature” (GNP: 193). In speculating about regular and happy, and irregular and miserable worlds, she is, thus, not making claims about supernatural realms, but worlds—i.e., regions of space and time—that are part of nature itself.¹⁹

Our contention is that the picture that emerges out of the *Grounds* Appendix is one on which, though it is by no means explicit, Cavendish’s views on regularity and irregularity have taken on, even if only in a loose sense, a *normative* dimension.²⁰ On our reading of the *Grounds* Appendix, Cavendish’s view is that we inhabit a ‘purgatory’ world that is partly regular and partly irregular and, perhaps, capable of improvement. *If* we inhabited a more regular world, like the

18. This would suggest that contrary to Leibniz (Mon: 345, 417) Cavendish does not think we inhabit the best of all possible worlds. This is a philosophically (and theologically) interesting implication of Cavendish’s view (and raises questions about the orthodoxy of her theological position), although we leave aside further discussion here. For more on the (un)orthodoxy of Cavendish’s theological views, see Stoneham & West 2023.

19. Thus, when Cavendish calls the perfectly regular world “heavenly” or “blessed” (GNP: A 3.2) this simply means that such a world is *heaven-like*, and not literally heaven, and as such offers ‘blessings’ in the sense of things that are beneficial to our happiness and welfare.

20. We are not the first commentators to suggest that Cavendish’s notions of regularity and irregularity are normative, but what is unique to our reading is the claim that the regular world in the *Grounds* Appendix provides a normative ideal. For further discussion of the connection between regularity/irregularity and normativity in Cavendish, see Detlefsen 2007 who argues that Cavendish uses regular (and irregular) in a normative sense. Boyle 2018: ch. 1 defends this interpretation against critics such as Cunning 2016 and Walters 2014.

perfectly regular world discussed in the Appendix, we would be happier, and less miserable. Thus, *if* we want to be happier, we should try to emulate the perfectly regular world. It seems unlikely that we could *fully* emulate the perfectly regular world since the irregularities we observe in our world, including our own human actions, are the result of “Irregularities of the Sensitive Parts” of nature itself (GNP: 207); something that is beyond our control.²¹ But that does not mean we cannot emulate the perfectly regular world in some sense, even if it is weakly, as a mere facsimile. On the balance of things, we think the textual evidence thus supports attributing to Cavendish the view that our world—a “Purgatory” world—is capable of being improved to some degree, and that the regular world discussed in the Appendix is intended as a normative ideal to help us to do so.

What kind of normative position, then, is Cavendish putting forward in the *Grounds* Appendix? On our reading, it is one on which ‘moral facts,’ facts about how we ought to behave (specifically towards the environment), are hypothetical, not categorical. There are facts about how humans ought to behave *if* they wish to attain a certain end; namely, happiness. Broadly speaking, then, on our reading, Cavendish can be thought of as holding what can be loosely characterized as an ‘Aristotelian’ approach to ethics.

Putting things this way helps situate Cavendish’s normative theory both in terms of what came before her (Aristotle’s ethics) and thinkers that would come much later—so-called ‘Neo-Aristotelian Naturalists’; twentieth-century meta-ethicists who claimed that ‘moral facts’ are grounded in facts about human nature. Our aim is not to suggest that Cavendish is, in any substantial sense an ‘Aristotelian’, nor do we want to suggest her views are influenced by Aristotle or subsequent Aristotelians. Nonetheless, thinking of Cavendish’s normative theory as something *like* a version of Aristotelianism helps clarify what we take her theory to look like.

Our case is also helped by the fact that there are further signs in Cavendish’s writing of what might be called an ‘Aristotelian’ approach to normativity. For the Aristotelian, the way that a creature ought to behave is determined by the nature of that creature. Humans, for example, (according to Aristotle) are rational creatures and thus *ought* to act rationally. In the *Philosophical Letters*, Cavendish

21. As an anonymous referee noted, to a certain degree, the happiness or misery of a world is determined by the degrees of rationality and sensitivity of that world on a fundamental level. There is thus a sense in which the happiness or misery of a world is pre-determined by, or baked into, the fundamental make-up of that world. But Cavendish also maintains that the way that the denizens of such worlds *behave* is also important. The passage where Cavendish lists the traits of the denizens of the miserable world—“Treachery, Slander, false Accusations, Quarrels, Divisions, Warr, and Destruction” (GNP: 207)—suggests that they are miserable *because* they exhibit such traits. Thus, even if we cannot possibly perfectly emulate or become the regular world, our actions, it seems, if they mimic those of the denizens of the regular world, can make us *happier*—even if not perfectly happy.

writes that “every Creature, if regularly made, hath particular motions proper to its figure” (PL: 184). Again, without wishing to draw any substantial connections to Aristotle, Cavendish does seem to hold that there is a “proper” way that creatures ought to behave. Furthermore, her claim is that this depends on the ‘figure’ of the creature which, for Cavendish, determines the kind of creature it is. And, in fact, Cavendish herself uses the language of what it is “natural” for creatures to do (GNP: 204). Our contention has been that in the *Grounds* Appendix Cavendish draws a connection between such claims about how creatures ‘ought’ to behave and happiness or misery. Creatures, including humans, *ought* to behave in certain ways, that is, *if* they wish to be happy. In Aristotelian terms, we might think of this as a claim about *flourishing*.²²

We have argued that in the *Grounds* Appendix Cavendish is putting forward a normative theory of what we can, or even must, do to attain more happiness and to avoid misery. The ‘moral facts’ that come out of this normative theory are facts about how we *ought* to behave if we are to be happy—perhaps even to ‘flourish’, in Aristotelian terms. How do we work out what those ‘moral facts’ look like? On our reading, Cavendish’s view is that, as denizens of a “partly Irregular, and partly Regular” world, we can learn something from the models provided by these *other* worlds—worlds that are more or less regular than ours. The next question that arises is: What do those ‘moral facts’ about how we ought to behave look like? We address that question in the next section.

3. Ecology in the Appendix to *Grounds*

In this section, we outline Cavendish’s description of the ecology of the regular world; specifically, her account of how humans, non-human animals, and plants relate to one another. In light of our argument in the previous section, our contention is that there are more than just descriptions of a merely possible world. Rather, Cavendish is making claims about how humans in *this* world ought to behave—*if* they wish to be happy or to ‘flourish’.

22. This ‘Aristotelian’ approach to happiness as something akin to flourishing alleviates a worry that one might have about Cavendish’s claim that altering our relationship to our environment will make us happier. One might worry that plenty of people who eat meat, hunt animals, or cut down trees for their own ends are perfectly happy. Thus, it seems as though the burden of proof is on Cavendish to show that avoiding such behaviours will lead to happiness. But if happiness is construed in terms of flourishing, then it can be thought of more in terms of acting in accordance with what is “proper” (PL: 184) to one’s nature and less as a claim about the subjective pleasure or happiness of individuals. Reading Cavendish this way is supported by the fact that she talks of actions that will “cause a general happiness” (GNP: 207), rather than the subjective happiness of an individual. In other words, one can *enjoy* an action even though it does not contribute to one’s overall happiness or flourishing. Thanks to an anonymous referee for raising this concern.

The first thing to note is that some of those changes in behavior—which would lead to an increase in regularity and thus in happiness—that Cavendish is prescribing are quite drastic. Putting forward what, at first glance at least, *sounds* like a normative claim, she explains that some parts of her mind “were of opinion, That it was natural for one Creature to subsist by another, and to assist each other; but not cruelly to destroy each other” (GNP: 204). The major part of her mind then goes on to flesh out this picture of the relations among humans, non-human animals, and plants in the regular world in more detail:

[T]hey might be assisted by the Lives of other Creatures, and not destroy their Lives; for Life could not be destroyed, though lives might occasionally be alter'd: but, some Creatures may assist other Creatures, without destruction or dissolution of their Society; as for example, The Fruits and Leaves of Vegetables, are but the Humorous Parts of Vegetables, because they are divisible, and can increase and decrease, without any dissolution of their Society; that is, without the dissolution of the Plant. Also, Milk of Animals, is a superfluous Humor of Animals [...] The same I say of the Fruits and Leaves of many sorts of Vegetable Creatures. (GNP: 204–205)

In the ecosystem of the regular world, creatures subsist on or are “assisted by” other creatures but do so *without* “the destruction or dissolution of their Society”. It is important, at this juncture, to say something about Cavendish’s use of the term ‘society’. She defines a society as “such Parts of Nature as are united into particular Creatures” (GNP: 205). For Cavendish, then, every individual *organism*—every human being, lion, or tree, for example—is a ‘society’: it is a part of nature that is made up of other, smaller parts of nature. So what Cavendish is saying, in this passage from the Appendix, is that in the ecosystem of the regular world, ‘creatures’ feed on (the produce of other) non-human animals and plants, but only insofar as their intervention does not lead to the “dissolution” of a particular ‘society’—i.e., of an individual organism. Put simply, creatures, including animals and humans, in the regular world might *eat* other animals and plants but not *kill* them.

In the passage cited above, Cavendish gives examples of what the non-destructive consumption of plants that she has in mind might look like. She suggests that humans and non-human animals in the regular world might eat the *fruits and leaves* of a plant but without pulling up its roots or destroying it. Fruits and leaves, she explains, are the “humorous” parts of a plant; they can be divided from the plant without the “dissolution of their [i.e., the plant’s] Society” (GNP: 205). In adopting this terminology, Cavendish seems to be suggesting that fruits and leaves of plants are akin to the humors of the human body, which traditionally were thought of in terms of the four humors of blood, phlegm, yellow bile, and black

bile.²³ A human body can survive the loss of some of its humors, just as a plant can survive the loss of some of its leaves and fruits. But also, Cavendish seems to think, just as a human body cannot survive the loss of all of one of its humors (e.g., all of its blood), a plant cannot survive the loss of *all* its fruits or leaves.²⁴

In other words, the ‘humorous’ parts of a plant, such as its fruit and leaves, can vary in quantity without leading to its ‘dissolution’ (i.e., without killing it). A plant, that is, can survive the loss of some, but perhaps not all, of its leaves or fruits. She also points to the example of milk, which she claims is a “superfluous Humor of Animals”. Again, her point is that these ‘parts’ of a non-human animal can be divided or taken from it without threatening the animal’s life. A little later, Cavendish claims that the same is true of eggs (GNP: 204). Concerning these ‘superfluous’ parts of an animal, Cavendish writes:

[A]ll the Parts of my Mind agreed unanimously, That Animals, and so Human Creatures, might feed on such sorts of Food, as aforesaid; but not on such Food as is an united Society: for, the Root and Foundation of any kind and sort of Creature, ought not to be destroyed. (GNP: 205)

This passage contains the most explicit reference to how humans in the regular world interact with other plants and non-human animals in their environment. Cavendish explains—again, using language that *sounds* normative and not just descriptive—that all non-human animals and human beings in this regular world “ought not” to feed on “such Food as is an united Society” (GNP: 205). In other words, while humans and non-human animals in the regular world may consume the fruit or leaves of a plant, or the milk and eggs of another (non-human) animal, they do not and “ought not” to kill and eat other (non-human) animals, or even plants, whole. Societies—i.e., individual organisms—within the regular world, do not destroy the “Root and Foundation” of other societies. For this reason, Cavendish explains that in the regular world

a Lyon, Leopard, or Wolf ... would be as harmeless as Sheep in this; and all Kites, Hawks, and the like Ravenous Birds, would be as harmless as those Birds that only feed on the Berries, and Fruit of the Earth. (GNP: 204)

Her comments also indicate that humans, too, would be just as “harmless”, in that sense at least.

23. Thanks to Deborah Boyle for this suggestion.

24. It is worth noting that this position seems compatible with the idea that humans or non-human animals might eat some parts of another (non-human) animals, if that does not lead to the latter’s death. It will become evident, however, that Cavendish believes that predatory behaviour would not take place in a perfectly regular world.

We have found, then, that in part three of the Appendix, Cavendish depicts an ecology—i.e., a set of relations between humans, non-human animals, and plants—that is radically different from those that we find here, in our world. In turn, if Cavendish intends for the ecology of the regular world to be an ideal that denizens of our ‘purgatory’ world should strive for, her normative claims are also radical. In the next section, we provide further support for our reading of Cavendish as putting forward a normative position by responding to an objection in the form of Deborah Boyle’s case for thinking that the regular world is a mere fiction or fancy of the imagination.

4. The Depth of Cavendish’s Ecology

In this section, we address a reading of the *Grounds* Appendix that contradicts our contention that the regular world is intended to serve as a normative ideal for humans in this world. Deborah Boyle (2018) argues that the descriptions of the regular world in the *Grounds* Appendix cannot be intended to serve as a normative ideal for our world, because that would imply that predatory non-human animals, like lions and wolves, ought to change their behavior. Our response to Boyle’s argument is twofold. First, we argue that even if this premise is granted—that Cavendish’s view cannot plausibly be that non-human animals ought to change their behavior—it still does not follow that the regular world is not intended to be a normative ideal that informs *human* action. Second, we offer some reasons for doubting the truth of this premise. That is, we provide some reasons for thinking that Cavendish might well have intended for the regular world to serve as a normative ideal *for all creatures*.

In her discussion of the *Grounds* Appendix, Deborah Boyle accepts that on the surface at least, Cavendish’s descriptions of the regular world *seem* to also contain normative claims applicable to denizens of our own world. She writes: “it seems that the perfectly regular world described in the Appendix should be a model for creatures living in *our* world to emulate as much as we can” (2018: 203). However, Boyle goes on to reject this reading of Cavendish’s ecological claims in the Appendix, ultimately concluding that “[i]t does not seem clear ... that what Cavendish says would occur in the perfectly regular world described in the Appendix should serve as a guide for human action in this world” (2018: 205).

Boyle puts forward two reasons to dismiss the idea that the regular world is a model for how inhabitants of our world ought to behave towards their environment. First, Boyle (2018: 215) argues that if Cavendish were providing a model for how denizens of our world ought to behave, then she would be committed to the view that predatory animals, like lions and wolves, *ought not to be predators*. In Boyle’s words, they “would not be carnivorous at all, or perhaps only eat

animals that have already died at their ‘natural time’” (2018: 203).²⁵ According to Boyle, this is too implausible a view to attribute even to Cavendish:

[I]t seems absurd to claim that every predator in our world is acting irregularly and unnaturally [...] killing and eating prey is surely natural for such animals as lions and wolves, and it would be very peculiar if Cavendish were denying this. (2018: 203)

Boyle is presumably reading Cavendish with something like the principle of charitable interpretation in mind and on that basis maintains that we ought not to interpret Cavendish in such a way that she is stuck with this problem: an ‘absurd’ conclusion.

Boyle suggests that in fact Cavendish, more generally in her writing, does not treat imagined worlds as ideals, as a solution to this problem. Boyle writes: “[o]ne solution to this problem is to deny that Cavendish means that the perfectly regular world described in *Grounds* is, in fact, an ideal to which our world should aspire” (2018: 203). And, even better, Boyle continues, there is textual evidence that Cavendish does *not* think of imagined worlds as ideals. As a case in point, she uses the example of the *Blazing World*, which contains immaterial spirits; entities which, in Cavendish’s more strictly philosophical writing, cannot be said to exist in nature since nature is entirely material (204).²⁶ Given that the alternative is to attribute to Cavendish what Boyle thinks of as a problematic view, she contends that, like the blazing world in Cavendish’s novel, we should take the regular and irregular worlds of the *Grounds* Appendix to be “fictional fancies of the imagination” (204).

It is worth noting the specific motivating factors behind Boyle’s conclusion that we should not take the ecological claims in part three of the *Grounds* Appendix to be normative. First, there is the idea that Cavendish could not plausibly believe that predators, in our world, should stop preying on other (non-human) animals.²⁷ Second, is the idea that the regular world is not intended to be an ideal. In other words, the regular world is just fictional fancy like the *Blazing*

25. In part three, chapter nine of the Appendix, the parts of Cavendish’s mind discuss how long the ‘natural’ length of a creature is. They conclude that “a Human Creature, in the Regular World, might last as long as the Productions did not oppress or burden that World—for that would be irregular –, but how long that might be, they could not possibly conceive or imagine” (GNP: 205). The point seems to be that, in the regular world, creatures live as long as they can without affecting the overall regularity of that world.

26. For an explicit statement of Cavendish’s materialism about nature, see (OEP: 137).

27. Instead, Boyle explains that, on her reading, the predators of the regular world, though they share names like ‘lion’ and ‘wolf’, are no more the *same species* as lions and wolves in our world, than Twin Water on Twin Earth is the same substance as Water in our world (in Hilary Putnam’s famous thought experiment) (2018: 204, fn 85).

World.²⁸ Third, and most importantly for our present concerns, is an implicit contention that if *any* elements of the regular world described in the Appendix cannot be plausibly construed as normative claims pertaining to our world (such as Cavendish's claims about lions and wolves), then *none* of them can be.

In what follows, however, we contest Boyle's reading. For the moment, we will take it as a given that Boyle is right that it is implausible to attribute to Cavendish the view that non-human animals like lions and wolves in our world *ought not to* prey on other animals. However, even granting Boyle this premise, we contest her conclusion by arguing that there is reason to believe that *some* elements of the ecology of the regular world might nonetheless be intended to be normative; specifically, those pertaining to humans. We make the case for this reading by offering two reasons to think that, for Cavendish, humans have a unique moral responsibility to improve their relationship with the environment, while other organisms do (or may) not, before returning to the question of whether Cavendish's normative claims extend beyond humans at the end of the section.

In the *Grounds*, Cavendish claims that humans have "different Knowledg[e] from Beasts, Birds, Fish, Flies, Worms, or the like" (GNP: 148). She also suggests, elsewhere in her writing, that humans have greater knowledge—thanks to their shape (e.g., P&F: 74).²⁹ Even so, she is keen to emphasize that this does not imply that human knowledge should be thought of as *better*—or that humans are wiser. As she puts it, even though different kinds of creatures have "different Knowledges [...] none can be said to be *least knowing*, or *most knowing*" (GNP: 148). And she adds a little later that "Man may have a different Knowledg[e]" compared to other animals, "and yet be no wiser than those sorts of Animal-kinds" (GNP: 148). It is clear, then, that Cavendish does think that humans may have more knowledge in terms of quantity. However, this, for her, does not imply that humans can be said to be 'wiser' or more intelligent—that is, to have a qualitatively *better* understanding of the world around them than, e.g., non-human animals. She is in that sense, as we put it in §1, an 'egalitarian' about the different kinds of knowledge dispersed throughout nature. Nonetheless, Cavendish does think human knowledge is *different* from the knowledge of other creatures.

In the *Grounds*, Cavendish maintains that there are "different Knowledges" that are "proper" to different "kind[s]" of creature(s). In the *Observations*, she provides an explanation of why that is the case:

28. For readings of the *Blazing World* that challenge this commitment, i.e., where this work is treated as endorsing some ideals about, e.g., the structure of a society, see Leslie 1996 or Trubowitz 1992.

29. As Boyle (2018: 194–195) points out, Cavendish's appeal to shape as an explanation for the more extensive human knowledge is closely connected to the human ability to speak and to the greater range of motion and action the human body allows for. We will return to this point later in this section.

[A]s the figures and parts alter by their compositions and divisions, so do both interior and exterior particular knowledges; for a tree, although it has sensitive and rational knowledge and perception, yet it has not an animal knowledge and perception; and it if should be divided into numerous parts, and these again be composed with other parts, each would have such knowledge and perception, as the nature their figure required. (OEP: 170–171)³⁰

Cavendish explains here that while *all* parts of nature have knowledge—which follows from her commitment to all parts of nature being composed of rational and sensitive, as well as inanimate, matter (e.g., OEP: 34)—different *kinds* of creatures have different kinds of knowledge, dependent upon the “figure” or shape of that creature. In other words, the way that the matter that composes an individual creature is *structured*—which, in turn, is determined by how the material parts of that creature *move*—determines the kind of knowledge it can possess. As Boyle puts it: “Because different types of creatures and their parts move in different ways, and the knowledge that each creature or part has depends on its motion, the knowledge possessed by humans differs from that possessed by beasts, birds, fish, worms, and the like” (2018: 192). The shape or figure of a human body, then, determines the extent *and* kind of knowledge that a human being can possess, compared to other kinds of creatures whose bodies are shaped differently.

While Cavendish has thus provided an explanation of *why*, in her view, human knowledge is different from the knowledge possessed by other creatures, she does not spell out *the ways* in which our knowledge is different. As Boyle (2018: 191) points out, Cavendish’s views stand in contrast to the Cartesian account of the difference between humans and non-human animals. Unlike Descartes, Cavendish does not maintain that humans are uniquely rational creatures. In fact, her metaphysics entails that all organisms—and, moreover, all parts of nature whatsoever—possess life, knowledge, and perception (1668: 15). Thus, Cavendish’s view that humans have ‘different’ knowledge from other organisms should not be cashed out in terms of thinking that humans are uniquely *rational*. However, there is reason to believe that Cavendish might think of humans as, if not uniquely rational, then at least more *speculative* or *imaginative* than other organisms. Indeed, one might think of the parts of the *Grounds Appendix* that this paper has focused on (i.e., those pertaining to ‘regular’ and ‘irregular’ worlds) as a testament to the idea that humans are speculative or imaginative creatures. We have the ability to go beyond what Cavendish elsewhere refers

30. This is consistent with Cavendish’s claim, in *Philosophical Fancies*, that different creatures have different knowledge “by reason of their different Figures ... yet it is Knowledge” (PhF: 54–55), discussed in section one. For more on Cavendish’s theory of perception, see West 2022.

to as “sense and reason” (OEP: 14), which involves making observations of the world around us and deriving explanations for what we observe, and can actually speculate about worlds that may or may not exist. And we have the capacity to write books—whether they be philosophical or fantastical—about those speculations, with the aid of our imagination. She may be skeptical of the Cartesian idea that humans are uniquely language-using animals (PL: 114; Boyle 2018: 190), but Cavendish would be hard pressed to deny that we are the only creatures to write books. As David Cunning (2018: 198) has argued, Cavendish’s endorsement of the imagination is “a quite different approach” to the one we find in many of her contemporaries, who typically saw the imagination as a distraction from the inquiries of the intellect. Cunning refers to passages from *The Blazing World* where Cavendish makes it clear that all of us (humans, that is) have the ability to “create Worlds of their Own” by employing what she calls their “Minds, Fancies or Imaginations” (BW: 159–160). As such, while Cavendish does not explicitly state that humans are uniquely speculative or imaginative creatures, it seems plausible to interpret her claim that humans have “different” knowledge to other organisms (GNP: 148) in terms of the idea that humans are able to use their imagination to speculate about other worlds.³¹ This could provide an explanation of why the regular world of the *Grounds* Appendix provides a normative model that ought to be followed by humans *uniquely*: because, according to this way of understanding her, we are the only organisms able to imagine this world and thus the only creatures that have access to the normative ideal it provides.³²

A second reason for thinking that Cavendish’s claims about the ecology of the regular world take on a specific normative dimension for humans draws on her claims about humanity’s desire for fame. Cavendish’s view is that humans, uniquely, desire fame. In the *Worlds Olio*, for example, she writes that: “Man strives after Fame, which Beasts do not” (WO: 272; see also Boyle 2018: 194, 196). The important point, here, is that this desire for fame is something that, for Cavendish, separates humans from other animals. And there is evidence

31. There is textual evidence that Cavendish thinks human knowledge is *different* to that of other creatures. Cavendish also claims that human knowledge is essentially figuristic (GNP: 93–94). Perhaps, then, Cavendish’s view is that the knowledge of other creatures is *not* figuristic. This could provide another explanation of how human knowledge differs from that of other creatures, including non-human animals. Many thanks to an anonymous referee for offering this further suggestion.

32. This reading is consistent with Boyle’s claim that it would be “absurd” to think Cavendish believes that lions and wolves, in our world, ought not to hunt prey (2018: 203). As the discussion in this section has shown, there is reason to believe that Cavendish may not think that lions and wolves (or any other non-human animals) have the kind of knowledge that would allow them to reflect on such an ideal, deliberate over it, and choose to alter their behavior in such a way as to try and emulate it—because they are not able to *imagine* it. Thus, the regular world does not constitute a (normative) ideal for such creatures.

that this view plays a role in her theorizing about the happiness of the regular world in the *Grounds* Appendix. At the end of part three of the Appendix (chapter twelve), Cavendish writes:

The Happiness that Human Creatures have in the *Regular World*, is, That they are free from any kind of Disturbance, by reason there are no Irregular Actions; and so, no Pride, Ambition, Faction, Malice, Envy, Suspition, Jealousie, Spight, Anger, Covetousness, Hatred, or the like; all which, are Irregular Actions among the Rational Parts: which occasions Treachery, Slander, false Accusations, Quarrels, Divisions, Warr, and Destruction[.] (GNP: 207)

Cavendish's point here is that the humans of the regular world are happy because they do not suffer from pride, ambition, malice, envy, and so on. This means that they do not engage in treacherous, slanderous, and (most relevant for our present concerns) destructive action. This seems especially pertinent given Cavendish's claim that in the regular world, humans live in accordance with the idea that "the Root and Foundation" of an organism "ought not to be *destroyed*" (GNP: 205, our emphasis).³³ She does not mention fame, explicitly, but references to pride and ambition do seem to connect this passage to her criticism of humanity's desire for "bastard fame" (WO: 1) or "Infamie" (WO: 2) elsewhere (e.g., WO: 51; PL: 138). Perhaps, then, it is in this sense that the humans of the regular world provide a model for us: we, too, should strive to free ourselves from feelings of pride and ambition and 'purify' our desire for fame towards a striving for "honour" (WO: 50).³⁴ This idea would, again, very much be line with Cavendish's description of our world as a 'purgatory.'

However, one might still push back and think that it might seem difficult to construe these claims about the humans of the regular world as a model for humans in this world, since the absence of feelings of pride, ambition, and the like, seems to follow from the fact that, as Cavendish puts it, "there are no Irregular Actions" in the perfectly regular world, where 'irregular actions' means the actions or motions of rational and sensitive matter rather than the 'macroscopic' actions of, e.g., humans themselves. Of course, there *are* irregular actions or motions of matter in our "partly Irregular ... partly Regular" purgatory world

33. This also ties in with Cavendish's point that all beings in the regular world "are of long life" and will not die "before their natural time" because there are not irregularities in this world (GNP: 205). Thus, the 'major part' of Cavendish mind concludes that if there is death it will not be an unhappy one (GNP: 208–209).

34. Or rather, we need to purify our self-love which drives this desire either in a virtuous or vicious direction, (see, e.g., SL: 163). For more on the connection between the human desire for fame or infamy to self-love and the latter's corruption see Boyle (2018: 134–137).

(GNP: 201)—and so, one might argue, humans will inevitably have feelings of pride, ambition, and so on. On the other hand, though, it does seem that even if, as denizens of a purgatory world, we cannot entirely rid ourselves of *feelings* like pride and ambition, we can (perhaps in virtue of the distinctive imagination we have) decide whether or not to *act upon* them.

In support of this interpretative claim, consider the fact that Cavendish describes pride, ambition, and so on as “Irregular Actions among the Rational Parts” that they “*occasion* Treachery, Slander ... Warr, and Destruction” (GNP: 207, our emphasis). The language of ‘*occasioning*’ here suggests that there is nothing inevitable about, e.g., my feeling of ambition and my action of engaging in war—particularly if we consider that Cavendish also emphasizes the “*liberty* of the Rational parts” (GNP: 69).³⁵ This strongly suggests that, for Cavendish, we have some degree of control over whether and how we act upon certain feelings. For instance, even if I choose to act on a feeling of ambition, there is still a difference between simply having that feeling and actually going so far as to (e.g.,) slander someone or go to war.³⁶ In short, if we have feelings such as pride or ambition, we still have the possibility to decide whether we engage in actions such as treachery, slander, or war and destruction (GNP: 207).

Thus, one can extract from the passages above a normative claim that applies to humans in our world, which is consistent with the reading of Cavendish we have defended so far: if you want to be happier, and more like the humans of the regular world, do your best to refrain from having feelings of pride and ambition. Or, if you have those feelings, refrain from acting upon them. We might also add that, on this view, you should try to refrain from desiring infamy or ‘bastard fame’—or, at the very least, avoid indulging in that desire. This would entail the further normative claim that we ought not to perform *destructive* actions, no matter the motives. Bearing in mind the evocative descriptions of the pain and

35. For readings of Cavendish on which nature’s actions are free, and on which parts of nature ‘*occasion*’ one another to act rather than ‘*causing*’ one another, by means of a necessary connection, see Detlefsen 2007 and Detlefsen 2006, respectively.

36. Nonetheless one might worry that we are imposing a distinction on Cavendish here, between feelings and actions, that cannot be found in her writings. (Thanks to an anonymous referee for raising this concern.) That might be true inasmuch as Cavendish does not explicitly make such a distinction. But, as we hope to have shown, there are *prima facie* good reasons to assume that Cavendish, at least implicitly, does employ such a distinction. This would, moreover, make sense because it would be implausible if Cavendish would need to hold that every feeling leads to an action. For instance, it seems absurd if Cavendish needs to claim that I will hit someone every time I want to. Thus, while we think it is right to be cautious about imposing distinctions on Cavendish (or any other thinker) in general, we do not take the distinction between having feelings and acting upon them to be especially contentious—especially considering that there is textual evidence that suggests such a distinction. Although it has to be admitted that the existence of such a distinction raises interesting questions—which go beyond the confinements of this paper—concerning the degree of (voluntary) control we, as parts of nature, can be said to enjoy.

cruelty inflicted on nature by humans in Cavendish's poetry, it is not implausible to think that she has the mistreatment of nature in mind when she talks of destructive action in this passage from the *Grounds Appendix*.

Thus far in this section, we have accepted Boyle's claim that it is implausible to attribute to Cavendish the view that non-human animals, like lions and tigers, ought to change their behavior. We have shown that even if this premise in Boyle's argument is granted, there are still reasons to think that Cavendish's view is that *humans* ought to change their behavior. However, at this point, one might argue that there is problem with this reading of Cavendish. Our attempt to identify differences between humans and other creatures, one might argue, is in tension with Cavendish's 'egalitarian' approach to humanity's relationship with the rest of nature, that we discussed in §1.³⁷

In several places in her writing, Cavendish claims that it is human folly—the product of vanity or pride—to think that we are 'above' the rest of nature. And there are places in her writing where Cavendish even denies that the imagination is something unique to humans. In the *Worlds Olio*, for example, (in a section on 'the Imagination of Man and Beast'), Cavendish writes:

ONE Man may know what Imagination another Man hath, by The relation of Discourse; but Man cannot know what Imaginations Beasts have, because They can give no relation to Mans Understanding, for want of Discourse. Wherefore Beasts may have (for ought Man knows) as strange and as fantastical Humours, Imaginations, and Opinions; and as clear Speculations as *Men*[.] (WO: 271)

Her point here is that we cannot know for sure whether non-human animals are able to imagine and speculate about the things we imagine or speculate about because of the former's "want for Discourse". That is, their inability to engage in language usage in a way that is comprehensible to us. Yet, she claims, *for all we know they might*. Indeed, we can extrapolate from this passage the claim that other creatures may well imagine other *worlds*—like those described in the *Grounds Appendix*—just like we do.

Clearly, passages like this are in tension with the reading of Cavendish we developed in this section, in response to Boyle, on which it is humanity's imaginative capacities that sets us apart from other creatures. This might well look like a problem for our reading of Cavendish more generally. But note that it was only necessary to identify differences between humans and other creatures *because* we granted Boyle's premise that we cannot plausibly attribute to Cavendish the

37. Again, consider her poems like 'The Hunting of the Hare' (P&F, 110–113) and 'The Hunting of the Stag' (P&F, 113–116), which communicate the message that non-human animals and plants are capable of suffering just as much as humans.

view that non-human animals, like lions and tigers, ought to change their behavior. Perhaps, in light of this tension, we ought *not* to grant Boyle that premise.

If Cavendish's view is that other creatures *do* have imaginations capable of imagining or speculating about other worlds, just like we do, then it no longer seems implausible to suggest that, in her view, other creatures, including lions and tigers, have access to normative ideals that they ought to strive to follow.³⁸ Certainly, it still sounds strange to suggest that lions and tigers are not only capable of, but are obliged to, alter their predatory behavior. But that is only because, ordinarily, we do not take the egalitarian approach to the rest of nature that Cavendish adopts. After all, it also sounds strange, one might argue, to suggest that all parts of nature possess life, perception, and knowledge—but that does not stop us attributing that view to Cavendish. The 'peculiarity' of a claim, to adopt Boyle's terminology (2018: 13), is not necessarily a barrier to it being something Cavendish is committed to. The fact that a view seems counter-intuitive to us is, at least on its own, not a reason to refrain from attributing it to an early modern philosopher, least of all Cavendish who was, in many ways, an unorthodox thinker.³⁹ Ultimately, then, our contention is that while the objection presented by Boyle's interpretation of Cavendish, which rests on the premise that it is implausible to think that predatory animals ought to change their behavior, can be met, the objection *need not* be met since it is also plausible, given Cavendish's egalitarian approach to humanity's relationship with nature, that she thinks that the regular world is a normative ideal that *all* creatures ought to follow—if they wish to be happier.

Conclusion

In this paper, we have argued that Cavendish is committed to a 'deep ecological' worldview; one on which humans should alter their relationships with the rest of nature such that nature is treated as something with intrinsic, and not just instrumental, value. We have thus corroborated Cunning's suggestion that her views, in some sense, anticipate "contemporary movements in deep ecology and environmental ethics" (Cunning 2022: §1). However, the notion of 'anticipation', here, should be conceived of very loosely. Our contention is not that Cavendish's views closely resemble, or bear any causal relation to, contemporary deep ecological

38. This is consistent with Cavendish's claim, in *Worlds Olio*, "there is no Virtue nor Vice, as Men call them, but may be found in other Creatures as well as Man" (WO: 277).

39. To put this in more contemporary terms, our point is that it is not appropriate to respond with an 'incredulous stare' when one is engaging with early modern philosophers—least of all, Cavendish.

worldviews.⁴⁰ And we are not suggesting that her ‘deep ecology’ was a central feature of her philosophical system. The same is true of her ‘naturalism’ about moral facts. We have argued that, for Cavendish, ‘moral facts’—specifically, facts about how we ought to interact with our environment—are hypothetical facts about how we ought to behave if we wish to be happier. For this reason, in §2, we argued that Cavendish’s normative theory can, loosely speaking, be characterized as an ‘Aristotelian’ one. It is ‘Aristotelian’ to the extent that there is a proper way for humans to behave and that, if they do so, they will attain happiness; or, in Aristotelian terms, ‘flourishing.’ Our contention has been that, when it comes to the environment, Cavendish’s view is that the proper way for us to behave is to treat the rest of nature as something of intrinsic value, not as a means towards our own ends. Specifically, based on the model provided by the regular world described in the *Grounds* Appendix, this means not destroying the root and foundation of another creature (GNP: 205). It is not clear that this constitutes a full-blown commitment to vegetarianism—and certainly it is not an endorsement of veganism.⁴¹ But Cavendish clearly thinks we ought not to eat non-human animals or plants cruelly or wastefully.⁴² We then considered Boyle’s reading of the ecology of the *Grounds* Appendix, which proceeds on the assumption that Cavendish cannot plausibly have thought that other creatures ought also to change their behavior. Even granting this premise, we demonstrated that our reading can get around this objection. Ultimately, though, we suggested that this premise is in tension with Cavendish’s ‘egalitarian’ approach

40. Although Cavendish’s view that Nature is a single (infinite) whole with some degree of (free) agency does bear some interesting parallels to ‘Gaia theory’ which originated in the work of James Lovelock (e.g., 2016) and proposes that the earth or Nature is a single, organic entity to which we bear a moral responsibility.

41. Note that we do agree with Boyle on one thing: it is not clear—not even on this reading of her—that Cavendish is endorsing vegetarianism or even veganism (Boyle 2018: 200). While lions may need adjust their diet and become omnivores, Cavendish’s view does not entail that they cannot eat any meat whatsoever. For instance, it would seem admissible for lions (and humans) to eat the meat of animals that died of ‘natural causes.’ Also, there might be instances where it is necessary to sacrifice a few for the well-being of many. For instance, even though Cavendish believes that humans cannot infect non-human animals with the plague and vice versa—except via the consumption of their meat—she argues that it can be “wise” to kill dogs and cats when a human plague starts because their flesh may be affected, which in turn may lead to more infections, even amongst humans (PL: 394–395). This latter point is consistent with her overall view because a spread of the plague would negatively affect the creaturely population at large, increase irregularities and diminish the chances to ‘flourish.’ We thank an anonymous referee for pointing out this passage and this potential tension in Cavendish’s view here.

42. As an anonymous referee pointed out to us, this might also align Cavendish’s view with that of Pierre Gassendi—a thinker she would most likely have been acquainted with during her time in Paris and via conversation with her brother-in-law, Charles. Gassendi held a view of ‘kataktematic’ pleasure—pleasure that encompassed the avoidance of pain and surplus effort, and entailed avoiding the unnecessary act of killing animals for the sake of consuming their flesh. For discussion, see Begley (2020, 2023).

to understanding humanity's relationship with our environment. Therefore, as strange as it might sound, we argued, there are reasons to think that Cavendish's normative claims apply not only to humans but to all creatures.

If nothing else, it should now be clear that there are strong reasons to think that the *Grounds* Appendix is of great significance to Cavendish's views on the environment and her place within the history of environmental ethics. The third part of *Grounds* Appendix in particular not only provides further evidence that Cavendish thought deeply about humans' relationship with their environment, building on her engagement with such issues in her poetry, but also that she believed that humans *ought* to change those relationships for the better. If Cavendish is right, then we ought to think seriously about how we interact with our environment. We do not need to, and thus *ought* not to, kill or destroy non-human animals or plants to sustain ourselves. As such, we ought to limit the degree to which we inflict harm on other organisms for the sake of our own gratification. What's more, if Cavendish is right, then we will in fact become happier as a result (in Aristotelian terms, we will 'flourish'), by leading lives that more closely resemble those of the denizens of the regular world.

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References

Primary Sources

PhF	Cavendish, Margaret (1653). <i>Philosophical Fancies</i> . Printed by T.R. for J. Martin and J. Allestrye.
P&F	Cavendish, Margaret (1654). <i>Poems and Fancies</i> . Printed by T.R. for J. Martin and J. Allestrye.
PL	Cavendish, Margaret (1664). <i>Philosophical Letters</i> .
GNP [followed by 'A' if citing the Appendix.]	Cavendish, Margaret (1668/2020). <i>Grounds of Natural Philosophy</i> . Anne M. Thell (Ed.). Broadview Press.

OEP	Cavendish, Margaret (1668/2001). <i>Observations upon Experimental Philosophy</i> . Eileen O'Neill (Ed.). Cambridge University Press.
BW	Cavendish, Margaret (1668/2003). <i>The Description of a New World, Called the Blazing World</i> , in Susan James (Ed.), <i>Margaret Cavendish: Political Writings (1–100)</i> . Cambridge University Press.
SL	Cavendish, Margaret (1664/2004). <i>Sociable Letters</i> . James Fitzmaurice (Ed.). Broadview Press.
WO	Cavendish, Margaret (1655). <i>The Worlds Olio</i> . Printed for J. Martin and J. Allestrye.
Mon	Leibniz, Gottfried Wilhelm (1714/1898). <i>The Monadology and Other Philosophical Writings</i> . Robert Latta (Ed. & Trans.). Oxford University Press.

Secondary sources

- Begley, Justin (2020). Pierre Gassendi and the Humanist Case for a Vegetarian Diet. In Haara Heikki, Stapelbroek Koen and Immanen Mikko (Eds.), *Passions, Politics and the Limits of Society* (75–88). De Gruyter.
- Begley, Justin (2023). Pierre Gassendi (1592–1655): Vegetarianism and the Beatific Vision. In Andrew Linzey and Clair Linzey (Eds.), *Animal Theologians* (25–43). Oxford University Press.
- Bowerbank, Sylvia (2004). *Speaking for Nature: Women and Ecologies of Early Modern England*. John Hopkins University Press.
- Boyle, Deborah (2018). *The Well-Ordered Universe: The Philosophy of Margaret Cavendish*. Oxford University Press.
- Cunning, David (2018). Margaret Cavendish on the Metaphysics of Imagination and the Dramatic Force of the Imaginary World. In Emily Thomas (Ed.), *Early Modern Women on Metaphysics* (188–210). Oxford University Press.
- Cunning, David (2022). Margaret Lucas Cavendish. In Edward N. Zalta and Uri Nodelman (Eds.), *The Stanford Encyclopedia of Philosophy*. <<https://plato.stanford.edu/archives/win2022/entries/margaret-cavendish/>>
- Detlefsen, Karen (2006). Atomism, Monism, and Causation in the Natural Philosophy of Margaret Cavendish. In Daniel Garber and Steven Nadler (Eds.), *Oxford Studies in Early Modern Philosophy Vol. 3* (199–240). Oxford University Press.
- Detlefsen, Karen (2007). Reason and Freedom Margaret Cavendish on the Order and Disorder of Nature. *Archiv für Geschichte der Philosophie*, 89(2), 157–191.
- Devall, Bill (1980). The Deep Ecology Movement. *Nat. Resources J.*, 20, 299–322.
- Duncan, Stewart (manuscript). Margaret Cavendish, Environmental Ethics, and Panpsychism Accessed at: <https://philpapers.org/archive/DUNMCE.pdf>
- Frey, Jennifer (2019). Neo-Aristotelian Ethical Naturalism. In Tom Angier (Ed.), *The Cambridge Companion to Natural Law Ethics: Part II—The Revival of Natural Law Ethics* (92–110). Cambridge University Press.

- Leslie, Marina (1996). Gender, Genre and the Utopian Body in Margaret Cavendish's *Blazing World*. *Utopian Studies*, 7(1), 6–24.
- Lewis, David K (1986). *On the Plurality of Worlds*. Blackwell.
- Lovelock, James (2016). *Gaia: A New Look at Life on Earth*. Oxford University Press.
- McNulty, Michael Bennett (2018). Margaret Cavendish on the Order and Infinitude of Nature. *History of Philosophy Quarterly*, 35(3), 219–240.
- O'Neill, Eileen (2001). Introduction. In O'Neill Eileen (Ed.), *Margaret Cavendish, Duchess of Newcastle: Observations upon Experimental Philosophy*. *Cambridge Texts in the History of Philosophy* (x–xxxvi). Cambridge University Press.
- Oxford English Dictionary online (n.d.). "purgatory, adj." Retrieved from https://www.oed.com/dictionary/purgatory_adj. Oxford University Press.
- Smith, Justin E. H (2022). *The Internet Is Not What You Think It Is: A History, A Philosophy, A Warning*. Princeton University Press.
- Stoneham, Tom & West, Peter (2023). The Unorthodox Margaret Cavendish. In Lisa Shapiro and Karen Detlefsen (Eds.), *The Routledge Handbook of Women and Early Modern European Philosophy* (435–449). Routledge.
- Suzuki, Mihoko (2021). Thinking Beings and Animate Matter: Margaret Cavendish's Challenge to the Early Modern Order of Things. In M. E. Weisner-Hanks (Ed.), *Challenging Women's Agency and Activism in Early Modernity* (183–206). Amsterdam University Press.
- Trubowitz, Rachel (1992). The Reenchantment of Utopia and the Female Monarchical Self: Margaret Cavendish's *Blazing World*. *Tulsa Studies in Women's Literature*, 11(2), 229–245.
- Walters, Lisa (2014). *Margaret Cavendish: Gender, Science, and Politics*. Cambridge University Press.
- West, Peter (2022). Margaret Cavendish on conceivability, possibility, and the case of colours. *British Journal for the History of Philosophy*, 30(3), 456–476.
- Whitaker, Katie (2003). *Mad Madge: The Extraordinary Life of Margaret Cavendish, Duchess of Newcastle, The First Woman to Live By Her Pen*. Basic Books.