

An Essentialist Bimodal Interpretation of Descartes' Creation Doctrine

Andrew Tedder*

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Abstract: This paper develops and defends an essentialist bimodal (or biessentialist) interpretation of Descartes' Creation Doctrine. The two modalities express facts about essences: i-modalities express relations of compatibility/entailment as obtaining between propositions and the essences of created things, while o-modalities express such relations with God's essence. On this reading, the necessity of eternal truths should be understood as i-necessity, while the possibility with which God could have made the eternal truths false should be understood as o-possibility. I argue that this is a plausible reading of the central texts, and that it renders the creation doctrine coherent while improving on some previous accounts.

Keywords: Descartes; metaphysics; modal voluntarism; essence.

1. The Problem with the Creation Doctrine

An especially difficult problem in the interpretation of Descartes' metaphysics, and its relation to Descartes' broader philosophical work, concerns the modal status of the *eternal truths*. Descartes uses this term to refer to

* Ruhr University Bochum

 <https://orcid.org/0000-0002-2303-003X>

 Department of Philosophy I, Ruhr University Bochum, Universitätsstraße 150, 44801 Bochum, Germany

 ajtedder.at@gmail.com

a class of necessary truths including, at least, truths about the *essences* of particular objects, as well as some more general necessary truths, such as truths of logic like the law of non-contradiction.¹ Essences and necessary truths play key roles in Descartes' metaphysical project in the *Meditations*, and in his scientific work more broadly, but these notions raise substantial difficulties in light of the (in)famous Cartesian thesis often called the *creation doctrine* (CD). Perhaps the simplest statement of CD is:

(CD) The eternal truths are *freely* created by God.

It is usually taken as a consequence of (CD) that God has the power to make the eternal truths false, and therefore that the eternal truths are possibly false. Kaufman (2002) provides a nice statement of the key problem with CD as a tension between the following two claims, to both of which Descartes seems committed:

- (1) Eternal truths are necessarily true.
- (2) Eternal truths are possibly false.²

It is widely accepted that a proposition is possibly false if and only if it is not necessarily true, and so (1) and (2) contradict each other. This raises the

¹ Descartes seems to take the term 'eternal truth' from Mersenne, for in the 15 April 1630 letter (AT 1:145, CSMK3, p.23), he writes first of "the mathematical truths which you call eternal," but, following the literature, I'll understand, by "eternal truths" just "necessary truths." All citations to Descartes' work are to, first, the Adams and Tannery (AT) original languages edition, and, second, to the English translations by Cottingham, Stoothoff, Murdoch, and Kenny. The first volume of the translated work (Descartes 1985) will be cited as 'CSM1,' the second (Descartes 1984) as 'CSM2,' and the third (Descartes 1991) as 'CSMK3.' Citations to original sources occurring in references to secondary literature will be altered to reflect this convention.

² This statement of (2) builds in the claim that CD entails that God has free control not just over which truths are necessary (eternal), but also over whether the actually eternal truths are true *simpliciter*. The latter claim is a stronger claim, and one may want, in the spirit of limited possibilism (discussed in §2), to assert, rather, a *prima facie* weaker iterative claim, namely: "it is possibly false that the eternal truths are necessarily true." One advantage of the kind of view I defend here is that it can render CD consistent even if it implies (2), in addition to this weaker claim (this is a point to which I'll return in the discussion of limited possibilism).

question: can CD be faithfully interpreted in a way which renders Descartes' total modal metaphysics consistent? Van Cleve (1994), for instance, argues that it cannot be consistently interpreted, though there is a long history of attempts. The extant attempts take a variety of tacks. Some approaches, most famously Frankfurt's (1977), seek to reject one of (1), (2), while others, including McFetridge (1990), seek to reinterpret the modal terms so that the apparent inconsistency is dissolved. My preferred approach, which is of a piece with McFetridge and, more recently, Saint-Germier (2018), invokes a distinction between multiple kinds of modality (hence the approach is *bimodal*). If the instances of 'possibly' and 'necessarily' occurring in (1) and (2) are read as expressing different kinds of modality, then these propositions may be consistent.

Bimodal accounts have been given in the literature. In fact, even Frankfurt's view involves a bimodal aspect, according to which Descartes does not claim that some *alethically* necessary propositions are *alethically* possibly false, but rather just that some *epistemically* necessary propositions are alethically possibly false (more on this in the next section). This last could happen if some propositions were possibly false, while being such that we could not conceive their possibility. While such an account gets something right about Descartes' modal metaphysics (indeed something about this story of conceivability is importantly right), a different bimodal account does a better job.

The kind of bimodal account developed by McFetridge, which I'll extend here, treats both modalities as alethic, so that while two different modal notions are at play, both concern metaphysical reality (and so neither has *just* to do with what a (human) agent can or cannot conceive). This move does seem to be a better fit for the central texts, but raises the question of how these two kinds of necessity are grounded – i.e. what features of metaphysical reality explain the difference between these two alethic modalities? There are a number of stories one could give here, but that which I defend here is *essentialist*. By claiming that Descartes is an essentialist I mean that he takes modal facts to reduce to (or be grounded in, or be true in virtue of, to be explained by...) facts about the essential properties (or 'essences') of things. Bimodalism falls out of this picture when we recognise that, for Descartes, there are two importantly different kinds of things with

essences, and from there infer that the essences of these different kinds of thing can ground different kinds of necessary/possible truth. The kind of view I have in mind may be called a *biessentialist* view.

The two kinds of things I have in mind here are, first, *God* and, second, *things created by God*. The second class includes everything which is not God. I'll argue that Descartes should be understood as an essentialist, in the appropriate sense, and furthermore that this distinction between kinds of essence is textually plausible. I'll aim to provide a plausible basis for the bimodal solution to the problem of CD in Descartes' metaphysics. I won't aim to resolve all potential problems with such an account, but where there are looming difficulties, I'll suggest what seem to me promising ways to resolve these. The upshot will be a story according to which both of the modalities in the bimodal solution are grounded in objects recognised by Descartes' metaphysics.

Let me start by considering three influential extant interpretations and, in passing, reviewing some of the key passages in which Descartes discusses CD and its consequences.

2. Some Extant Interpretations

Much of the discussion surrounding CD has taken place against a background of assumptions and claims made by two influential interpreters. These are Frankfurt (1977) and Curley (1984), and their proposed interpretations are *universal possibilism* and *limited possibilism* respectively. According to the universal possibilist reading, Descartes is committed to the view that every proposition is *merely possible*, and hence that Descartes is not committed to (1) above. Alternately, the limited possibilist reading has it that while Descartes is committed to (1), but is not committed to (2) as written, but rather just to:

(2') Eternal truths are possibly possibly false.

So long as one rejects that if ϕ is possibly possible then ϕ is possible (a version of the distinctive axiom of the modal logic **S4**), (2') is not inconsistent with (1). The limited possibilist invokes *iterated modalities* in order to render CD consistent, whereas the universal possibilist invokes Descartes'

(apparent) commitment to the claim that God's free creation of the world implies that nothing is necessary, and that God could bring about any state of affairs whatsoever. Almost as old as the limited possibilist line, and more important for my purposes, is the bimodal reading developed by McFetridge (1990), which seek to dissolve the apparent contradiction by reading (1) and (2) as concerning two distinct modalities.

I'll recapitulate the development of these three positions in some detail in order to bring out some of the terrain in which the discussion of CD takes place, and to trace the development of some key positions and views in the literature.

2.1. Frankfurt: Universal Possibilism

Frankfurt's interpretation is perhaps the most influential of recent accounts, though the main concern of many commentators is to avoid his conclusion: according to Descartes, every proposition is *merely* possible. To start, Frankfurt notes:

What Descartes calls 'eternal truths' are truths about essences. The Pythagorean theorem, for example, is (or purports to be) an eternal truth about what is essential to right triangles. Asserting that the eternal truths are laid down by God is tantamount, then, to saying that God is the creator of essences. (Frankfurt 1977, p. 38).

Evidence for this essentialist reading of eternal truths is available in a letter to Mersenne, among the earliest statements of CD:

You ask me by what kind of causality God established the eternal truths. I reply: by the same kind of causality as He created all things, that is to say, as their efficient and total cause. For it is certain that *He is the author of the essence of created things no less than of their existence; and their essence is nothing other than the eternal truths.* You ask also what necessitated God to create these truths; and I reply that He was free to make it not true that all radii of the circle are equal – just as free as He was not to create the world. And it is certain that *these truths are no more necessarily attached to His essence than are other created things.* (To

Mersenne, 27 May 1630, AT 1:152–53, CSMK3 p. 25 – my emphasis)

According to this passage, God has voluntary creative control over the essences of things, and those essences somehow determine the eternal truths. Thus since God has voluntary control over the essences of the objects He creates, He has voluntary control over the eternal truths.³ From this consideration, Descartes is led to the creation doctrine in virtue of some of his other, sometimes idiosyncratic, theological views: in particular, he holds a version of the Divine Simplicity thesis according to which God's will and intellect are the same faculty. God's believing a proposition does not, like for us, involve a movement in God's will following a light in God's intellect. Rather, they, being the same divine faculty, move in unison. Thus God's will is not constrained by considerations of what is necessary, good, or true. As Frankfurt puts it, "there are no truths prior to God's creation of them, His creative will cannot be determined or even moved by any considerations of value or rationality whatever." (Frankfurt 1977, p. 41). This remarkable view is espoused and defended in the replies to the sixth objections to the *Meditations*, which I quote at length:

As for the freedom of the will, the way in which it exists in God is quite different from the way in which it exists in us. It is self-contradictory to suppose that the will of God was not indifferent from eternity with respect to everything which has happened or will ever happen; for it is impossible to imagine that anything is thought of in the divine intellect as good or true, or worthy of belief or action or omission, prior to the decision of the divine will to make it so. I am not speaking here of temporal priority: I mean that there is not even any priority of order, or nature, or of 'rationally determined reason' as they call it, such that God's idea of the good impelled Him to choose one thing rather than another. For example, God did not will the creation of the world in time

³ Frankfurt (1977, p. 39) notes that the eternal truths concern not just the essences of existing things, but also the essences of things which God has not made to exist. Frankfurt suggests that such objects only have *objective existence* in the sense of being objects of awareness, but need not be really existing.

because He saw it would be better this way than if He had created it from eternity; nor did He will that the three angles of a triangle should be equal to two right angles because He recognized that it could not be otherwise, and so on. On the contrary, it is because He willed to create the world in time that it is better this way than if He had created it from eternity; and it is because He willed that the three right angles of a triangle should necessarily equal to two right angles that this is true and cannot be otherwise...(Sixth Replies, AT 7:431–432, CSM2 p. 291)

This makes it clear that Descartes takes God's act of creation to be totally unconstrained by considerations of truth or even necessary truth, and that these truths are themselves dependent on God's free will.⁴ Similar claims concerning the dependence of necessary truths on God's will are made in the following passage, from a few years after Descartes wrote the replies to the Sixth objection, which is noteworthy for the use of the law of non-contradiction as an example:

I turn to the difficulty of conceiving how God would have been acting freely and indifferently if He had made it false that the three angles of a triangle were equal to two right angles, or in general that contradictories could not be true together. It is easy to dispel this difficulty by considering that the power of God cannot have any limits, and that our mind is finite and so created as to be able to conceive as possible the things which God has wished to be in fact possible, but not be able to conceive as possible things which God could have made possible, but which He has nevertheless wished to make impossible. The first consideration shows us that God cannot have been determined to make it true that contradictories cannot be true together, and therefore that He could have done the opposite. The second consideration assures us that even if this be true, we should not try to

⁴ What makes this view so remarkable is, perhaps, best brought out by keeping Leibniz in mind as a foil to Descartes, as the distinction between God's will and His intellect, and furthermore the fact that God is compelled to create the best possible world, is the key move in Leibniz's theodicy.

comprehend it since our nature is incapable of doing so. (To Mesland, 2 May 1644, AT 4:118–119, CSMK3 p. 235)

The most important part for my purposes here is what is shown by the first consideration.⁵ There is dispute as to how to read “therefore that He could have done the opposite,” but on the simplest reading the opposite of making it true that contradictories cannot be true together is to make it that (some) contradictories *can* be true together.⁶ From this reading of the passage, Frankfurt draws the following conclusion:

God was free in creating the world to do anything, whether or not its description was logically coherent ...Descartes evidently thinks that God could have omitted creating the essence ‘circularity’ entirely. In that case there would be *no* eternal truths about circles...Descartes also evidently thinks that God, while creating the essence ‘circularity,’ could have made it different from what we conceive it to be. In that case there would be eternal truths about circles, but they would differ from – and perhaps be the negations of – the propositions that are necessarily true of circularity as we now understand it. (Frankfurt 1977, p. 42–43).

So the interpretation offered by Frankfurt is as follows: God is the creator of essences, and essences determine the eternal truths. God could have failed to create some essences He did, hence making some of the eternal truths

⁵ The second consideration is also important, as it raises the apparent possibility that what Descartes meant in these passages was *merely* that we are not in a position to judge the nature of God’s power, and the freedom in which He created the world. This reading, which takes Descartes’ point here to concern not what God’s nature is like but rather what we have warrant to assert about it, would seem to make Descartes’ claims here easier to come to grips with. I think, however, that while the 1644 Letter to Mesland supports this ‘deflated’ reading, the sixth replies, as well as a number of the other texts propounding CD, are more naturally interpreted as making claims about metaphysical reality itself, rather than about our ability to conceive it. For this reason, I’ll proceed, as I have, reading the texts in this metaphysically loaded way.

⁶ For comparison, see Ishiguro’s (1986) for her alternative reading of ‘doing the opposite’ in light of her account of Descartes on negation.

false. Furthermore, God could have made some essences to be different than we understand them to be, even in ways which are logically incoherent.

How are we to understand the 'could' in the passages above? Clearly it can't pick out logical possibility, as we have understood Descartes to claim that God could bring about the logically impossible. Frankfurt's proposal, put briefly, is that this "could" expresses metaphysical possibility, whereas the necessity of the eternal truths is merely *epistemic*. Eternal truths only *appear* to be metaphysically necessary to us because God has created our minds in such a way that we can't conceive of their falsity. To return to the problem as stated in §1, Frankfurt reads (1) as a fact about our minds – i.e. eternal truths only appear necessary to us given the nature of our minds – and (2) as a fact about what it is possible for God to bring about (see (Frankfurt 1977, p. 45) for details).

As a final point, Frankfurt considers a proposal, for which he cites Gueroult (1953), that God has unlimited control only over essences which are not His own. So, Gueroult claims, there are some genuinely necessary truths: namely, truths about God's essence, such as that God is omnipotent and is not a deceiver (Gueroult lists more claims, but these are the ones which matter for my purposes). Frankfurt rejects this, pointing to some passages in which Descartes seems to claim that God's powers are *fully limitless*, or at least that this the position we must take, in light of our epistemic position:

For my part, I know that my intellect is finite and God's power is infinite, and so I set no bounds to it; I consider only what I can conceive and what I cannot conceive, and I take great pains that my judgment should accord with my understanding. And so I boldly assert that God can do everything which I conceive to be possible, but I am not so bold as to deny that He can do whatever conflicts with my understanding – I merely say that it involves a contradiction. (To More, 5 Feb. 1649, AT 5:272, CSMK3 p. 363)

So Frankfurt solves the apparent contradiction between (1) and (2) by treating (1) as weaker than it first appears. Rather than using metaphysical necessity and so contradicting (2), (1) uses a kind of epistemic necessity, so there is only an apparent contradiction between them. There are a number of criticisms of universal possibilism, but the most substantial is that his weakening of (1) is a bad fit for Descartes' broader philosophical

commitments. Curley's arguments to this effect are quite persuasive, and it is to them, and his positive proposal, that I now turn.

2.2. Curley: *Limited Possibilism*

Curley (1984) develops his account, *limited possibilism*, in response to a suggestion from Geach (1973), according to which while the eternal truths are necessarily true, they are not *necessarily* necessarily true. So Curley's view accepts (1), but replaces (2) with the weaker:

(2') Eternal truths are possibly possibly false.

This dissolves the apparent contradiction in CD so long as Descartes is not committed to the distinctive principle of the modal logic S4, as mentioned above. So while Frankfurt seeks to weaken (1) to preserve coherence, Curley seeks instead to weaken (2). The key motivation for this move is that Frankfurt's weakening of (1) fails to do justice to the role played by eternal truths in Descartes' philosophy apart from concerns with CD. When discussing truths dependent on true and immutable natures in the *Meditations*, for instance, Descartes seems to commit himself to their necessity, and it seems that this necessity is significant for his broader project. Curley writes:

Consider the ontological argument. As Descartes expounds this, it requires the assumption that I conceive of countless things which have true, immutable and eternal natures, even though they may never have existed or have been thought of (*Fifth Meditation*, AT 7:64, CSM2 p. 44). These eternal natures do not depend on my mind; my thought does not impose any necessity on things, rather the necessity of the things themselves determines me to think of them in the way that I do...Moreover, not only do we perceive that the truths of mathematics are necessary, sometimes, at least, we perceive clearly and distinctly that they are necessary. If they aren't in fact necessary, then it looks as though Descartes will have to give up his criterion of truth. Not everything we perceive clearly and distinctly is true. (Curley 1984, p. 572)

So Descartes is committed not just to the conceptual or epistemic necessity of eternal truths, but to their metaphysical necessity. Some of Descartes'

discussion surrounding CD indicates not only that he thought that God could have willed the eternal truths false, but that He did, in fact, will them to be necessarily true. Consider the following passage, in which Descartes responds to an objection regarding the immutability of the natures in the *Meditations*:

You say that you think it is 'very hard' to propose that there is anything immutable and eternal apart from God. You would be right to think this if I was talking about existing things, or if I was proposing something as immutable in the sense that its immutability was independent of God. But just as the poets suppose that the Fates were originally established by Jupiter, but that after they were established he bound himself to abide by them, so I do not think that the essences of things, and the mathematical truths which we can know concerning them, are independent of God. Nevertheless I do think that they are immutable and eternal, since the will and decree of God willed and decreed that they should be so. (Replies to the Fifth Objections, AT 7:380, CSM2, p. 261)

So there is substantial evidence that Descartes is committed to (1) with 'necessity' understood in a robustly metaphysical sense. Limited possibilism, by contrast, provides a way for a truth to be both freely created and necessary in this robust sense. On this line, while eternal truths are metaphysically necessarily, God was not necessitated to will them to be necessarily true, and it is this latter claim which expresses God's freedom in creation (Curley 1984, pp. 579–581). Limited possibilism dissolves the apparent contradiction by turning on this difference between God's willing a proposition to be necessary and His being necessitated to will it, which distinction Curley expresses in terms of *iterated modalities*:

[The] suggestion is that we should understand Descartes's doctrine of the creation of the eternal truths as involving, not a denial that there are necessary truths, but a denial that those which are necessary are necessarily necessary...Descartes wants to allow that there are some propositions which are in fact impossible, but which might have been possible, and others that are in fact

necessary, but might, nevertheless, not have been necessary. There is nothing epistemic about these ‘mights.’ We are not saying: ‘These things *seem* necessary, but, for all we know they might not *be* necessary.’ We are saying: ‘These things *are* necessary, but there is nothing necessary about *that*.’ (Curley 1984, p. 581–583).

Limited possibilism can be stated in very simple terms:

(LP) For every proposition ϕ , ϕ is possibly possible.

Curley presents a positive argument for this thesis, using a natural deduction system and some modal premises which Descartes plausibly accepts.

Limited possibilism has been criticized by a number of commentators. McFetridge (1990, pp. 179–180) and Van Cleve (1994) both use a variation on Curley’s formal argument to prove *universal* possibilism also follows from similar premises. Van Cleve takes this to prove that Descartes’ metaphysics is inconsistent, whereas McFetridge just notes that it puts pressure on Curley’s view. Beside noting this logical property of Curley’s proposal, the general tenor of the criticisms of limited possibilism is that (2’) does not adequately capture Descartes’ commitments concerning CD, or that it somehow renders God’s powers *too weak*. A general version of this criticism against limited possibilism had been put forward by Plantinga (1980) before the publication of Curley’s paper, and versions have since been presented by Alanen (1985), Bennett (1994), Kaufman (2002), and recently by Saint-Germier (2018). Curley admits (Curley 1984, p. 590) that limited possibilism, as a modal theory, is not substantially more plausible than universal possibilism, but he seems to hold that something like limited possibilism is needed in order to render CD coherent, noting that CD “faces severe difficulties, even on the most charitable of interpretations.” (Curley 1984, p. 597).

2.3. McFetridge and Saint-Germier: Bimodalism

The general trouble with CD is that (1) and (2) cannot be coherently captured with one pair of modal operators which are connected by modal duality – i.e. that ‘ ϕ is necessary’ is equivalent to ‘it’s not possible that not ϕ ’ and ‘ ϕ is possible’ to ‘it’s not necessary that not ϕ .’ So if you understand

Descartes as countenancing only one kind of metaphysical modality, then (1) or (2) has to give. Frankfurt renders (1) in terms of epistemic necessity in order to make room for the possible falsity of the eternal truths, whereas Curley replaces (2) with (2') in order to make room for their metaphysical necessity. The most natural solution calls, rather than rejecting one of these, for a disambiguation of the terms occurring therein.

McFetridge, in the posthumously published (McFetridge 1990), defends a bimodal view of Descartes' modal metaphysics. McFetridge notes a deep ambivalence in Descartes' writing between whether eternal truths depend on our minds or not, which point has recently been reinforced by De Rosa (2011). Furthermore, he takes this ambivalence to be reflected in the two proposed solutions discussed previously. In short, universal possibilism seems plausible in light of the tendency in some of Descartes' writings to treat the necessity of the eternal truth as somehow epistemic, or determined by human minds and thinking, while limited possibilism seems plausible in light of the tendency in other of Descartes' writings to treat that necessity as mind independent, and hence more like alethic necessity. McFetridge invokes a bimodal solution:

In one sense, 'necessarily₁,' certain propositions are necessarily₁ true (though not necessarily necessary₁). In another sense, 'necessarily₂,' no truths are necessarily₂ true....Necessity in one sense would be, in another sense would not be, 'a function of the structure of our mind.' (McFetridge, 1990, pp. 180–181).

This account provides the grist for a simple solution to the apparent contradiction between (1) and (2), as sketched in the introduction. The trick is just to allow that while some propositions are necessary₁, this does not entail that they are necessary₂. If we allow that the eternal truths are necessarily₁ true and possibly₂ false, one can provide for a consistent disambiguation of the central passages concerning CD.

In fact, McFetridge builds in more substantial assumptions about the relative behaviour of his modalities. In particular, he assumes that no propositions are necessary₂, relying on passages, and some of the reasons, Frankfurt appealed to. He also singles out an instance of this, namely that no proposition is necessarily₂ necessary₁, as part of his explanation of the passages relied on by Curley, according to which while God willed the eternal truths to be

necessary (necessary₁), God was not necessitated (necessary₂) to will this. Finally and I'll come back to this point in §5, he argues that the set of possible₁ propositions must be identical to the set of conceivable propositions – i.e. these must be coextensive (McFetridge 1990, pp. 191–194). The reasoning in this passage, while I'll come to, seems to provide a fatal objection to the kind of epistemic/alethic bimodalism proposed by Frankfurt.

Saint-Germier (2018), working in McFetridge's bimodal framework, delves further into issues concerning the relationship between conceivability and possibility, some of which we'll come back to in §5. In addition, he (Saint-Germier 2018, pp. 4807–4811) argues, against Alanen (1985) and Kaufman (2002), that the modal-ity which expresses facts about what God could have done (McFetridge's "necessary₁") is a genuine modal notion, and so I refer the interested reader to that discussion in Saint-Germier's work.

The bimodal approach seems to be the best way to dissolve the apparent contradiction in CD, and the disambiguation strategy allows one to retain the important insights of universal and limited possibilism without falling into (the most obvious) pitfalls of either theory. Furthermore, McFetridge and Saint-Germier fill in the structure of such an account in some ways that allow us to develop important insights into the interplay of various modal notions at work in Descartes' philosophical work. There is, however, an avenue of improvement on this kind of bimodal theory, which I'll seek to follow, and a point of disagreement with McFetridge and Saint-Germier which falls out of the approach I follow.

The avenue of improvement concerns a point which McFetridge raises before going into the structure of his theory (McFetridge 1990, p. 175–176). He notes that CD commits Descartes to the view that the ground of the necessity₁ of necessary₁ truths seems to be contingent₂. That is, the ground, or explanation, for why an eternal truth is necessary₁ is that God willed it to be – but since God's will is free, God could have done otherwise. McFetridge notes this interesting aspect of Descartes' metaphysical picture, and draws some consequences, but does not say much about how necessary truths are grounded besides making an oblique reference to God's will. Saint-Germier also does not aim to provide a "full conceptual analysis of modality" (Saint-Germier 2018, p. 4809) for Descartes. That is, neither author seeks to provide an account explaining *why eternal truths are necessary*

(in whatever sense they are necessary). It would be an improvement on existing work in the bimodal interpretation of CD to provide an account which grounds/explains the necessity of the two kinds of necessary truths in appropriately Cartesian terms. One may respond that the weaker form of necessity (McFetridge's necessary₁) can be grounded in God's act of creation. This is surely correct, but it seems to me that more can be said about how this grounding works, and that saying more would lead further plausibility to the account. In the rest of the paper, I'll argue that the best story appeals to Descartes' *essentialism*.

Before moving on to this, I'll preface the point of disagreement. Both McFetridge and Saint-Germier follow the universal possibilist line in that they hold the the stronger notion, necessity₂, applies to no propositions. While I can see the reasons for adopting this, a bimodal account need not do so, and the biessentialist line I propose gives some reasons to think that there are some propositions which Descartes should take to be necessary even in the stronger sense. Namely, following Gueroult, propositions about God's nature are necessary in both senses. I'll discuss this point further in the next, and the last, section of the paper.

3. Essences and Two Modalities

I seek to argue that the bimodal disambiguation fits well with Descartes' broader metaphysical commitments, and I seek to do so in terms of attributing to him a species of essentialism. According to essentialism, as I use the term, modal truths are to be understood as reducible to essences, or collections thereof, according to (something like) the following schema:

- ϕ is necessary iff ϕ is made true by the salient essence(s).
- ϕ is possible iff ϕ is not made false by the salient essence(s).

For simplicity, I'll occasionally express the definiens of ' ϕ is possible' by saying that (the truth of) ϕ is *compatible* with the salient essence(s). Furthermore, I'll assume that any proposition is either made true by some essence or made false by some essence, so that ϕ is possible iff it is not necessarily false, and similarly that ϕ is necessary iff it is not possibly false.

3.1. What Are Cartesian Essences?

The kind of essentialism I attribute to Descartes here bears a notable resemblance to the essentialism which Embry attributes to Suárez. (Embry 2017). Embry argues that, in disputation 31 of *Disputationes Metaphysicae* (see (Suárez 1983, pp. 178–211), Suárez rejects a brand of essentialism developed by Henry of Ghent, according to which the essences which ground eternal truths in essences which “necessarily have essential being from eternity” (Embry 2017, p. 559), and replaces it with a view according to which essences, while grounding eternal truths, may be non-existent, enjoying only a kind of potential being (Embry 2017, pp. 558–561). Embry’s account relies on subtle features of Suárez’s metaphysics which need not concern us here, but the claim that non-existent (or merely potentially existent) essences ground necessary truths seems appropriately attributable to Descartes as well.⁷

The core of the account of Cartesian essences involves a few claims, for which well-known texts provide evidence:

- (a) The properties of essences are not determined by what we are able to conceive (see *Fifth Meditation*, AT 7:64, CSM2 p. 44–45, *Conversation with Burman* AT 5:160, CSMK3 p. 343).
- (b) Essences of created things are freely created by God (Letter to Mersenne, 27 May 1630, quoted above).
- (c) Essences ground (in some way) eternal truths (same as for (b))

Point (c) is needed in order to make grounding modal properties of propositions in properties of essences associated to those propositions (as I do here) plausible. There are a number of potential ways to think about the relationship between essences and eternal truths that’s consistent with Descartes’ commitments, the strongest of which holds essences and eternal

⁷ Alanen, Cronin, and Pessin (Alanen 1991, Cronin 1960, Pessin 2010) situate Descartes’ views surrounding CD in relation to his contemporaries and predecessors, and provide ample evidence of Suárez’s influence on Descartes. This influence is mostly negative, for instance in that some of Descartes’ examples in CD are clearly stated as the negations of some of Suárez’s claims (see Cronin), but this, by itself, doesn’t provide reason to think that Descartes was not influenced by Suárez’s essentialism, in broad strokes. This is the position I’ll defend.

truths to be *literally identical*, which get to if we take the 27 May 1630 letter to Mersenne at face value. For my purposes, all that's needed is that Descartes takes eternal truths to be true *in virtue of* essences, and this certainly is supported by that letter to Mersenne even if we don't attribute to Descartes this strong identity thesis.

Given that, point (b) indicates why God has free control over eternal truths – at least those which concern created things. For since God has free control over essences, and essences ground those eternal truths, then God has free control over the eternal truths. Finally, point (a) provides the grist for rejecting epistemic/alethic theories, that it is incorrect to think of the necessity of the eternal truths in purely epistemic, or conceptual, terms. This way, the essences are able to ground modalities which are genuinely metaphysical, insofar as they reflect an aspect of reality, rather than being reliant on what are able to conceive.

The issue of providing a clear and coherent account of Cartesian essences, and their ontological status, is itself a thorny interpretive problem. As De Rosa (2011) argues, there is a deep tension in Descartes' writing pulling between *Platonist* accounts of essences, which situate them in God's mind or decrees, and *conceptualist* accounts, which situate them in the human mind. She claims that this tension requires a deep rethink of the problem space, and the case for this is compelling.⁸

I am not able to resolve the difficulties raised by De Rosa here. I take it as plausible that Descartes is an essentialist in the sense I propose above, while admitting that there are difficulties with giving a compelling story

⁸ A broadly Platonist line is a better fit for my proposal, though I would, following Kenny (1968, pp. 155–156), emphasize the *Meinongian* (or, perhaps better, *Noneist*, in the sense of (Routley 2018, Priest 2016) aspect of Descartes' thought, according to which something may be non-existent while still, it would seem, potentially being the subject of our ideas and the grounds for the truth of propositions. It seems likely to me that a kind of Platonism which appealed to this Meinongian aspect may not contradict the apparent conceptualism of the *Principles*, in that it might allow for essences to be non-existent objects, except for the extent to which they can come to exist in our minds. This way, the story could go, essences, if they ever exist, exist in some mind, but that they needn't have this existence in order to have their essential properties, and so their having those properties is not determined by whether they do, in fact, exist in some mind.

about what exactly Cartesian essences are. For my purposes, the reduction of modal facts to essences is of the most importance, and, following Frankfurt, I take it that the cited texts above provide enough evidence to render this claim plausible.⁹ Having said this, in order to argue that the essentialist reading does provide for grounds for alethic modalities, rather than epistemic modalities, the account I need is broadly Platonist in character. Perhaps the most plausibly such account is Rozemond's *moderate platonism* (Rozemond 2008), according to which essences are dependent on God (and hence God's mind), but are independent of our minds. I won't go into more detail defending the use of this account, but will rather take it for granted.

3.2. Distinguishing Inner and Outer Modalities

There are two salient (collections of) essences which, substituted into the above schema, provide definitions of modalities which we should understand Descartes as employing. These are, first, God's essence and, second, the essences of created things. The latter class is invoked explicitly in explaining and justifying (2) in the letter to Mersenne (27 May 1630) cited above. The schema with the essences of created things defines what I'll call the *inner* or *i*-modalities (these are analogous to McFetridge's *l*-modalities):

- ϕ is *i*-necessary iff ϕ is made true by the essences of created things.
- ϕ is *i*-possible iff ϕ is not made false by the essences of created things.

As an example, it is *i*-necessary that triangles have three angles summing to two right angles because this proposition is made true by the essence 'triangularity'; nothing can have that essence without having three angles with this property. Furthermore, the proposition 'some triangle has a right angle' is *i*-possible in virtue of the fact that this property is compatible with an object being triangular (since there are right triangles), but 'some

⁹ Secada (2000) discusses a different sense in which Descartes is an essentialist, namely in that Descartes holds that knowledge of the essence of something precedes knowledge of its existence. While not of direct import to my work here, Secada's book provides interesting discussion of related topics, including the late Scholastic context of Descartes' metaphysics.

triangle has two right angles' is not, because the property 'has two right angles' is ruled out by being triangular.¹⁰

The other salient essence here is God's. Descartes does appeal to facts about God's nature in his philosophical work. For instance, Descartes claims that God's essence includes existence in §14 of Part 1 of the *Principles*. The same point is, more famously, made in the Fifth Meditation (AT 7:65, CSM2 p. 46), where it is claimed "existence can no more be separated from the essences of God than the fact that its three angles equal two right angles can be separated from the essence of a triangle." Here the point seems to be that we recognise existence as belonging to the essence of God in precisely the same way as we recognise properties belonging to the essences of mathematical objects.

God's essence provides the grist of what I'll call the *outer* or *o*-modalities (analogous to McFetridge's 2-modalities):

- ϕ is o-necessary iff ϕ is made true by God's essence.
- ϕ is o-possible iff ϕ is not made false by God's essence.¹¹

The solution to the problem with CD then relies on the claim that, for Descartes, there are many truths which, though they are guaranteed to hold in virtue of the essences of created things, both they, and their contradictions, are compatible with God's essence. While such truths are i-necessary, they are o-contingent, or *merely* o-possible. The import of CD is that every eternal truth not concerning God is like this. Expanding the example from before, while 'triangles have three angles summing to two right angles' is made true by the essence *triangularity*, it is not made true by God's essence. God's essence is compatible with it, so it's o-possible, but God's essence is also compatible with the opposite, 'triangles have three angles summing to something other than two right angles,' so this is also o-possible. While God created the essence *triangularity*, His essence does not ground its essential

¹⁰ With Descartes, I consider only *Euclidean* geometry.

¹¹ It is highly plausible that ' ϕ is o-necessary' implies ' ϕ is i-necessary' and that ' ϕ is i-possible' implies ' ϕ is o-possible,' so the truth conditions for the i-modalities should, strictly speaking, be stated in terms of 'the essences of created things or God's essence' rather than merely 'the essences of created things.' The truth conditions are stated in the slightly less correct manner for simplicity.

properties, and hence is compatible with it having other properties, or perhaps with there being no such essence.

With this picture, the apparent contradiction between (1) and (2) is resolved by reading them as follows:

- (1) Eternal truths are i-necessarily true.
- (2) Eternal truths are o-possibly false.

The eternal truths are necessary, but only in the sense that they are made true by the essences created by God, not in the sense that they are made true by God's essence itself. Furthermore, and this comes out as the radical part of Descartes' doctrine, God's essence is compatible with the falsity of the eternal truths, and even with the truth of propositions contradicting the eternal truths. This is the sense in which God was free to make it not true that all the radii of the circle are equal (To Mersenne, 27 May 1630) and that in which He "cannot have been determined to make it true that contradictories cannot be true together, and therefore that He could have done the opposite" (To Mesland, 2 May 1644). God's essence neither makes it true that all the radii of the circle are equal nor does it make it true that contradictories cannot be true together. The eternal truths associated with these things are all i-necessary, but o-contingent, and furthermore this is explained by appeal to the explanation of the modal properties of these propositions.

Bimodalism also explains the distinction, relied on by Curley, between God's making ϕ necessarily true and God's being necessitated to make ϕ true. In my framework, "God makes ϕ necessary" expresses the fact that ϕ is i-necessary, i.e. that God makes ϕ true by making the essences of creating things in the appropriate way. On the other hand, "God is necessitated to make ϕ true" expresses the claim that ϕ is o-necessary, so that its truth is grounded in God's own nature. On this way, the difference between the iterated modality reading and the bimodal reading can be cashed out in terms of the grounds of the necessities in question, rather than just in terms of the logical form of the central claims.

One more important point to note here is that on this reading not *every* eternal truth should be understood as *merely* o-possible, as God's essence does make some claims true. Examples of such claims which play an central role in Descartes' broader philosophical project are 'God exists' and 'God is

not a deceiver,' but there are many such claims which are plausible candidates: 'There is one unique God'; 'God has every perfection'; 'God is immutable.' Frankfurt, as well as Saint-Germier and McFetridge, hold that God's limitless power should be expressed in universal possibilist terms, according to which no proposition is necessary ('o-necessary' or 'necessary₁' for McFetridge and Saint-Germier). I differ in taking it that, since God's nature does ground some propositions, those propositions are o-necessary. One might worry that this winds up putting inappropriate *limits* on God's power. In response to this, I have a couple points.

The first is that, following Kaufman (2002, pp. 38–39), it is plausible to understand Descartes as committed to the view that something only counts as a *limit on God* if it comes from outside God. For instance, in the 27 May 1630 letter to Mersenne, Descartes is concerned to argue that eternal truths are under God's control *because* He is their author, and furthermore that these are not necessarily attached to his essence. (AT 1:152–153, CSMK3 p. 25) Furthermore in the Replies to the Sixth Objections, Descartes is concerned to indicate that the eternal truths are necessary only *because* God willed it, and that "nothing impelled Him to choose one thing rather than another." (AT 7:431–432, CSM2 p. 291) Finally, Descartes, in the Replies to the Fifth Objections, seems to indicate that God's will could be bound by previous decrees (in the analogy with Jupiter, the Styx, and the Fates – see Kaufman for discussion of this passage). This suggests that Descartes' main concern in not putting limits to God's power is to avoid positing something outside God which limits Him. This leaves room for the claim that God's indifference and freedom is compatible with constraints which come from God Himself. Since God's nature is not external to Him, constraints imposed by God having the nature He does are compatible with God's freedom, as Descartes is most concerned to defend it.¹² The creation can still be understood as free even in spite of the fact that God's own nature is not within His control in the same way that the natures of mathematical objects are.

¹² The letter to More 5 Feb. 1649 does see Descartes refusing to set bounds to God's power, but in light of this way of understanding the kind of freedom in question, it's not obvious that we have to read this passage in such a way as to motivate universal o-possibilism.

The second point is just to note that Descartes holds that, in contradistinction to the essences of created things, God is not His own efficient cause. In the replies to the fourth objections, Descartes writes “the phrase ‘his own cause’ [applied to God] cannot possibly be taken to mean the efficient cause; it simply means that the inexhaustible power of God is the cause or reason for his not needing a cause” (AT 7:236, CSM2 p. 165). The main reason, as I understand it, for taking (most) eternal truths to be o-possibly false is that God, in freely creating these things (as “their efficient and total cause,” Letter to Mersenne 27 May 1630), could have made them some other way. Since Descartes denies that God stands in this causal relationship to Himself (and presumably His essence), the main positive reason for taking these propositions to be o-possibly false is undercut. This provides a textual reason to deny that Descartes holds that God’s nature is under His control in the same way that the natures of mathematical objects are.

As a final point against universal possibilism, note that none of the passages cited so far (and these comprise most of Descartes’ writing on CD) explicitly concern propositions concerning God Himself. Descartes could have, following the 1644 letter to Mesland, claimed somewhere that “God cannot have been determined to make it true that He exists, and therefore He could have done the opposite.” The example Descartes chooses in this passage, the law of non-contradiction, is striking, but it’s not as striking as this. The other examples concern mathematical entities, and even whether there is a world at all (27 May 1630 letter to Mersenne), but none concern God Himself, or His nature. Given what Descartes does include in the scope of CD (almost every proposition), the fact that he didn’t take the one further step to consider examples about God is some evidence that the view was not intended to stretch *that* far.

I would like to caution against being misled by my, and Descartes’, occasional use of ‘God could’ locutions in order to express o-possibilities. For instance, when discussing CD, Descartes considers (in the 2 May 1644 letter to Mesland) those ‘things which God could have made possible, but which He has nevertheless wished to make impossible.’ On my reading, ‘God could have made ϕ true’ is just a way of expressing ‘ ϕ is o-possible.’ In particular, it should be noted that ‘God could have made ϕ true’ does not entail the i-possibility or o-possibility of a change in God’s will. Indeed,

since God is immutable, it would seem to be o-impossible for God's will to change. God's freedom to create the world other than it was created (or to not create the world at all, as per the letter to Mersenne, 27 May 1630) is not a matter of the possibility (of either kind) of God's will changing, but rather is just a matter of the falsity of propositions expressing those circumstances being compatible with God's essence.

This suffices to express the core part of my proposal, according to which Descartes' essentialism about modal facts, and consideration of two very different kinds of essence, leads him to adopt a bimodal metaphysics in virtue of which the apparent inconsistency in CD is rendered as *merely* apparent. This presentation of the biessentialist interpretation leaves many questions unanswered, but I take it that the essentialism is, in broad strokes, plausible as a reading of Descartes' modal metaphysics, and that in virtue of this the bimodalism is rendered more satisfying as a solvent for the apparent inconsistency in CD. While I can't hope to address every question concerning biessentialism and how it interacts with Descartes' myriad commitments, in the rest of the paper I will address two natural questions. The first concerns how we can understand logical truths to be grounded in essences, for Descartes, and the second concerns an upshot for biessentialism coming from the Fourth Meditation discussion of the truth rule.

4. Universal and Logical Truths

The examples of necessary truth I've discussed the most thus far are those concerning particular essences such as *triangularity*. It is easy to see how one might hold that necessary truths concerning triangles can be explained by appeal to the feature of this essence. Descartes, however, also considers the law of non-contradiction (LNC) as in the scope of CD. LNC is one of those propositions which, while necessary, is nonetheless such that God could have made it false. This example would seem to have broader import, insofar as its inclusion suggests that Descartes would consider all logical truths as in the scope of CD. In addition to logical truths, there are a number of plausible candidates for CD which concern properties which apply universally, such as "things that are the same as a third thing are the same as each other" (*Regulae* Rule 12) and "what is done cannot be undone"

(*Principles* Part 1, §49). How should we understand the necessity of these universal truths as grounded in the essences of created things?

It is reasonably plausible to hold, following Fine (1994) and Hale (2018), that eternal truths which hold regardless of the object in question (but which still concern properties of *objects*, and do not concern the truth of propositions, or other more clearly logical properties of propositions) are grounded in *collections* of essences of created things. The ground of the necessity of “the whole is greater than the part” can be explained in terms of the essences of any object which can have, or does have, parts. Then the necessity of this eternal truth is universal in being grounded not just in some essence or other, but in any essence of the appropriate kind of object. For those eternal truths which apply to every object whatever, the natural grounds of i-necessity would be the collection of all essences. For example, the necessity of the claim “everything is self-identical” is plausibly grounded in the necessity of the instances, each of which is grounded in the essence of the object in question. This kind of approach to grounding logical necessity has recently been suggested by Shalkowski (2004, p. 79) who suggests that “logical necessities might be explained as those propositions true in virtue of the natures of every situation or every object and property, thus preserving the idea that logic is the most general science.” It is, in any case, a plausibly essentialist explanation of the grounding of universal i-necessary truths in the essences of particular created things, and I don’t see any reason to think it’s incompatible with Descartes’ commitments. Having said that, it’s not obviously the right approach to take for logically necessary truths which seem to concern not objects but propositions, and their truth and falsity. Since LNC falls under this description, it seems that a different story should be given for such i-necessities.

I’ve mentioned Shalkowski, but in addition to him a number of contemporary essentialists have sought to provide accounts of how logical truths, and their necessity, can be explained by appeal to essential properties. Fine (1994) claimed that logical necessities are true/necessary in virtue of the natures of *logical concepts*.¹³ This kind of account leaves some flexibility for

¹³ This fits into Fine’s broader essentialism, according to which all necessities belonging to a particular domain or discipline (e.g. conceptual, logical, physical ...necessities) “are true in virtue of the characteristic concepts and objects of the

what the salient logical concepts are. According to one proposal, due to Correia (2012), these are *inference rules* in a natural deduction system; Hale proposes that certain *logical functions*, such as, perhaps, truth functions, provide the grounding; and Shalkowski (2004), in passing, suggests *truth bearers* or *propositions* themselves.

These are interesting accounts, but the difficulty with trying to read Descartes as potentially accepting any of them would involve restating them without appeal to the machinery of contemporary logic. This would seem to rule out an approach like Hale's, which builds in the apparatus of contemporary model theory. Having said that, both Correia's and Shalkowski's suggestions seem able to stand even if the contemporary machinery is removed. Furthermore, it seems that one could find room for something like either in Descartes' broader philosophical work. So I'll consider these two kinds of account in turn, and suggest how one could make Cartesian sense of them. I won't come down on one or the other as the best view, because I don't see overwhelming textual reasons in favour of either, and furthermore suspect that such reasons will not be forthcoming. Descartes' explicit discussions of logic, as studied by his predecessors and contemporaries, are few and mostly concern his unhappiness with the subject – see Gaukroger (1989), especially Chapters 1 and 2.¹⁴ This suggests that we'd be hard pressed to give a robust defense of any positive account of the grounding of logical necessities. So I'll aim only to sketch two accounts (which are not, as far as I can see, mutually incompatible), and claim that these indicate that an appropriately Cartesian essentialist reduction of logical necessities is possible.

4.1. *Grounding Logical Necessities in Inference*

Correia's account provides an interesting inroad in that it can be understood in terms of *inference* (Correia 2012, pp. 646–650). For Correia, logical

discipline,” while metaphysically necessary truths as those “which are true in virtue of the nature of all objects whatever.” (Fine 1004, p. 9–10)

¹⁴ It is worth noting, briefly, that while Descartes has little to say of logic that is kind, he does, in the Conversation with Burman, note that at least one of his complaints “applies not so much to logic, which provides demonstrative proofs on all subjects, but to dialectic, which teaches us how to hold forth on all subjects.” (Conversation with Burman, AT 5:175, CSMK3 p. 350)

necessities are true in virtue of the correctness of certain modes of inference; for example, an instance of the law of excluded middle “ ϕ or not ϕ ,” is logically necessary in virtue of the existence of a natural deduction proof of this proposition, from no premises, using the inference rules characterising disjunction and negation. The particulars of a natural deduction system are part of Correia’s account, but it seems that we can get a reasonable account even if we remove this part. One could simply say that it is logically necessary that ψ sentence follows from ϕ in virtue of the correctness of inferring ψ from ϕ , without any claim that such an inference must follow the patterns of any proof system. Similarly, one could say that ϕ is logically necessary just in case it is always correct to infer ϕ . Since it is always correct to infer an instance of LNC, this is logically necessary. What’s compelling about this kind of account is that Descartes, even while not generally concerned with the syllogistic, does concern himself with inference.

Gaukroger (Gaukroger 1989, Ch. 2) situates Descartes’ conception of inference within his broader views concerning how we obtain scientific knowledge, in particular against the background of the *Regulae* account of such knowledge as obtained through two intellectual processes: *intuition* and *deduction* (see especially Rule 3, AT 10:366–370, CSM1 pp. 13–15). The former “consists in grasping one proposition or in grasping a necessary connection between two propositions, and it is equated with clear and distinct perception” (Gaukroger 1989, p. 50). In contrast, Descartes defines deduction as “the inference of something as following necessarily from some other propositions which are known with certainty,” and he goes on to claim that “very many facts which are not self-evident are known with certainty, provided they are inferred from true and known principles through a continuous and uninterrupted movement of thought in which each individual proposition is clearly intuited.” (*Regulae* Rule 3) So a deduction consists in a chain of propositions, some early ones of which are intuited, such that we intuit the necessary connection between those next to each other in the chain, so that we go on to intuit the latter propositions, including whatever the deduction is seeking to prove. At first, we go through a deduction with the use of memory, but the goal is to eventually be able to think through this chain “so quickly that we no longer have to rely on memory, with the result that we ‘have the whole in intuition’ before us at a single time” (Gaukroger 1989, p. 50).

In fact, the most concrete example Descartes gives in the *Regulae* concerns chains of propositions, each of which, being categorical, involves the comparison of *objects*. The example is “all A is B, all B is C, therefore all A is C.” (*Regulae* Rule 14) He claims that the best way to think of this inference, and “all knowledge whatsoever” as involving comparisons between objects. He goes on to claim that such comparisons really do make up the bulk of our inferential activity, and discusses how we proceed from easy comparisons (where the objects share a nature) to more complex comparisons:

the business of human reason consists almost entirely of preparing for this operation [that of comparing two or more things]. For when the operation is straightforward and simple, we have no need of a technique to help us intuit the truth which the comparison yields; all we need is the light of nature. We should note that comparisons are said to be simple and straightforward only when the thing sought and the initial data participate equally in a certain nature. The reason why preparation is required for other sorts of comparison is simply that the common nature in question is not present equally in both, but only by way of other relations or proportions which imply it. The chief part of human endeavour is simply to reduce these proportions to the point where an equality between what we are seeking and what we already know is clearly visible. (*Regulae* Rule 14, AT 10:440, CSM1 pp. 57–58)

The claim above concerning a certain nature, or a common nature between some things, is suggestive of one approach to grounding necessary connections between propositions, and hence grounding deduction and logical necessity. A necessary connection between propositions, of the sort to support deduction of one from the other, may be supported by there being things described in the two propositions which share an essence, and hence some essential properties. For instance, both triangles and circles share the essence *geometrical figure*, and so some inferences involving propositions discussing these two figures may be grounded in these shared properties (such as their having sides, angles, an area, etc...). Then the necessary connection is grounded in the shared essential properties of two objects, and this grounds the correctness of some associated inference.

It should be noted that this reading of the passage above involves an analogy, because “nature” as it occurs in the *Regulae* does not seem to mean the same thing as “essence,” and its cognates, do in the rest of Descartes’ writings, given that the former are primarily mental entities, and furthermore can be present to a greater or lesser extent in an object. However, the analogy here seems plausible to the following extent: when making a comparison between two objects, we can recognise some shared essential properties, and furthermore these properties can ground a necessary connection between the objects, and some propositions concerning them.

4.2. *Grounding Logical Necessities in Truth Bearers*

The account sketched above explains the fact that the conclusions of an inference follow necessarily from the premises, but it is less obviously able to provide a compelling explanation of the fact that certain claims, not directly about inference, seem to be logically necessary. Furthermore, the logical claim which Descartes explicitly considers is one of these.

On the face of it, LNC seems to be a claim about *truth* rather than about individual objects. This presents the difficulty in finding a plausible essentialist basis, but also suggests that we look to what grounds truth for Descartes, in order to discover what may ground the necessity of LNC. Unfortunately, the nature of truth (of propositions, not of objects) is another of topic which gets little discussion in Descartes’ work. He seems to hold a version of the correspondence theory, as he claims “it is possible to explain the meaning of the word to someone who does not know the language, and tell him that the word ‘truth,’ in the strict sense, denotes the conformity of thought with its object.” (Letter to Mersenne, 16 October 1639, AT 2:596–597, CSMK3 p. 139)¹⁵ So, if we were to follow Shalkowski’s suggestion and seek to ground logical necessity in truth bearers, then we should identify the latter as *thoughts*.

In particular, the kinds of thoughts which matter here “are as it were images of things” (*Meditations* 7:36, CSM2 p. 25), which he calls *ideas*. Given that thought is the principal attribute of mental substance (*Principles*

¹⁵ Curley (1984, p. 572) notes the same passage as evidence that Descartes held a correspondence theory.

Part 1, §53), it's highly plausible that, for Descartes, individual ideas are either attributes or modes of that substance. Furthermore, the properties of individual ideas will be grounded in mental substance itself, and their necessary properties grounded in the essence, or attribute, of that substance. From this, the necessary properties of *truth*, since truth is a property of ideas, will be grounded in mental substance.

What LNC seems to claim is that it is not possible for a pair of contradictory ideas to conform to their object – they can't both be true. LNC, in stating a necessary property of ideas, is plausibly grounded in the ground of ideas. That is, it is a property of the nature of thought, the attribute of mental substance, that contradictory ideas cannot both be true. On this sketch, then, the necessity of logically necessary truths is grounded in the nature of the mind, rather than in the nature of any particular objects.

A natural worry is that such an account would wind up making logical necessities merely epistemic, rather than alethic, which is the kind of necessity I've claimed is enjoyed by eternal truths. I will just here note the difference between " ϕ is necessary in virtue of a thinking thing's being incapable of conceiving its falsity" and " ϕ is necessary in virtue of the nature of thinking beings." The former grounds the necessity of ϕ in *the fact that* we can't conceive its falsity, while the latter grounds this necessity in the nature of our mind (which itself determines what we are able to conceive). This difference is enough to indicate that the sketch above does render logically necessary truths as alethically necessary.

4.3. *Logically Necessary Truths*

The above sketches are merely sketches, and I doubt that more compelling stories are forthcoming from the text. I think, however, that these make it at least plausible that we can read Descartes as having an essentialist ground of logically necessary truths, however he understands these. Unfortunately, while he used LNC as an example in his discussion of CD, the rest of his work provides only hints as to how we should understand this – hence my goal has been to follow some hints, and to try to construct plausible stories from them.

5. God is O-Necessarily Not a Deceiver

An important question raised in §2.1 is that of delineating the scope of CD. Over just which necessary truths is God supposed to have free control? Put in terms of the vocabulary used here: which propositions are o-necessary? The point of contention here is whether God has free control even over eternal truths about Himself. On Frankfurt's line, God could have made it that He doesn't exist, that He is imperfect, etc..., since God could have made any truth false. Against Frankfurt, and in keeping Gueroult, my account has it that Descartes is committed to the claim that certain eternal truths about God are o-necessary. The reason for this is that some truths are made true by God's own essence, and hence are necessary in the strongest sense available. Examples of such truths are those ascribing essential properties to God such as existence, omniscience, eternity, and immutability. Descartes ascribes some of these properties to God, giving a list in the Third Meditation (AT 7:40, CSM2 p. 28), and furthermore more in the Fourth Meditation (AT 7:57, CSM2 p. 40) he ascribes certain perfections not just to God, but to God's essence: the meditator, after considering their own faculty of understanding, says "I at once form an idea of an understanding which is much greater – indeed supremely great and infinite; and from the very fact that I can form an idea of it, I perceive that it belongs to the nature of God." This suggests that omniscience, along with the other superlative properties Descartes ascribes to God in the previous meditation, should be understood as being ascribed to God's essence. This is in addition to Descartes' claims, in giving his ontological argument, that God's essence includes existence.

So on the biessentialist picture, there are a number of o-necessary propositions. I've already argued that this fact should not count against the picture, because we should not think of these propositions as *limiting* God, and in this section I'll provide an argument (apparently presaged by Spinoza) that "God is not a deceiver" is one of these. That this claim is o-necessary can already be seen by Descartes' claim that a will to deceive indicates an imperfection (AT 7:53, CSM2 p.37), and so is incompatible with the nature of a being, like God, which includes every perfection. There is, however, a further argument which is interesting in tying back to the Fourth Meditation more directly.

This point involves consideration of some finer points in Descartes' discussion of conceivability and possibility. McFetridge (1990) argues that Descartes is committed to the claim that ϕ is conceivable iff ϕ is possible (i-possible in the framework developed here). His defense of this interpretive claim relies on a passage in the replies to the second set of objections to the Meditations.¹⁶

If by 'possible' you mean what everyone commonly means, namely, 'whatever does not conflict with our human concepts,' then it is manifest that the nature of God, as I have described it, is possible in this sense, since I supposed it to contain only what, according to our clear and distinct perceptions, must belong to it; and hence it cannot conflict with our concepts. Alternately, you may well be imagining some other kind of possibility which relates to the object itself; but unless this matches the first sort of possibility it can never be known by the human intellect, and so it does not so much support a denial of God's nature and existence as serve to undermine every other item of human knowledge. (Second Replies AT 7:150-151, CSM2 p. 107 – my emphasis)

The upshot of McFetridge's reading of this passage is that Descartes is committed to the coextensivity of conceivability and i-possibility. In addition, there is good reason to suppose that Descartes is committed to the fact that this equivalence is not only true, but o-necessary. The argument proceeds by considering an i-possible world, and a brief remark is in order

¹⁶ As some background, Descartes is responding to Mersenne's criticism of Descartes' argument in the fifth meditation that God exists. Mersenne holds that what Descartes shows in that meditation is only that existence belongs to the nature of God, but not that God exists because Descartes has not successfully argued that God's nature is possible. (CSM2 p. 91) Descartes takes Mersenne to open the argument with the major premise "That which we clearly understand to belong to the nature of something can be truly asserted to belong to its nature." (CSM2 p. 106) In the following passage, he gives a better major premise for Mersenne's argument, and goes on to argue that our clear and distinct perception of God's nature does provide us with knowledge that God's nature is possible. This provides direct textual evidence that "God is possible" is also o-necessary.

about this. I have not claimed that Descartes' modal metaphysics should be understood as invoking alternative worlds in order to explain necessity and possibility, and furthermore such a view would, I think, have a much harder time getting off the ground than the biessentialist view does.¹⁷ Having said that, the ascription of possibility to a proposition does seem, conceptually, to involve a kind of *alternativeness*, as Saint-Germier (2018, p. 4809) puts it, which suggests that if ϕ is possible, then there is (in some sense of "there is") a way for ϕ to have been true. While this needn't be explained by the existence of a possible world, it does seem to permit us to consider and, as far as possible, reason about what would or might have been the case had ϕ been true. This seems to be the case even if we take facts about modality to be reducible to essences, as I have it here. With this in mind, I'll sketch an alternative in which God is not a deceiver, and suggest that it should be ruled out by Descartes' lights.

Suppose, counter-i-possibly, that God had created the world so that different eternal truths were true, and that some of the actual eternal truths were false. If God is o-possibly a deceiver, then He o-could have created the world to have thinking things in it, and furthermore could have given those things the same faculty of conceivability that we enjoy. In this scenario, it could be that a thinker, in employing their intellectual faculties perfectly soundly (i.e. carefully distinguishing their ideas, refraining from judgment until their intellect clearly and distinctly perceives...) may come to error. That is, they may conceive that some proposition is necessary (say, that " $2+2=4$ ") which, given the creation of the world, is false. This conception may be perfectly clear and distinct, understood by their intellect, and they may go on to employ their will and come to believe it, perhaps in a way which is "wholly free" (AT 7:58, CSM2 p. 40). In so doing, they land in error through no fault of their own. This is precisely the scenario Descartes seeks to rule out in the Fourth Meditation defense of the truth rule. Since such a scenario is o-possible when God is

¹⁷ Though there is a remark in *The World* (AT 11:47, CSM1 p. 97) involving some discussion of what might have happened if God had created many worlds, this is not clearly about possible worlds in the sense usually meant today, and this passage is not invoked in the argument I'll give here.

o-possibly a deceiver, we, and Descartes, should conclude that God is o-necessarily not one.¹⁸

This argument is presaged by Spinoza in his *Metaphysical Thoughts*, Part II, Chapter IX (Spinoza 1985, pp. 332–333), where he writes “if God had created things in another way, he would at the same time have constituted our nature so that we would understand things just as they had been created by God.” Some care must be exercised in determining how exactly to read this passage, but it seems plausible to me that Spinoza is deducing a consequence of Descartes' views, as Spinoza understands them. In any case, the argument Spinoza gives is similar to that which I give here, regardless of his intentions in composing the salient passage.

The fact that conceivability is coextensive with i-possibility does not mean that Descartes is committed to the claim that conceivability is coextensive with o-possibility. In fact, he seems to commit himself to the view that there are o-possible, inconceivable propositions. This is evidenced in the text of the 2 May 1644 letter to Mesland. God has created our minds, and our faculty of conceivability, to match what he chose to make possible (what is i-possible) not what he could have made possible, but didn't (what is o-possible).¹⁹ A more general upshot for the interaction between this reading of CD and Descartes' epistemic project is that for the purposes of vouchsafing certain knowledge, i-necessity is necessity enough. Put in slightly different terms, the mere o-possibility of some i-impossible ϕ doesn't have an adverse impact on our epistemic lives. We're not epistemically worse off for not being able to conceive propositions which are i-impossible but o-possible.

¹⁸ This argument is meant as a supplement to the point that God's non-deception is o-necessary in virtue of His nature, but is natural enough, and so closely related to the point of the Fourth meditation, that it seemed to me worth concluding.

¹⁹ I assume that the i-possibility of ϕ entails the o-possibility of ϕ , and thus ϕ is o-possibly i-possible only if ϕ is o-possible. (This also involves the assumption that both modalities obey the **S5** properties – in particular, the assumption that possible possibility entails possibility, for both i- and o-possibility.) So it does not introduce a confusion to read ‘what God could have made possible’ in this passage from the correspondence with Mesland as ‘what is o-possible,’ rather than as ‘what is o-possibly i-possible.’

A fuller discussion of a bimodal approach to questions concerning conceivability and possibility in Descartes is available in Saint-Germier (2018), which provides a compelling account of the upshots of a bimodal account for Descartes' modal epistemology. The treatment of the issue here is to provide some bimodal reasons for admitting, against Frankfurt, the existence of some o-necessary propositions (against those delivered by the essentialism itself), and to give some indication of how conceivability fits into the picture I endorse.

6. Conclusion

In this paper I have developed a *biessentialist* interpretation of Descartes' creation doctrine. I have presented the basic view, providing textual evidence where possible, and giving, hopefully plausible, conjectures where not. In so doing, I have sought to improve on the bimodal picture by arguing that the pair of modalities used to resolve the contradiction in the creation doctrine can be explained in essentialist terms, and furthermore that this is a good fit with Descartes' overall metaphysical commitments. The account has room for improvement, and I cannot claim that it is watertight, but it seems to me plausible and, if it, or a variation on it, works, then it will allow us to see the creation doctrine as a natural part of Descartes' broader metaphysical commitments.

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