



Margaret Cavendish on conceivability, possibility, and the case of colours

Peter West

To cite this article: Peter West (2022) Margaret Cavendish on conceivability, possibility, and the case of colours, *British Journal for the History of Philosophy*, 30:3, 456-476, DOI: [10.1080/09608788.2021.1998762](https://doi.org/10.1080/09608788.2021.1998762)

To link to this article: <https://doi.org/10.1080/09608788.2021.1998762>



Published online: 18 Nov 2021.



Submit your article to this journal [↗](#)



Article views: 101



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)

ARTICLE



Margaret Cavendish on conceivability, possibility, and the case of colours

Peter West

Department of Philosophy, Durham University, Durham, UK

ABSTRACT

Throughout her philosophical writing, Margaret Cavendish is clear in stating that colours are real; they are not mere mind-dependent qualities that exist only in the mind of perceivers. This puts her at odds with other seventeenth-century thinkers such as Galileo and Descartes who endorsed what would come to be known as the ‘primary-secondary quality distinction’. Cavendish’s argument for this view is premised on two claims. First, that colourless objects are inconceivable. Second, that if an object is inconceivable then it could not possibly exist in nature. My aim in this paper is to explain why Cavendish accepts both premises of this argument. However, the repercussions of this paper go much further than just explaining why she thinks colourless objects cannot exist in nature and the upshots are twofold. First, it provides new insights into the fundamental role that perception plays in Cavendish’s metaphysics. While Cavendish’s view that all of nature perceives is well-established, I show that Cavendish is also committed to the view that all of nature is perceivable. Second, it provides the first in-depth discussion of Cavendish’s modal epistemology and her reasons for thinking that inconceivability entails impossibility (in nature).

ARTICLE HISTORY Received 18 March 2021; Revised 02 June and 17 August 2021; Accepted 1 October 2021

KEYWORDS Margaret Cavendish; colour; conceivability; possibility; perception

Introduction

Throughout her philosophical writing, Margaret Cavendish is clear in stating that colours are real; they are not mere mind-dependent qualities that exist only in the mind of perceivers. This puts her at odds with other seventeenth-century thinkers such as Galileo and Descartes who endorsed what would come to be known as the ‘primary-secondary quality distinction’.¹

CONTACT Peter West  westp@tcd.ie

¹The primary-secondary quality distinction was later endorsed by natural philosophers such as Robert Boyle and was most famously articulated (after Cavendish’s death) by Locke in his *Essay Concerning Human Understanding* (henceforth: ECHU). Locke contrasts the qualities of objects that are “utterly inseparable from the body, in what state soever it be” and which “the mind finds inseparable from every particle of matter” (ECHU 2.8.9), from those qualities “which in truth are nothing in the objects themselves, but powers to produce various sensations in us” (ECHU, 2.8.10).

According to these thinkers, the physical (or ‘primary’) qualities of objects (such as size, shape, and surface texture) exist externally to the mind while colours *as they are presented to us in experience* are their mind-dependent effects. To borrow an example from Galileo, just as we would not say the ‘ticklishness’ of a feather really exists independently of the mind, these thinkers argue we should not believe that colours do either (Galileo, *Essential*, 185). Throughout her philosophical writings, Cavendish rejects this distinction, maintaining instead that colours are inseparable from, and therefore just as real as, the physical qualities of objects like their size and shape.

In *Observations upon Experimental Philosophy* (published in 1666),² Cavendish puts forward an argument for this position which is premised on what she sees as the *inconceivability* of colourless objects. She argues that since colourless objects are inconceivable, they cannot possibly exist in nature.³ Her argument thus consists of the explicit premise that we cannot conceive of an object without colour and the implicit premise that if something is inconceivable then it could not possibly exist in nature.

The aim of this paper is to explain why Cavendish accepts both premises of this argument. However, the repercussions of this paper go much further than just helping us understand why Cavendish thinks colourless bodies cannot exist in nature. In fact, the interpretation I develop in what follows also has repercussions for our understanding of some of the most fundamental aspects of Cavendish’s metaphysics and epistemology. First, I provide new insights into the fundamental role that perception plays in Cavendish’s metaphysics. While Cavendish’s view that all of nature *perceives* is well-established, I show that Cavendish is also committed to the view that all of nature is *perceivable*. Second, I provide the first in-depth discussion of Cavendish’s modal epistemology and her reasons for thinking that inconceivability entails impossibility (in nature).⁴ Thus, while on the surface this paper may appear to be about Cavendish’s philosophy of colour, the interpretation I develop in what follows really concerns the relation between what we can conceive, what can be perceived, and what can exist in Cavendish’s system of nature.

²References to Cavendish’s works are as follows (followed by page numbers): *Philosophical Letters* = PL; *Philosophical and Physical Opinions* = PPO; *Observations upon Experimental Philosophy* = OEP; *Grounds of Natural Philosophy* = GNP.

³This qualification (‘in nature’) is important. Cavendish is not committed to the view that inconceivability entails impossibility *per se*. Rather, she is committed to the view that something inconceivable could not exist *in nature*. For instance, Cavendish maintains that the nature and attributes of God are inconceivable and that he exists *outside* of nature (OEP, 88–9). In theory, Cavendish could thus allow that colourless objects exist *outside nature*. But this is ruled out by her view that colours are figures of objects and only corporeal objects (i.e. those which exist in nature (OEP, 137)) have figures (OEP, 88–9). An anonymous reviewer raised the question of whether Cavendish allows for the existence of other entities, such as immaterial minds, that exist outside of nature. While that does seem to have been the case in her earlier writing (e.g. PL, 225–6), this is a position she later rejects (see, e.g. GNP 239).

⁴As Deborah Boyle notes, Cavendish’s “epistemology has received little attention” (*Well-Ordered Universe*, 438). Her *modal* epistemology has received even less.

The structure of this paper is as follows. I begin with an outline of Cavendish's remarks on colour and her argument in the *Observations*. In the same section, I also compare Cavendish's account of the relation between (in)conceivability and (im)possibility with the views of her contemporaries. In Section Two, I explain why Cavendish accepts the premise that colourless objects are inconceivable – focusing on her account of what conception involves. In Section Three, I demonstrate that Cavendish is committed to two claims: (i) if an object can be perceived, it can be conceived, and (ii) if an object can possibly exist in nature, it can be perceived. Together, these claims explain why she accepts the premise that an inconceivable object cannot exist in nature. Finally, in Section Four, I explain how Cavendish responds to the claim that colourless objects are not only *conceivable* but *perceivable* in the world around us, by outlining her views on transparent objects.

1. Cavendish on colour and conceivability

1.1. Colour

Cavendish's commitment to the view that colours are as material – and thus *real* – as any other qualities of objects is consistent throughout her writing.⁵ For example, in the *Philosophical and Physical Opinions* (1663), she writes:

such Colours as are Inherent, Light onely shews them to the Eye, but doth not make them in their Substance, for Grass is Green, whether the Eye seeth it or not.

(PPO, 216)

Here, she responds to the idea that colour experiences are simply the result of light interacting with the surfaces of material objects. Her point is that when it comes to an object's *inherent* colours – i.e. those colours which truly belong to it and are not simply the result of, say, abnormal lighting conditions – light might *show* us those colours, but it does not *cause* them. Thus, she states that 'Grass is Green' whether we see it or not. As such, colours cannot exist only in the mind. Similarly, in the *Grounds of Natural Philosophy* (1668) she writes: "there is no such thing in Nature, as a Colourless Body" and that "Matter, Colour, Figure, and Place, is but one thing, as one and the same Body" (GNP, 12.29). This has led one recent commentator to conclude that, for Cavendish "sensuous color is an irreducible property of bodies, on a par with size and shape" (Chamberlain, 'Material World', 299), where 'sensuous colour' is to be understood as "color-as-it-visually-appears or color-as-experienced" (Chamberlain, "Material World", 298).⁶

⁵Cavendish's view is that all of nature is material (OEP, 137; PL, 187).

⁶Following Anna Ortin Nadal's discussion of Descartes on the primary-secondary quality distinction ("Descartes on the Distinction", 4), we could also say that while he is an 'anti-realist' about sensuous colours, Cavendish is a 'realist'.

In a chapter on colour in the *Observations*, Cavendish puts forward an argument for this position:⁷

Truly, in my judgement, those opinions, that no parts have colour, but those which the light reflects on, are neither probable to sense nor reason; for how can we conceive any corporeal part, without a colour? In my opinion, it is as impossible to imagine a body without colour, as it is impossible for the mind to conceive a natural immaterial substance.

(OEP, 86)

Again, Cavendish is reacting to the view that parts of nature only have colour when light reflects on them. Cavendish rejects this view, which she claims is neither “probable to sense nor reason”,⁸ on the basis that we cannot “conceive any corporeal part, without a colour”. Cavendish then states that it is as impossible to imagine a body without colour as it is “for the mind to conceive a natural immaterial substance”. It is telling that she draws this comparison because, by this point in her life, Cavendish was committed to the impossibility of natural immaterial substances.⁹ The passage thus indicates that Cavendish thinks colourless bodies are likewise impossible.

It is worth reiterating that Cavendish’s argument consists of two premises. One is explicit – colourless bodies are inconceivable – while the other is implicit; anything that is inconceivable cannot possibly exist in nature.

1.2. *Conceivability and possibility*

Before explaining why Cavendish accepts the two premises of this argument, I first want to compare Cavendish’s claims about what we can and cannot

⁷Cavendish actually puts forward two arguments in the *Observations*. The second is based on a case described in Robert Boyle’s *Experiments and Considerations touching Colours* (OEP, 80). She begins with an observable phenomenon: namely, that during the tempering of steel, whenever its material qualities change, its colours do too. Cavendish argues that such changes “prove, that colours are material, as well as steel”. I leave aside discussion of this argument, first, because my focus is on Cavendish’s views on conception and existence, and, second, because it is not an especially convincing argument. As Chamberlain notes (“Material World”, 312–13), the observable phenomenon of steel’s colour changing every time its physical qualities change is equally consistent with the mechanistic claim that changes in physical qualities cause changes in our colour experiences.

⁸It might be argued that Cavendish’s view is that colourless bodies are *improbable* rather than impossible based on this remark. However, following Boyle (*Well-Ordered Universe*, 447), we can attribute this claim to Cavendish’s ‘moderate scepticism’ concerning metaphysical truths. On this reading of Cavendish, a proposition can be a metaphysical truth about nature, even if our knowledge of it is not absolutely certain. As such, it is plausible to attribute to Cavendish the view that colourless bodies are impossible, even if that truth is only probably *known* to us. Thanks to David Bartha and Tom Stoneham for raising this concern.

⁹By the time she wrote the *Observations* and *Grounds*, Cavendish’s view was that immaterial substances cannot exist in nature (GNP Appendix 1.2; for discussion, see Cuning, “Thinking Matter”, 120; Wilkins, “Exploding”). The best (and perhaps only) example of an immaterial substance is God who Cavendish describes as an “infinite, incomprehensible, supernatural, and immaterial essence, void of all parts” (OEP, 38). All parts of nature, for Cavendish, are material (OEP, 137). Thus, God, being immaterial, is not a part of nature but is “supernatural”. She also adds that God can “no ways be subject to perception”.

conceive with those of Galileo and Descartes. Doing so reveals that Cavendish's views are idiosyncratic in at least two ways. First, unlike other seventeenth-century thinkers, she thinks that colourless bodies are inconceivable. Second, her argument requires the (controversial) premise that if something is inconceivable then it cannot exist in nature.

Galileo and Descartes, who were both proponents of what would come to be known as the 'primary-secondary quality distinction', maintain that only the primary qualities of objects (like their size and shape) exist independently of the mind (see Galileo, *Essential*, 184–5; Descartes, *Philosophical Writings* (henceforth: CSM) 1: 227). While there is more to be said about how these (and other) thinkers arrived at this conclusion, what is important for my present concerns is that both agree we can conceive of objects that have primary, but not secondary, qualities.¹⁰ For example, in *The Assayer* (1623), Galileo explains that whenever we conceive of material substances, we are "drawn by necessity" to conceive of them as having primary qualities like size or shape. He then claims that, "my mind does *not* feel forced to regard it as necessarily accompanied by such conditions as the following: *that it is white or red, bitter or sweet, noisy or quiet, and pleasantly or unpleasantly smelling*" (Galileo, *Essential*, 185, my emphasis). In other words, Galileo thinks there is an important difference between qualities like size and shape and qualities like sound, taste, smell, or colours. Like other proponents of the distinction, Galileo maintains that the latter, just like the sensation of 'ticklishness' in a feather, exist only in the mind while the former are part of mind-independent reality (Galileo, *Essential*, 185). Descartes, similarly, notes that we can conceive of objects (such as transparent stones) which possess qualities like size and shape but not colour (CSM 1: 227). The prevalence of this view – that we conceive of objects that possess primary qualities but not secondary qualities (including colours) – makes Cavendish's own view all the more striking. For Cavendish's argument is premised on what she sees as the *inconceivability* of colourless objects.

Another striking feature of Cavendish's argument is that she moves from the inconceivability of colourless bodies to the impossibility of their existing in nature. Other thinkers from the period, including Galileo and Descartes, move from what we can conceive to what could possibly exist.¹¹ Cavendish, meanwhile, makes the stronger (and more controversial) move from what we *cannot* conceive to claims about the kinds of things that *could not possibly* exist. This distinction may not appear to be hugely significant, but it in fact provides us with a strong motivation to look for an explanation of where

¹⁰For an account of Descartes' argument for the primary-secondary quality distinction, see Downing, "Sensible Qualities".

¹¹For example, one of the premises in Descartes' argument for the real distinction between mind and body in the sixth meditation is the claim that we can conceive of minds and bodies existing separately (CSM 2:54).

Cavendish's argument is coming from. First, this difference means that we cannot simply put Cavendish's argument down as an attempt to argue *ad hominem* against the likes of Galileo and Descartes.¹² *Ad hominem* arguments only work when they are built on the same premises as one's opponents – Cavendish's argument is not. Second, while moves from inconceivability to impossibility were not unheard of at the time of Cavendish's writing,¹³ they were considerably more controversial. While a seventeenth-century thinker might reasonably infer that if *I* can conceive of an object, then God can too (and hence God could create it), there is no obvious reason why *my* inability to conceive of an object indicates that God, with his omniscience and omnipotence, would not be able to. Epistemic humility would seem to recommend holding back from moving from claims about inconceivability to claims about impossibility. Yet, that is exactly what Cavendish does.

This raises the important question of *why* Cavendish felt entitled to move from the inconceivability of a colourless object to the impossibility of such an object existing in nature – a question to which, I suggest, there is no simple answer.¹⁴ Indeed, I will turn to this question in Section Three and it will require an in-depth analysis of Cavendish's metaphysics to provide an answer. However, in the next section, I will offer an explanation of why Cavendish thinks that colourless objects are inconceivable in the first place by examining her account of what conception involves.

2. Are colourless objects inconceivable?

Given that Galileo and Descartes both claim that we can conceive of colourless objects, it seems remarkable that Cavendish's own argument is premised on a statement to the very opposite effect. Even laying aside Galileo and Descartes' views, Cavendish's remark is striking for it seems far from obvious that colourless objects are inconceivable. We might very well think that a square circle is inconceivable because of the *inconsistency* at the heart of such a

¹²I am here using 'ad hominem' consistently with how the Early Moderns understood the term. Whereas today we might think of an *ad hominem* argument as one where the character of the arguer is attacked, rather than the argument itself, in the context of Early Modern philosophy, an *ad hominem* argument was one where a thinker's own premises are used against them. As Clare Marie Moriarty explains, this was part of a wider commitment to the idea that "a philosopher should be able to live in accord with his or her principles" ("The Ad Hominem Argument", 436). Locke, for example, construes an *ad hominem* argument as an attempt to "press a man with consequences drawn from his own principles or concessions" (ECHU 4.7.21). Moriarty, "The Ad Hominem Argument" provides a very insightful discussion of Early Modern *ad hominem* argumentation.

¹³For example, Hobbes moves from the inconceivability of self-moving matter to its impossibility (Adams, "Visual Perception as Patterning", 212, fn. 11).

¹⁴Chamberlain seems to play down the significance of Cavendish's move from inconceivability to impossibility, noting that she was "entitled to this assumption in her dialectical context" ("Material World", 310, fn. 34). However, I hope to have shown that this is not quite as obvious Chamberlain's remark suggests.

notion, but there seems to be no such inconsistency involved in the notion of a colourless object.¹⁵ The question of why Cavendish thinks colourless objects are inconceivable is thus worth addressing.¹⁶

As things stand, Cavendish and her opponents appear to be talking past one another. Galileo and Descartes claim they can conceive of colourless objects, while Cavendish denies that this is possible. It seems likely, then, that some kind of equivocation – most likely over the term ‘conceive’ – is taking place.¹⁷ At this point, it is crucial to note that Cavendish uses the terms ‘conceive’ and ‘imagine’ interchangeably. That is, for Cavendish, to *conceive* of a colourless object is to *imagine* one. This has been noted by other commentators (e.g. Boyle *Well-Ordered Universe*, 444; Adams, “Visual Perception as Patterning”, 5; Chamberlain, “Material World”, 306–7). Even if this observation does not provide us with an obvious solution to the apparent inconsistency between Cavendish and her opponents’ views, it does allow us to identify where that inconsistency is coming from. Cavendish’s use of the term ‘conceive’ marks a point of disagreement with thinkers like Descartes, who, rather than equating conceiving and imagining, associate conception with the grasping of a priori truths and the imagination with the senses (see Pasnau, *Metaphysical Themes*, 508; Chamberlain, “Material World”, 307; Ortin Nadal, “Descartes on the Distinction”, 3).¹⁸ Descartes thus separates conception from imagination, while Cavendish identifies them as one and the same thing.

Recall the difference between the inconceivability of a square circle and the apparent inconceivability of a colourless body. The former seems to arise from an *inconsistency* at the heart of that notion. However, there does

¹⁵As Colin Chamberlain suggested to me, while there does not *seem* to be a contradiction involved in the notion of a colourless object, this could turn out to be Cavendish’s view. If Cavendish really thinks that body and colour are “one thing” (GNP 12.21), she may think that conceiving of a colourless body is akin to (e.g.) conceiving a triangle without three sides.

¹⁶Another reason to address this question is that Cavendish’s claim that colourless objects are inconceivable anticipates Berkeley’s well-known argument against the primary-secondary quality distinction (as articulated by Locke). For instance, Berkeley’s spokesperson in the *Dialogues*, Philonous, asks his interlocutor, Hylas; “[c]an you even separate the ideas of extension and motion, from the ideas of all those qualities which they who make the distinction, term *secondary*?” to which Hylas replies, “I do not find that I can” (“Three Dialogues”, 194, emphasis in original). Berkeley thinks it follows from the inconceivability of an object with primary qualities and not secondary qualities (such as colours) that no such object could exist in nature. It remains unclear why Berkeley accepts this claim (for discussion, see Holden, “Berkeley on Inconceivability and Impossibility”) but perhaps understanding why Cavendish does can provide us with some clues. For further discussion (albeit, brief) of similarities between Cavendish and Berkeley views, see Wilson, “Two Opponents”, 41; Chamberlain, “Material World”, 305–6; Allen, “Cavendish and Boyle”, 71.

¹⁷Another way one might try to explain this disagreement is psychologically and with reference to the conceptual capacities of the individual thinkers involved. Perhaps, for instance, Cavendish, Galileo, and Descartes simply had varying capacities for mental imagery such that Cavendish could not conceive (or imagine) of colourless bodies while Galileo and Descartes could. They would, in that case, be working on the basis of conflicting introspective evidence. Jacovides, “How Berkeley Corrupted”, discusses this possibility with regard to Berkeley’s conceptual capacities.

¹⁸See, for example, Descartes’ ‘wax argument’ in CSM 2: 30. In using ‘conceive’ interchangeably with ‘imagine’, Cavendish is much closer to Hobbes (e.g. *Leviathan*, 2.10).

not seem to be any such inconsistency in the notion of a colourless body. On what grounds, then, does Cavendish maintain that a colourless body is inconceivable? The answer lies in Cavendish's commitment to the interchangeability of conceiving and imagining. Consider the way in which Cavendish phrases her argument for the impossibility of colourless bodies:

how can we *conceive* any corporeal part, without a colour? In my opinion, it is as impossible to *imagine* a body without a colour, as it is impossible for the mind to *conceive* a natural immaterial substance.

(OEP, 86)

In this passage, Cavendish switches from talking about 'conceiving' to 'imagining' and back to 'conceiving' again. The argument is only valid (and the principle of charitable interpretation recommends we assume it is) if she is using these terms interchangeably.

Indeed, much turns on the fact that when Cavendish refers to what she can conceive, she likewise refers to what she can imagine. That she uses the terms 'conceive' and 'imagine' interchangeably shows that she does *not* see conception as uniquely privileged in accessing a priori truths. In fact, Cavendish explicitly denies the existence of the purported faculty of the intellect (OEP, 47, 88, 272). For Cavendish, the objects of conception and imagination are one and the same. It is for this reason that Cavendish thinks we *cannot* conceive of a colourless body – since we cannot *imagine* one – while Galileo and Descartes think we can. The reason being that, for Cavendish, we cannot imagine that which could not, in principle, be perceived.¹⁹ If one wishes to object to Cavendish's claim, the burden is on them to provide an alternative account of what 'conceiving' involves. But Cavendish thinks no such alternative is available: all mental activity is either patterning or figuring, and (as we will find in the next section) it is not possible to pattern or figure a colourless object.

3. Why does inconceivability entail impossibility (in nature)?

In the previous section, I explained what Cavendish has in mind when she uses the term 'conceive'. For Cavendish, to 'conceive' an object is to *imagine* that object. This can help us to understand her disagreement with Galileo and Descartes. Cavendish thinks that a colourless object cannot be conceived because it cannot be imagined. Galileo and Descartes, meanwhile, find that there is nothing inconsistent in the notion of a colourless object. Since they associate conceiving with a priori analysis, they find that a colourless object *is* conceivable.

In this section, I focus on the implicit premise in Cavendish's argument; the claim that if an object is inconceivable then it cannot possibly exist in nature.

¹⁹Again, in this regard, Cavendish is consistent with Hobbes (e.g. *Leviathan*, 2.2)

In Section 1.2, I suggested that Cavendish's commitment to this claim cannot be explained by her dialectical context or as an ad hominem argument, since the move from inconceivably to impossibility is more controversial than the move from conceivability to possibility employed by Galileo and Descartes.

Instead, I identify which of Cavendish's metaphysical and epistemological commitments explain why she accepts this premise. I argue that Cavendish's view is that everything that exists in nature is perceivable and that everything that is perceivable can be conceived. More formally, I attribute to her the following claims:

P1. If an object can be perceived, it can be conceived.

P2. If an object can possibly exist in nature, it can be perceived.

Together, these claims entail that if a colourless body cannot be conceived then a colourless body cannot possibly exist *in nature*.²⁰ In the following subsections, I explain why Cavendish accepts P1 and P2.

3.1. Perception and conception

In this subsection, I explain why Cavendish thinks that if an object can be perceived, it can be conceived. Before proceeding, however, it is necessary to provide some exposition of Cavendish's account of perception. Once this is accomplished, and the distinction between figuring and patterning has been made clear, we will be in a position to see why Cavendish accepts P1.

Cavendish holds a materialist account of the mind. Like every other part of nature, for Cavendish, the mind is material and the operations of the mind are matter in motion (Cunning, "Thinking Matter"; Detlefsen, "Atomism, Monism, and Causation", 200).²¹ She thus also construes *perception* in materialist terms. However, unlike other materialists, such as Hobbes, she does not hold (and in fact explicitly argues against) 'pressure-based' accounts of perception where the mind is passively acted on by external objects via the sense organs similarly to how wax is acted upon by a stamp (OEP, 140; for discussion, see Detlefsen, "Atomism, Monism, and Causation", 165; Adams, "Visual Perception as Patterning", 195–6; Boyle, *Well-Ordered Universe*, ch. 4). Instead, she characterizes perception as "an exterior knowledge of foreign parts and actions" that involves "an action of figuring or patterning" (OEP, 15). For Cavendish, nothing is imprinted on the mind in perception. Rather, the matter in the mind figures or patterns – that is, *copies* – the

²⁰Again, this qualification ('in nature') is important. Recall that Cavendish is not committed to the view that inconceivability entails impossibility per se.

²¹In fact, Cavendish holds that (like every other part of nature) the human mind is composed of three kinds of matter: rational matter, sensible matter, and dull or inanimate matter (OEP, 157–8, 206–7). For more on the role that Cavendish's tripartite account of matter plays in her system of nature, see Shaheen, "Parts of Nature and Division".

figures of whatever objects it perceives. Importantly, the matter in the mind is *active* and not passive in perception.²² For she maintains that “self-motion if the cause of all exterior perception”.

‘Figuring’ and ‘patterning’, for Cavendish, are technical terms and make up an exhaustive (dichotomous) list of the kinds of perceptual activities the mind engages in. The two activities are closely related but differ in terms of the *freedom* with which they operate and the scope of their objects. Figuring is the mental activity which operates with the greatest freedom. Nonetheless, it always involves the matter in the mind organizing itself into the form of some object. All mental activity, for Cavendish, involves figuring and thus all mental activity, she thinks, involves *picturing* something. In fact, at times, she uses the terms ‘picture’ and ‘figure’ interchangeably (e.g. OEP, 88–9). According to Cavendish, if I am thinking of something, I am figuring something and, in turn, the matter of my mind is organizing itself into the form (or picture) of something. For instance, if I recollect something I previously perceived, such as the sun in the sky when I lie in bed at night, that figure is of an external object. But oftentimes, Cavendish claims, figuring happens “without the presentation of exterior objects” and “without taking any copies of foreign objects” (OEP, 170) such as when I imagine a unicorn. This kind of figuring results in “[i]maginations, fancies, conceptions, passions, and the like” (see also PL 179).

Patterning, for Cavendish, is a very similar activity. In fact, it is a *kind* of figuring; so there is no genuine distinction between the two activities. Patterning is the mental activity whereby the matter in the mind copies the motions of an object (or objects) that is *currently* presented to the sense organs. As such, patterning has considerably less freedom than figuring. We can only *pattern* what is right there in front of us. In that regard, patterning is much closer to how we would ordinarily think about perception since, generally speaking, we tend to say that we can only perceive things that are actually present. Cavendish acknowledges this and sometimes refers to patterning as ‘sensitive perception’ (i.e. perception via our senses, as opposed to figuring in the mind). As she puts it, “sensitive perception can go no further than the exterior shape, figure and actions of an object” (OEP, 175).²³

²²Cavendish’s account of perception can be understood as part of her wider commitment to occasional causation in nature. Unlike Hobbes, she construes external objects not as *causes* but as *occasions* for human and animal perception. For discussion, see James, “Philosophical Innovations”, 231–9; Detlefsen, “Atomism, Monism, and Causation” and “Reason and Freedom”; Boyle *Well-Ordered Universe*, 97–100.

²³In this passage from the *Observations*, Cavendish is also making a point about the difference between exterior and *interior* motions of objects. Interior motions, she explains, are “not subject to the perception of our exterior senses”. In fact, her criticisms of microscopy make it clear that she thinks the interior motions of objects could never be perceived (OEP, 50). It is important to note, therefore, that her claims about perception and what is perceivable (which I discuss in what follows) are restricted to the *exterior* motions of parts of nature.

Patterning is akin to our ordinary way of thinking about perception. But where does *conception* come in? Since we can conceive of things that *are not* right there in front of us (like the sun in the sky when we lie in bed at night) or which we might never perceive via the senses (such as a unicorn), conception is a kind of figuring. Like other 'rational' activities of the mind (as opposed to its 'sensitive' activities), such as remembering, contemplating, and judging (OEP, 158; PL, 185; Boyle, "Margaret Cavendish", 444), conception is not present-object-dependent. As she puts it, when we conceive of things our rational activity is "not encumbered with any other parts of matter" (OEP, 150).

To return to the question of why Cavendish accepts P1 ('if an object can be perceived, then it can be conceived'), the answer has to do with the fact that figuring and patterning, while they differ in scope and freedom, are the *same kind* of mental activity. Every instance of patterning is, for Cavendish, an instance of figuring. Thus, not only *can* anything that is perceived (patterned) be conceived (figured), everything that is perceived *is* conceived (in a sense). But our conceiving powers, unlike our perceiving (patterning) abilities go beyond just figuring those objects currently present to the senses and include all the possible objects of the imagination. The scope of what can be conceived, for Cavendish, is therefore much wider than the scope of what can be perceived.²⁴ There are a whole range of (potentially infinite, in Cavendish's system) things which I can conceive but only one set of objects I can, at any one time, *perceive*. As such, if something lies beyond the limits of my conceptual abilities, which are much freer and wider in scope than my perceptual abilities, then it will inevitably also lie beyond the scope of my perceptual abilities.

²⁴Note that this suggests there are things we can conceive but not perceive. In *Philosophical and Physical Opinions*, Cavendish introduces the concept of 'notions' (PPO, 89; see also GNP 6.1). A notion, she explains, is an "Obscurity of perfect Figures [...] made not by the Rational Animate motions from outward Objects or Senses, but [...] out of their voluntary and intire Motions, without the help of the Sensitive Prints" (PPO, 89). When we have 'notions', for Cavendish, we are figuring things that could not be patterned. Examples include our notion of 'Infinite' and our notion of 'Nothing' (PPO, 89). Are Cavendish's claims about notions consistent with the views I have attributed to her so far? First, note that they *are* consistent with P1 (if an object can be perceived, it can be conceived). Cavendish's talk of notions simply indicates that she would not go so far as to say *if and only if* an object can be perceived, can it be conceived. Whether her claims about notions are consistent with P2 (if an object can possibly exist in nature, it can be perceived) depends on whether the things we have notions of can exist *in nature*. In the case of 'Nothing' it is clear that she is not referring to something that could exist in nature (see PL, 198). 'Infinite' is less clear. Cavendish herself certainly thinks that nature itself is infinite but it is less obvious that she would accept that infinity is something that exists *in or as a part of* nature. It is also a contested issue whether Cavendish is committed to infinite divisibility in nature (see, e.g. Detlefsen, "Atomism, Monism, and Causation"; McNulty, "Order and Infinitude"; Shaheen, "Parts of Nature and Division"). It seems to me that, on the balance of evidence, either Cavendish thinks our notion of 'Infinite' is not a notion of something that could exist in nature or that this constitutes an inconsistency in her view. In any case, I do not think Cavendish's account of notions threatens the reading I have attributed to her thus far.

3.2. Perception and existence in nature

In the remainder of this section, I justify attributing to Cavendish P2: if an object can possibly exist in nature, it can be perceived.

Cavendish's metaphysics is one in which perception plays a fundamental role. In the *Observations*, she claims that "every action of nature is a knowing and perceptive action" (OEP, 15) and that "natural knowledge and perception, is the ground and principle ... of all the infinite particular actions of nature" (OEP, 137). Similarly, in the *Philosophical Letters*, she writes that "Perception and Action is one and the same" (PL, 175). Her view that all of nature *perceives* is thus explicit and well-established. However, in what follows I will show that Cavendish also believes that all of nature is *perceivable*. To do so, I will show that Cavendish thinks that if an object could not be perceived then it could not exist in nature.²⁵

The textual evidence on offer in the *Observations* and the *Grounds* supports attributing to Cavendish two claims: (i) that all of nature is corporeal, and (ii) that anything corporeal is perceivable. The textual support for both claims is explicit and together they commit her to the view that all of nature is *perceivable*. It follows that anything could not be perceived could not exist in nature. In support of (i) consider the following remark from the *Observations*:

Nature is purely corporeal or material, and there is nothing that belongs to, or is a part of nature, which is not corporeal; so that natural and material, or corporeal, are one and the same.

(OEP, 137)

Similarly, in the *Philosophical Letters*, she writes: "Nature is Material, or Corporeal; and whatsoever is not composed of matter or body, belongs not to Nature" (PL, 187). In both cases, her point is clear: all parts of nature are corporeal, or material, to the extent that the terms 'natural', 'corporeal', and 'material' are virtually interchangeable. Now consider the following remark from the *Grounds* which supports (ii):

Whatsoever is Corporeal, is Perceivable; that is, may be perceived in some manner or other, by reason it hath a Corporeal Being: but, what Being an Immaterial hath, no Corporeal can perceive. Wherefore, no Part in Nature can perceive an Immaterial, because it is impossible to have a perception of that, which is not to be perceived, as not being an Object fit and proper for Corporeal Perception.

(GNP Appendix 1.3)

Again, Cavendish is explicit: "*Whatsoever is Corporeal, is Perceivable*". This passage (which appears almost verbatim in the 1668 edition of the

²⁵Note that this is compatible with Cavendish's view that inconceivable entities, including God, can exist *outside* nature and cannot be conceived by corporeal beings (OEP, 88–9; GNP Appendix, 1.2).

Observations (see OEP, 89)) reveals that something about parts of nature – corporeal things – makes them ‘fit and proper’ for perception. Thus, Cavendish’s view is that the perceptibility of parts of nature is something that necessarily follows from their corporeality. Whatever it is that makes corporeal parts of nature perceivable is lacking from immaterial things which are *not* “fit and proper for Corporeal Perception” (GNP Appendix 1.3). Lacking corporeality, and therefore perceivability, immaterial things cannot be perceived: “because it is impossible to have a perception of that, which is not to be perceived”. With the discussion in 3.1 in mind, this is enough to establish that, for Cavendish, anything that can exist in nature is conceivable, since she thinks that anything that can be perceived can be conceived.²⁶

Having established that Cavendish accepts P2 (‘if an object can possibly exist in nature, it can be perceived’), it’s worth considering *why* she accepts it. Unfortunately, Cavendish’s reasons for doing so are not made explicit.²⁷ For that reason, I offer, by way of a “Cavendishian proposal”,²⁸ an explanation derived from her commitment to the view that nature is a *plenum*. Cavendish, like Hobbes and Descartes, is a plenist insofar as she thinks that there are no genuine vacuums or truly empty spaces in nature and that all parts of nature are material or corporeal (see, e.g. PL 451–2, 521). Cavendish’s commitment to plenism (so defined), in conjunction with her view that where there is matter there is perceptual activity (OEP, 15, 157–8, 206–7), can help us understand why she thinks all of nature is perceivable.

Cavendish’s view is that all parts of nature are surrounded by other ‘neighbouring’ parts, all of which are material and all of which are perceiving. It seems highly likely, then, that Cavendish would accept that all parts of nature perceive their neighbouring parts. This is because, as was established in 3.1, perception, for Cavendish, is present-object dependent and, in the plenum, all of nature is surrounded by other present objects. Consider, for example, the following claim from the *Observations*:

there is knowledge and perception in every part, by which each part doth not only know itself, and its own actions; but has also a perception of some actions of its neighbouring parts.

(OEP, 152)

²⁶The claim that, for Cavendish, something that is not part of nature (and therefore not corporeal or material) cannot be conceived is also supported by her discussion of our knowledge of God in OEP. There, she explains that “though the finite parts of nature may have a perception or knowledge of the *existence* of God, yet they cannot possibly *pattern or figure* him” (OEP, 88, my emphasis). This is because, “it is impossible for man to make a figure, or picture of that which is not a part of nature; for pictures are as much part of nature, as any other parts”.

²⁷It is possible that Cavendish takes the perceivability of the corporeal as a basic fact. However, as will become clear, I think there is evidence that this view is motivated by other commitments.

²⁸I borrow this phrase from Detlefsen (“Atomism, Monism, and Causation” and “Reason and Freedom”) to describe an interpretation of Cavendish that attributes to her a position that is not explicit but *is* consistent with her writing. It involves putting forward a position Cavendish could – and perhaps ought – to have accepted, based on the textual evidence available.

Admittedly, Cavendish's claim here is that each part of nature perceives 'some' actions of its neighbouring part. Nonetheless, since every part of nature perceives it is hard to see how anything could slip through the net, so to speak, and fail to be *perceived*.

David Cunning leans towards the view that all parts of nature are perceived by their surrounding parts when he writes:

[for Cavendish] because each body is always surrounded by other bodies ad infinitum, all the bodies in nature depend for their properties and structural integrity on the bodies that immediately surround them.

(Cunning, *Margaret Cavendish*, 11)

Cunning's claim is that, for Cavendish, all bodies are causally dependent on the bodies that surround them in the plenum. This is not an explicit reference to perception. But elsewhere Cavendish herself is explicit in holding that all interaction, including causal interaction,²⁹ *pre-supposes* perception. As she puts it in the *Observations*:

there can be no commerce or intercourse, nor no variety of figures and actions; no productions, dissolutions, changes, and the like, without perception; for how shall parts work and act, without having some knowledge or perception of each other?

(OEP, 15)

Taking into account, then, that for Cavendish, all causal action pre-supposes perception, it is not much of a stretch to move from Cunning's reading to one in which all parts of nature are perceived.³⁰ In fact, if Cunning is right and all of parts of nature are causally dependent on their surrounding parts, then it follows that all parts of nature must be perceived (at least by their surrounding parts). Note that this results in the conclusion that all parts of nature are *perceived* as opposed to 'Perceivable', which is the term we find Cavendish using in the *Grounds*. But something which is perceived must also be perceivable. As Cavendish puts it, "it is impossible to have a perception of that, which is not to be perceived" (GNP Appendix 1.3).

There are two concerns that might be raised against this reading. First, some textual evidence seems to indicate Cavendish does *not* think all parts of nature perceive their neighbouring parts.³¹ Consider the following passage:

some parts may make perceptions of distant parts, and not of neighbouring parts; and others again, may make perceptions of neighbouring and adjoining

²⁹Although strictly, in Cavendish's system, that should be *occasional* causal interaction.

³⁰Eileen O'Neill compares Cavendish's vitalism with the view, endorsed by the Stoics, that an action on behalf of one part of nature affects "all the other parts of the universe" ("Introduction", xxii). If indeed Cavendish does hold something like this view, and if all activity pre-supposes perception, again it would seem to follow that all parts of nature are perceived.

³¹Thanks to Colin Chamberlain for raising this concern.

parts, and not of those that are distant: As for example, in the animal perception, taste and touch are only perceptions of adjoining objects, whereas sight and hearing do perceive at a distance; for if an object be immediately joined to the optic sense, it quite blinds it.

(OEP, 184)

In this instance, Cavendish seems to say that *some* parts of nature perceive their neighbouring parts, while some do not. This suggests that there could be parts of nature that ‘slip through the net’ and are not perceived.

However, this concern can be alleviated by considering the passage in detail. Cavendish is referring to a specific case where it becomes impossible to see something when it is too close to one’s eyes (where the object is “immediately joined to the optic sense”). She is not casting doubt on the *perceivability* of such an object *per se*. There are still circumstances in which the same object could be perceived (e.g. by someone who was further away from it). What’s more, this has no bearing on whether that object continues to be perceived by the parts of nature that are surrounding it. It is simply that the object it is too close to the optic sense of a specific individual to be seen by that individual. As such, this passage does not conflict with the view I have attributed to Cavendish so far.

The second concern is about Cavendish’s modal epistemology. My claim is that Cavendish’s modal epistemology is such that if I cannot conceive an object then I *know* that object cannot possibly exist in nature.³² This seems to require the claim, stronger than P2, that if an object can possibly exist in nature it can be perceived *by me or by a creature like me*. Given that all parts of nature perceive, for Cavendish, it seems possible that even if I (or any other creature like me) cannot conceive an object, something *else* could.³³ This certainly would be possible – and would indeed pose a problem for Cavendish’s modal epistemology – if she thought that human perception were different in kind from the perception taking place elsewhere in nature. As it happens, though, that *is not* Cavendish’s view. While she admits that human (and animal) perception involves the use of sense organs, which of course other parts of nature are not equipped with (OEP, 222), she also seems to think this makes very little difference.³⁴ She is categorical in stating that perception – which as we saw in 4.1 involves patterning or figuring (OEP, 15) – occurs wherever there is self-motion and, for Cavendish, self-motion is fundamental to nature (OEP, 138). Other passages indicate that she thinks ‘perception’ means the same thing wherever it is applied; for instance, when she writes:

³²Again, this does not apply in the case of God’s incomprehensibility since God exists beyond or outside nature (OEP, 17).

³³Many thanks to an anonymous reviewer for the BJHP for encouraging me to address this concern.

³⁴In turn, this raises the question of why Cavendish thinks human and other animals have sense organs in the first place – but that is beyond my present aims.

Wherefore rational and sensitive corporeal motions, cannot change from being motions, though they may change from moving thus, to move thus; nor perceptions from being perceptions, though they may change from being such or such particular perceptions; for the change is only in particulars, not in the ground or principle, which continues always the same.

(OEP, 142)

Here, the suggestion is that motion and perception are so fundamental to nature that, even if certain instances of motion or perception seem to differ in their particularities, the ‘ground or principle’ – that is, the *actions themselves* – are always the same. It is also worth noting that Cavendish maintains that both sensitive and rational matter exist “not only in every part of Mans Body, but in every part of nature” (PL, 185; see also OEP, 24). Thus, given Cavendish’s metaphysical commitments, there are no grounds on which to distinguish between what *I* can perceive and what other parts of nature can perceive. Either an object is perceivable by parts of nature, or it cannot be perceived at all.

In this section, I have shown the textual evidence is explicit in committing Cavendish to the view that all parts of nature can be perceived. While Cavendish does not provide an explicit explanation for *why* she holds that view, I argued that it can be explained by an appeal to her plenism and the view that all action pre-supposes perception. In conjunction with her view that inconceivability entails imperceptibility, Cavendish’s reasoning entails that an inconceivable object could not possibly exist in nature.

4. The case of transparent objects

Before concluding, I want to return to Cavendish’s disagreement with those seventeenth-century thinkers who held that colours are mind-dependent qualities, distinguishable from physical qualities like size and shape. More specifically, I want to consider how Cavendish might respond to an objection along the following lines: *transparent* objects are colourless, so colourless objects are evidently possible since they actually exist.

In 1.2, I argued that the disagreement between Cavendish and her opponents over whether colourless objects can be *conceived* can be explained by appealing to her use of the term ‘conceive’ as interchangeable with ‘imagine’. However, in Descartes’ remarks on colours we also find a stronger claim: that we can actually *perceive* colourless objects in the world around us such as when we come across “stones so transparent as to lack colour” (CSM 1:227–8). If Descartes is right then colourless objects are not only conceivable, and thus possible, but they actually exist.

There are signs that Cavendish anticipated this kind of objection. At the very least, she was obviously familiar with the case of transparent stones since she dedicates a chapter of her *Philosophical and Physical Opinions* to

them (part V, chapter 25). She makes no attempt to dispute their existence – or, indeed, their transparency – but simply remarks that they are “somewhat of the nature” of glass (PPO, 187–8). She explains that they are “made by such kind of Motions” as other stones but “seem to be made by Stronger motions, and more Pure Tempered Matter” (PPO, 188).

How might Cavendish respond to the suggestion that transparent objects are examples of *colourless* bodies existing in nature? Initially, one might think her reply would be that we never actually perceive a body, even a ‘transparent stone’, as *colourless*. The argument might go like this: when we perceive a transparent body, we inevitably perceive it as having the colour of whatever other body is on the other side of it (and one might extend that claim to conception/ imagination too). Chamberlain suggests that this kind of response, in which transparent bodies are construed as “*chameleons* rather than colorless”, is available to Cavendish (“Material World”, 308). In other words, she might claim that even the mental pictures we form of transparent objects are necessarily coloured-in.

However, this is not the response Cavendish offers (although, as will become clear, it perhaps *ought* to have been). As Keith Allen notes, Cavendish’s view is that objects like transparent stones “are not genuinely colourless, we are just unable to perceive their colours in specific circumstances” (“Cavendish and Boyle”, 72). In other words, Cavendish rejects the move from transparency to colourlessness. How does she justify this claim? The first clue lies in her response to the idea (from Robert Boyle’s *Experiments and Considerations touching Colours*) that if a flax seed is divided enough times it will lose its colour. Her reply is that

they being divided into such small and fine parts, it makes their colours, which are the finest of their exterior parts, not to be subject to our optic perception; for what is very small or rare, is not subject to the human optic sense.

(OEP, 81–2)

She adds that one of the conditions required in order for us to have “optic perception of an exterior object” is that, “the object must not be too subtle, rare, or little, but of a certain degree of magnitude” (OEP, 82).

This claim cannot simply be imported as an explanation of why Cavendish does not think a transparent object is *colourless*. A transparent stone, unlike the tiny fragments of a flax seed, is not itself too small to be subject to our optic sense. However, Cavendish’s view seems to be that certain *figures* of an object *are*. Figures, for Cavendish, are simply matter in motion – and the different colours of objects are grounded upon their various figures (see, e.g. PL, 149–51; OEP, 82). As she puts it in *Philosophical Letters*, “different figures, in my opinion, are the cause of different colours” (PL, 475). Consider again her remark that what makes transparent stones different from other stones is that “they seem to be made by Stronger

motions, and more Pure Tempered Matter" (PPO, 188). Cavendish claims that transparency is the result of a difference between the strength of the motions and purity of the matter that makes up those stones. Since figures, which are the grounds of various colours, are simply matter in motion, we can assume that an object with strong motions and pure matter is an object with strong and pure *figures*.

Cavendish's point is thus that certain figures of transparent stones – those which constitute their *colours* – are too "subtle, rare, or little" to be perceived by the optic sense. In other words, for Cavendish, transparent stones *have* a colour, but one that cannot be seen by the human eye. For that reason, we should not be so quick to jump from the observation of a *transparent* object to the existence of a genuinely *colourless* one.

Cavendish's claim that transparent objects do in fact have a colour but that it is too 'subtle' or 'rare' to be seen by the human eye is unlikely to convince her opponents. But perhaps at this point it is more prudent to stop thinking of Cavendish as *disagreeing* with the likes of Descartes. Instead, it is perhaps more helpful to think of Cavendish as *radically re-conceptualising* what it means for an object to be coloured. After all, Descartes and Galileo would not have agreed with the claim that colours are figures in the first place; let alone figures too 'little' to be perceived. However, a more pressing question about Cavendish's response to the case of transparent objects is whether it is consistent with the modal epistemological claims she defends elsewhere (which I outlined in section three). It does appear to be the case that by conceiving of a transparent stone we could conceive of something colourless – even if that the actual transparent stones in the world around us really are 'coloured' (in Cavendish's sense of having the right kind of figures).

Cavendish could avoid this concern by claiming that transparent objects are "chameleons", as Chamberlain puts it ("Material World", 308). Given her view that conceiving is the same as imagining, it seems plausible to suggest that when we imagine a transparent object we inevitably imagine it as having the colour of whatever is on the other side of it (even if that is a non-descript black or white background). Unfortunately, there is no textual evidence that this was Cavendish's view, even if it plausibly should have been.

Based on the textual evidence that *is* available, it is plausible to suggest that Cavendish was not totally happy with her own response to the case of transparent objects – perhaps because she came to appreciate that it was inconsistent with her modal epistemological views. There is a sustained discussion of colours in each of Cavendish's major philosophical works, from the *Philosophical Letters*, through the *Philosophical and Physical Opinions*, and her final published works the *Observations* and the *Grounds*. However, while a chapter is dedicated to transparent stones in the *Philosophical and Physical Opinions*, any such discussion is conspicuously absent from the works that followed it. Most conspicuously, the chapter on transparent

stones was omitted from the *Grounds*, which was Cavendish's attempt to significantly rework the *Philosophical and Physical Opinions*. There are two mentions of transparent stones in the *Grounds*, but both are cursory (GNP, 3.9; 13.4). For whatever reason, she evidently decided not to hold on to that discussion in her most mature natural philosophical writing. In the *Observations*, meanwhile, she uses the example of transparent objects to make a point about the difference between exterior and interior motions of parts of nature (OEP, 59) but there is no sustained discussion – and there is no mention of transparency in the chapter on colour.

To return to the objection raised at the beginning of this chapter, and the question of whether we can perceive colourless objects in the world around us, the evidence suggests that Cavendish *did* have a response but that it was one she later decided not to publish, perhaps because it was inconsistent with her modal epistemology. As we have seen, a more convincing response which does not raise any concerns about consistency – namely, the claim that transparent objects are 'chameleons' – was available to her but, for whatever reason, she did not endorse it.

Conclusion

I began this paper with a reconstruction of Cavendish's argument for the view that a colourless body could not possibly exist in nature. Cavendish's claim about the inconceivability of colourless objects then served as a prompt for an examination of her views concerning conception, perception, and existence in nature. I began by explaining Cavendish's disagreement with other seventeenth-century thinkers like Galileo and Descartes, about the apparent inconceivability of colourless objects, by appealing to her use of 'conceive' interchangeably with 'imagine'. I then set out to explain why she thinks that *if* a colourless body is inconceivable then such an object cannot exist in nature. I argued that Cavendish's reasoning relies on two claims: (P1) if an object can be perceived, it can be conceived and (P2) if an object can possibly exist in nature, it can be perceived.

Cavendish's view that all parts of nature *perceive* is well-established. However, the discussion in this paper has provided two further insights into her metaphysics. First, the textual evidence commits Cavendish to the view that all parts of nature are *perceivable*. Second, as I have argued, Cavendish believes that whatever can be perceived can be conceived, meaning that *anything* that exists in nature can be conceived. These metaphysical claims also have repercussions for our understanding of Cavendish's modal epistemology. Cavendish draws a close connection between conception, perception, and existence in nature. Anything that is part of nature can be perceived and, in turn, conceived. Furthermore, since Cavendish equates conceiving with imagining, this means that conceiving an object involves forming a mental

'picture' of it. Since Cavendish thinks that anything that could possibly exist in nature could be perceived, and since anything perceivable can be 'pictured' (conceived or imagined) in this way, it follows that the inability to form such a picture of something entails that such a thing could not possibly exist in nature.

It is for *this* reason that Cavendish premises her argument for the impossibility of a colourless body existing in nature on the *inconceivability* of a colourless body. For Cavendish, when we conceive of objects we necessarily think in colour. That is, our 'pictures' of nature are necessarily coloured-in. Since it is impossible, she thinks, to form a *colourless* picture of any part of nature, it follows that a colourless body could not possibly exist in nature.

Acknowledgements

Many thanks to Colin Chamberlain for kickstarting the conversation about Cavendish on colours, encouraging me in the early stages of writing this paper, and offering a lot of very helpful feedback. Thanks also to Manuel Fasko, Lauren Slater, and Jon Shaheen for very helpful comments on previous drafts. Thanks to participants of the University of Western Ontario Online Early Modern Philosophy conference, the British Society for the History of Philosophy Annual Conference 2020, an online workshop on Cavendish held at Trinity College Dublin, and a workshop on this paper in the Durham University Philosophy Department, for many probing questions and constructive feedback. Thanks also to those involved in Jon Shaheen's Cavendish reading group – I got a lot out of discussing Cavendish's writing with the group on a regular basis.

Bibliography

- Adams, Marcus. "Visual Perception as Patterning: Cavendish Against Hobbes on Sensation". *History of Philosophy Quarterly* 33, no. 3 (2016): 193–214.
- Allen, Keith. "Cavendish and Boyle on Color and Experimental Philosophy". In *Experiment, Speculation and Religion in Early Modern Philosophy*, edited by Peter Anstey and Alberto Vanzo, 58–80. London: Routledge, 2019.
- Berkeley, George. "Three Dialogues Between Hylas and Philonous". In *Philosophical Writings*, edited by Desmond Clarke, 151–242. Cambridge: Cambridge University Press, 2008. References are to marginal numbers in that edition.
- Boyle, Deborah. "Margaret Cavendish on Perception, Self-Knowledge, and Probable Opinion". *Philosophy Compass* 10, no. 7 (2015): 438–50.
- Boyle, Deborah. *The Well-Ordered Universe: The Philosophy of Margaret Cavendish*. Oxford: Oxford University Press, 2018.
- Boyle, Robert. *Experiments and Considerations Touching Colours*. London, 1664. Reprinted in M. Hunter and E. B. Davis, eds. *The Works of Robert Boyle*. Vol. 4. London: Pickering and Chatto, 1999.
- Cavendish, Margaret. *Grounds of Natural Philosophy*. Urbana, IL: Project Gutenberg, 1668. Accessed May 1, 2020. <http://www.gutenberg.org/ebooks/58404>.
- Cavendish, Margaret. *Observations upon Experimental Philosophy*. Edited by Eileen O'Neill. Cambridge: Cambridge University Press, 2001.
- Cavendish, Margaret. *Philosophical and Physical Opinions*. London: William Wilson, 1663.

- Cavendish, Margaret. *Philosophical Letters*. London, 1664.
- Chamberlain, Colin. "Color in a Material World: Margaret Cavendish Against the Early Modern Mechanists". *Philosophical Review* 128, no. 3 (2019): 293–336.
- Cunning, David. "Cavendish on the Intelligibility and Prospect of Thinking Matter". *History of Philosophy Quarterly* 23, no. 2 (2006): 117–36.
- Cunning, David. *Margaret Cavendish: Essential Writings*. Oxford: Oxford University Press, 2019.
- Descartes, Rene. *The Philosophical Writings of Descartes*. Translated by John Cottingham, Robert Stoothoff, and Dugald Murdoch. 2 vols. Cambridge: Cambridge University Press, 1984–85. References are to volume and page number in that edition.
- Detlefsen, Karen. "Atomism, Monism, and Causation in the Natural Philosophy of Margaret Cavendish". *Oxford Studies in Early Modern Philosophy* 3 (2006): 199–240.
- Detlefsen, Karen. "Reason and Freedom: Margaret Cavendish on the Order and Disorder of Nature". *Archiv für Geschichte der Philosophie* 89, no. 2 (2007): 157–91.
- Downing, Lisa. "Sensible Qualities and Material Bodies in Descartes and Boyle". In *Primary and Secondary Qualities: The Historical and Ongoing Debate*, edited by L. Nolan, 109–35. Oxford: Oxford University Press, 2011.
- Galileo, Galilei. *The Essential Galileo*. Translated by Maurice A. Finocchiaro. Indianapolis, IN: Hackett, 2008.
- Hobbes, Thomas. "1651, *Leviathan*". In *Leviathan, with Selected Variants from the Latin Edition of 1668*, edited by E. Curley. Indianapolis, IN: Hackett, 1994. References are to chapter and section number.
- Holden, Thomas. "Berkeley on Inconceivability and Impossibility". *Pacific Philosophical Quarterly* 98, no. 1 (2019): 107–22.
- Jacovides, Michael. "How Berkeley Corrupted His Capacity to Conceive". *Philosophia* 37 (2009): 415.
- James, Susan. "The Philosophical Innovations of Margaret Cavendish". *British Journal for the History of Philosophy* 7, no. 2 (1999): 219–44.
- Locke, John. *An Essay Concerning Human Understanding*. Edited by Peter H. Nidditch. Oxford: Oxford University Press, [1975] 1690. References are to book number, chapter number, section number in that edition.
- McNulty, Michael Bennett. "Margaret Cavendish on the Order and Infinitude of Nature". *History of Philosophy Quarterly* 35, no. 3 (2018): 219–39.
- Moriarty, Clare Marie. "The ad Hominem Argument of Berkeley's Analyst". *British Journal for the History of Philosophy* 26, no. 3 (2018): 429–51.
- O'Neill, Eileen. "Introduction". In *Observations upon Experimental Philosophy*, edited by Eileen O'Neill, x–xxxvi. Cambridge: Cambridge University Press, 2001.
- Ortin Nadal, Anna. "Descartes on the Distinction Between Primary and Secondary Qualities". *British Journal for the History of Philosophy* (2019). doi:10.1080/09608788.2019.1568227.
- Pasnau, Robert. *Metaphysical Themes 1274–1671*. Oxford: Oxford University Press, 2011.
- Shaheen, Jonathan L. "Parts of Nature and Division in Margaret Cavendish's Materialism". *Synthese* 196 (2019): 3551–75.
- Wilkins, Emma. "'Exploding' Immaterial Substances: Margaret Cavendish's Vitalist Materialist Critique of Spirits". *British Journal for the History of Philosophy* 24, no. 5 (2016): 858–77.
- Wilson, Catherine. "Two Opponents of Material Atomism". In *Leibniz and the English-Speaking World*, edited by P. Phemister and S. Brown, 35–50. Dordrecht (Netherlands): Springer, 2007.