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Iterated Modalities and Modal Voluntarism

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RESUMEN

Descartes adopta el *voluntarismo modal*, de acuerdo con el cual todas las verdades necesarias son producto del libre albedrío de Dios. El voluntarismo modal amenaza con conducirnos hacia un punto de vista fuertemente problemático, el *posibilismo universal*. De acuerdo con esta posición las contradicciones son, en algún extraño sentido, posibles. Edwin Curley ha argumentado que, apelando a las modalidades iteradas, Descartes sería capaz de defender el voluntarismo modal sin caer por ello presa del posibilismo universal. En este artículo defiendo que el enfoque de Curley no tiene éxito: lleva de hecho al posibilismo universal y no desempeña su función precisamente allí donde se supone que ha de ser útil.

ABSTRACT

Descartes endorses *modal voluntarism*, according to which all necessary truths are products of God's free will. Modal voluntarism threatens to lead into a deeply problematic view: *universal possibilism*, according to which contradictions are in some bizarre sense possible. Edwin Curley has argued that by appealing to iterated modalities, Descartes would be able to defend modal voluntarism without falling prey to universal possibilism. In this paper I argue that Curley's approach fails: it in fact leads to universal possibilism, failing precisely where it is supposed to be useful.

INTRODUCTION

In April 1630, in his correspondence with father Mersenne, Descartes expresses his peculiar view about the origin of necessary truths, or, to be exact, *eternal truths*. According to Descartes's *modal voluntarism*, eternal truths have been "laid down by God and depend on him entirely no less than the rest of his creatures."¹ Nothing, Descartes holds, necessitates God to create any of his creatures, and, as creations of God, necessary truths are just as free products of God's will than the rest of his creatures. In Descartes's philosophy, eternal truths proceed from God, not the other way around; the root of all truths is God's free and unlimited will.

Modal voluntarism is in a sharp contrast with scholastic intellectualism, notably defended by the Spanish *Doctor Eximius et Pius*, Francisco Suárez, who writes that eternal truths...

[...] are not true because they are known by God, rather they are known because they are true, otherwise no reason could be given why God necessarily knows that they are true, for if their truth proceeded from God himself, that would happen by means of God's will, so it would not proceed necessarily but voluntarily [...] [Suárez, *Disputationes Metaphysicae*, XXXI, xii, 38-47, quoted in Curley (1984), pp. 585-586].

Which position has more plausibility? If we accepted that there is an omnipotent and omniscient God, should we opt for an intellectualistic framework, in which eternal truths are independent of God's will, or should the voluntarist have the final say on this matter? One of the ways of assessing this question is to concentrate on the problems that each theory incurs. Here I shall concentrate on a particular problem involved in modal voluntarism, and evaluate a particular attempt to neutralize the problem.

Now, God's freedom with respect to the production of necessary truths quite quickly leads to a serious problem. If an agent's act is free, it is obviously possible for her not to perform this act; if I freely have my hair cut off, it is possible for me to have my hair cut in some other fashion, or to pass by the barber's shop and let my hair grow. Acting freely involves being free to do otherwise, so if we supposed that God has freely created all eternal truths, we perhaps should also suppose that God was able to do otherwise. But what could 'doing otherwise' in this case mean? As far as necessary truths are free creations of God, it seems that, in creating them, God is free to do absolutely anything, whether or not its description is logically coherent [Frankfurt, H. (1977), p. 42]. Contradictories, in a bizarre sense, thus seem to become possible for God. Descartes, then, seems to be committed to *universal possibilism*, the view that absolutely everything—including contradictions—is possible.

Edwin Curley has made an interesting attempt to interpret modal voluntarism in a way that is designed to avoid reading Descartes as a proponent of universal possibilism [Curley (1984)]. According to Curley, modal voluntarism is best expressible in terms of *iterated modalities*. The crux of his interpretation is that, according to modal voluntarism, no contradictory proposition is possible, but every proposition is possibly possible. Thus, modal voluntarism only implies that eternal truths such as " $2 + 2 = 4$ " are not necessarily necessary; it does not imply that such truths are not necessary. In this paper, I argue that Curley's interpretation fails. Indeed, Curley himself points out that his interpretation includes problems, but he does not consider them serious enough to abandon the interpretation, because he holds that Descartes's doctrine is "best expressed" in terms of iterated modalities [Curley (1984), p. 594].

Curley further holds that the “iterated modality interpretation avoids the horrendous systematic consequences of the simple modality interpretation.” [Curley (1984), p. 593]. According to the simple modality interpretation, Descartes was committed to the view that contradictions are possible, whereas according to Curley’s interpretation Descartes was only committed to the view that contradictions are possibly possible. Notice that it is crucial to Curley’s approach that the iterated modality interpretation can be distinguished from the simple modality interpretation. According to Curley, the iterated modality interpretation offers a way to overcome the troubling thesis of universal possibilism, whereas the single modality interpretation does not.

In the first section, I shall formulate Curley’s main interpretive approach. The second section will include a discussion of theoretical requirements included in Curley’s approach. In the third section, I shall first formulate two critical points already set forth by Curley himself. To this extent, my treatment will be expository. However, I shall finally formulate criticism that I find conclusive against Curley’s interpretation. My main argument will have the conclusion that Curley’s interpretation in fact leads to universal possibilism, thereby boiling down to an ineffective attempt to overcome the unwelcome consequence of the single modality interpretation.

I. THE ITERATED MODALITIES INTERPRETATION

Descartes writes to Mesland as follows:

And even if God has willed that some truths should be necessary, this does not mean that he willed them necessarily; for it is one thing to will that they be necessary, and quite another to will this necessarily, or to be necessitated to will it [Letter to Mesland, 2 May 1644, CSMK III, p. 235; AT IV, pp. 118-119].

According to Curley, this passage provides “quite explicit textual basis” for the view 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.” [Curley (1984), pp. 581, 582].

Supposing that some of Descartes’s writings give an initial ground for setting forth the iterated modality interpretation, we should further ask what the benefits of this interpretation are, compared to the view that Descartes is committed to universal possibilism. Why should we not interpret Descartes as a proponent of universal possibilism? Curley argues that Descartes cannot have accepted universal possibilism, since it would have undermined his whole philosophical system. If Descartes accepted universal possibilism, serious problems would arise in connection with (i) the thesis that God exists

necessarily; (ii) the ontological proof for God's existence;² (iii) clarity and distinctness as the criterion of truth;³ (iv) the centrality of the eternal truths in Descartes's physics;^{4,5} (v) the proof for the real distinction between mind and body.⁶ Perhaps some of the difficulties which Curley raises here are not as obvious as others, but I believe he is right in thinking that there are serious systematic reasons for rejecting the view that Descartes is a partisan of universal possibilism [see also Alanen (1988), p. 185.] Now, if universal possibilism can be rejected within the iterated modality interpretation, Curley's approach has, at least, the merit that it avoids the unwelcome systematic consequences included in the simple modality interpretation. In order to see how and whether Curley's interpretation can earn this merit, let us proceed to discuss his interpretation in more detail.

The iterated modality interpretation emphasizes the concept of will. This is obviously a very important notion, because modal voluntarism traces the roots of modality to God's will. Curley argues that from (i) an intuitive principle about willing and (ii) the fact that modalities are anchored to God's will, we reach a result that (iii) necessary propositions are not necessarily necessary [Curley (1984), pp. 580-581]. To understand this argument, let us first formulate its two main premises. Firstly, the intuitive principle about willing is that the nature of will includes the possibility of alternative actions. This principle can be expressed as follows:

(P1) For every subject s and every proposition p , if s wills that p , it is possible for s not to will that p .⁷

Secondly, the fact that modalities, or all truths for that matter, are anchored to God's will, is the following:

(P2) For every proposition p , p is true if and only if God wills that p .

Now, consider any necessary proposition, say, p . From this proposition, $\Box p$, and (P2), it follows that God has willed that $\Box p$. This consequence, together with (P1), implies that it is possible for God not to will that $\Box p$. This, together with (P2), finally implies that it is possible that p is not necessary,⁸ or equivalently, that p is not necessarily necessary, but possibly possibly false. Arguably, then, modal voluntarism leads to the view that every proposition—be the proposition contradictory or not—is possibly possible. However, we are led to ask whether this conclusion commits the proponent of modal voluntarism to accept universal possibilism. Indeed, $\Diamond\Diamond p$ certainly seems to imply $\Diamond p$! If this implication could not be blocked, the iterated modality interpretation would be nothing but the simple modality interpretation in disguise. However, if there was a means to block the implication, the iterated modality interpretation could make sense of modal voluntarism without arriving at universal possibilism; it would preserve the necessity of eternal

truths, and maintain voluntarism as a thesis according to which God can make eternal truths *possibly* false, even though he cannot make them false.⁹ In the next section, I shall discuss the theoretical postulates of the view according to which the first-order and second-order modalities can be distinguished as called for here.

II. THEORETICAL REQUIREMENTS: NON-NORMAL WORLDS

Let us call the following formula *the crucial formula* of the iterated modality interpretation:

$$(CF) (\forall p) (\diamond\diamond p),$$

or equivalently,

$$(CF) (\forall p) (\neg \Box \Box \neg p).$$

(CF) expresses the fundamental idea in Curley's interpretation: every proposition is possibly possible, and no proposition is necessarily necessary. Since the iterated modality interpretation does no harm to the necessity of eternal truths, it also includes the following thesis which express that there *are* necessary truths:

$$(ET) (\exists p) (\Box p),$$

or equivalently,

$$(ET) (\exists p) (\neg \diamond \neg p).$$

As the crucial formula (CF) and the thesis (ET) above show, the main idea of the iterated modality interpretation is that first order modalities and second order modalities are distinguished from each other, and we are led to ask what manoeuvres should be made in order to draw this distinction.

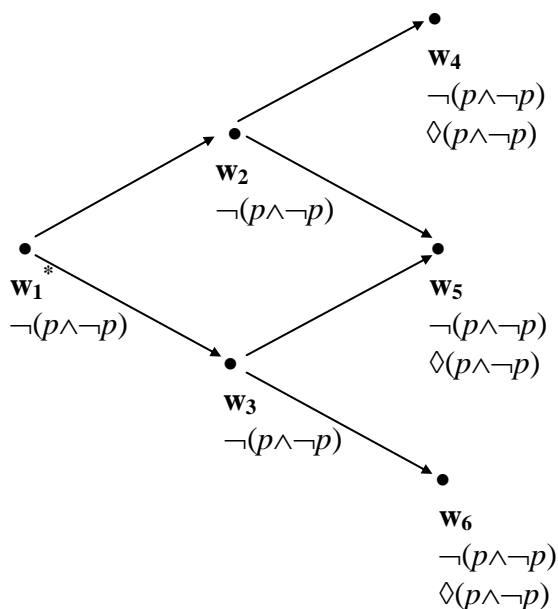
There are systems of modal logic in which the proposition $(\forall p) (\diamond\diamond p)$ is a logical truth, but in which contradictions are false in every possible world. Curley believes that these kinds of systems are somewhat suspect [Curley (1984), p. 590], and holds that even if (CF) were the best formula for expressing Descartes's modal voluntarism, Descartes would be not much better off than if he accepted universal possibilism [Curley (1984), p. 592]. However, because Curley holds that the iterated modality interpretation avoids universal possibilism and its unwelcome consequences, he prefers the iterated modality interpretation over the simple modality interpretation.

The modal systems Curley refers to are those that include accepting so called non-normal worlds—worlds which can be characterized as follows:¹⁰

1. The valuation rules for non-modal formulae are the same as in normal worlds.
2. The valuation rules for modal formulae deviate from those of normal worlds: be p assigned the value 1 or 0, $\diamond p$ is always assigned the value 1.
3. Each non-normal world is accessible to at least one normal world.
4. No world is accessible to a non-normal world.

The first two conditions are of special importance. They enable us both to admit worlds in which contradictions are possible and deny that contradictions are true in some world. The following scheme below represents a model in which non-normal worlds are accepted.¹¹ In this model M , both the crucial formula (CF) and the formula (ET) can be accepted.

MODEL M



The worlds w_4 - w_6 are non-normal. In all of them, the proposition $\diamond(p \wedge \neg p)$ is true, even though the proposition $p \wedge \neg p$ is false in every world. Now, in the non-normal worlds, any proposition is possibly true, and hence, in the normal worlds, any proposition is possibly possible. This implies that the crucial formula (CF) is true in every world of the model, including the actual world. Nevertheless, universal possibilism does not seem to apply, because contradictions are false in each world. There is no world in which $p \wedge \neg p$ is true.

III. PROBLEMS

A. Pseudo-Modalities

Consider the model M presented above. If we suppose that the accessibility relation in the model is transitive, the proposition $\diamond\diamond(p \wedge \neg p)$ is valid in the model. Furthermore, it is valid even though $p \wedge \neg p$ is false in each world. This seems very problematic. We are led to wonder how we can make sense of alethic possibility in any of the non-normal worlds. For in those worlds possibility means something completely different than truth in some accessible world. As Curley himself observes, the valuation rules for modal formulae in the non-normal worlds seem not to be rules for genuine modal operators at all [Curley (1984), p. 592], at least what comes to the possibility operator.

We can further elucidate the problematic issue at hand as follows: from the point of view of accessibility, non-normal worlds are similar to what Segerberg has called *dead ends*: non-normal worlds, by definition, are in complete lack of alternatives [See also Segerberg (1971), p. 93]. Therefore, we can say that any proposition p is necessary in a dead end. That is, necessary in the sense that p is true in every world accessible to a dead end, there being none. But this kind of concept of necessity is clearly vacuous or trivial [see also Hughes and Cresswell (1984), pp. 34-35]. In fact, in the case of a *Verum* system [Hughes and Cresswell (1984), pp. 34-35], characterized by the class of all models in which every world is a dead end, the modal system partly collapses into (non-modal) propositional calculus. The necessity operator can be treated as a *Verum Functor*. We can call it a Verum Functor since it makes a true proposition out of any proposition. When a Verum Functor is joined to p , the resulting proposition comes out true, regardless of p 's truth value in any world. The necessity operator in Verum models,¹² in being a Verum Functor, is not a genuine modal operator at all.

As far as the truth-values of modalized formulae are concerned, non-normal worlds are unlike dead ends: whereas in dead ends $\Box\alpha$ is always true and $\diamond\alpha$ always false, in non-normal worlds the case is the opposite [Hughes and Cresswell, (1984), p. 9 n8]. Nevertheless, both dead ends and non-normal worlds have their own verative functors. Whereas in Verum system the ne-

cessity operator is a Verum Functor, this same role is played by the possibility operator in a *non-normal* system, that is, a system characterized by the class of all models in which every world is non-normal. The difference between the two kinds of systems is that a different sign is used to stand for the Verum Functor. Just as the necessity operator is not a genuine modal operator in Verum models, the possibility operator, in being a Verum Functor, is not a genuine modal operator in non-normal models.¹³

Thus, non-normal interpretation leads to a partial modal collapse. However, on Curley's behalf it could be said that if the iterated modality interpretation could avoid the attribution of universal possibilism to Descartes, we perhaps would still have a good reason to prefer the iterated modality interpretation over the simple modality interpretation.

B. Equivocation on 'Possible'

The iterated modality interpretation contains the further problem that it implies an equivocation on the concept of possibility [Cf. Curley (1984), p. 592]. It contains *both* the sense of 'possible' that fits better with our modal intuitions *and* a completely counterintuitive one. According to the one that fits better with our intuitions, possibility means the same as truth in some possible world. The deviating one is describable in terms of the Verum Functor discussed above. To see that the equivocation occurs, think about the following two requirements of the iterated modality interpretation. Firstly, in order to avoid universal possibilism it requires that:

(P1) There is no world in which a contradiction is true.

This requirement can be translated as:

(P1') Contradictions are not possible.

Another requirement, which stems from the attempt to make the crucial formula (CF) a logical truth, is:

(P2) There are non-normal worlds.

The requirement (P2) commits its proponent to the existence of non-normal worlds. When these worlds are concerned, the possibility operator makes a true statement out of any statement—including contradictions.

In the non-normal worlds it is true that, say, $\diamond(p \wedge \neg p)$. But since $p \wedge \neg p$ is a contradiction, the non-normal worlds seem to tell us the following:

(P2') Contradictions are possible.

(P1') and (P2') are contradictory. Nevertheless, we see that in fact no contradiction occurs because the concept of possibility in (P1') is different than that included in (P2'). The one in (P1') is the ordinary possible world sense of

possibility, while the one included in (P2') is the deviating one. Even so, the use of these two senses of 'possible' in explicating modal voluntarism is very suspect. We should, I find, require that the concept of possibility does not suffer any equivocations when used in the explication of modal voluntarism. Curley, however, believes that Descartes's modal voluntarism "faces severe difficulties even on the most charitable of interpretations" [Cf. Curley (1984), p. 597], the problem of equivocation presumably being one of them.

C. *Iterated Modalities and Universal Possibilism*

I shall now turn to the criticism I consider decisive against Curley's interpretation. The core of my criticism is that Curley's interpretation fails precisely where it is meant to succeed — it fails to avoid interpreting Descartes as committed to universal possibilism.¹⁴

Now, in each non-normal world, contradictions are possible. This is to say that in each non-normal world, universal possibilism holds good. Now, could God not have actualized a non-normal world? I believe that actualizing a non-normal world is not particularly difficult for the omnipotent God. What reason do we have, ultimately, to think that if there are non-normal worlds, we do not actually inhabit such a world? How can we be sure that the non-normal worlds are at least one accessibility step away from the actual world? If we were inhabitants of a non-normal world, universal possibilism would apply in our world.

To make the problem even more serious, recall the two principles (P1)¹⁵ and (P2)¹⁶ in Curley's argument discussed above. Let us now introduce a new principle (P3):

(P3) If necessarily p , then p .

The truth of (P3) seems unquestionable. Now, consider any necessary proposition $\Box p$. This proposition and (P3) imply that p which, together with (P2), implies that God wills that p . From this and (P1) it follows that it is possible for God not to will that p . Finally, together with (P2), this implies that it is possible that p is false, which is to say that a necessary truth is possibly false. The principles (P1) – (P3), I presume, are true in every world, most importantly the actual world, so the consequences of those principles are also true in every world.¹⁷ Therefore, the final conclusion is that Curley's principles (P1) and (P2), together with the principle (P3), lead to the result that, in every world, it is possible that p is false. This is to say that universal possibilism applies in every world, which is simply to say that universal possibilism, on the iterated modality interpretation, is a valid doctrine. Approaching Descartes's modal voluntarism in terms of iterated modalities thus leads to the same "horrendous" consequences as the simple modality interpretation. Thus, I believe Curley is wrong in saying that Descartes would not be much better off if he

endorsed the iterated modality interpretation than if he accepted universal possibilism. In fact, Descartes would be *no* better off, because the iterated modality interpretation is just the simple modality interpretation in disguise.

IV. CONCLUDING REMARKS

Curley is aware that his interpretation of modal voluntarism faces difficulties. However, despite the problems he is aware of, he holds that the best approach to Descartes's modal voluntarism is in terms of iterated modalities. Curley's reason to hold that the iterated modality interpretation is the most charitable one is, I take it, that he believes it can can dodge the "appalling" doctrine of universal possibilism [Curley (1984), p. 592]. In this paper I have argued that here the iterated modality interpretation fails to do this, and therefore the only reason for preferring it over the simple modality interpretation is undermined.

For all I have said, the question whether Descartes really is committed to the view that contradictions are possible, remains open, and thus the conclusion of this paper is negative. However, I am strongly inclined to believe that an interpretation which can make sense of Descartes's modal voluntarism without entailing universal possibilism can be formulated, but the task of construing and assessing such an approach lies beyond the scope of the present paper and has to be tackled on another occasion.¹⁸

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NOTES

¹ [Letter to Mersenne, 15 April 1630, CSMK III, p. 23; AT I, p. 145.] CSMK III is an abbreviation of Descartes, R., *The Philosophical Writings of René Descartes: The Correspondence*, vol. 3. AT is an abbreviation of Adam-Tannery, editors of Descartes, R., *Œuvres de Descartes*.

² If the necessities human reason discovers are mere subjective necessities, completely isolated from metaphysical modality, the necessity of God's existence that we discover only expresses something about our own contingent nature, not whether it really is necessary that God exists.

³ Curley writes: "[...] 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.” I find that Curley moves too fast from our perceiving as necessary something which, in fact, is not necessary to the conclusion that clarity and distinctness as a criterion of truth should be given up. What Curley says seems to lead to the abandoning of clarity and distinctness as a criterion of necessity, but not straightforwardly to giving it up as a criterion of truth [Curley (1984), p. 572].

⁴ Only if the laws of nature are true in all possible worlds, physics can be *a priori* to the extent that Descartes thinks it is.

⁵ Of the first three difficulties, see Curley (1984), pp. 571-573.

⁶ [Curley (1978), p. 198.] An important premise in Descartes’s argument for mind – body dualism is that everything which the meditator clearly and distinctly understands is capable of being created by God so as to correspond exactly with the meditator’s understanding of it [Sixth Meditation, CSM II, p. 54; AT VII, p. 78.] According to Curley, Descartes argues from (i) the meditator’s capability to have a complete understanding of mind apart from body and vice versa, and (ii) God’s capability to make this true, to the conclusion that mind and body are really distinct. Now, if contradictions are possible for God, it seems that God could create mind apart from body even if this were not logically possible.

⁷ Formally, $(\forall s)(\forall p) (Wsp \rightarrow \Diamond \neg Wsp)$.

⁸ According to (P2), any proposition is equivalent with God’s willing it, so the modal status of any proposition is the same as the modal status of God’s willing it.

⁹ Thus, in Curley’s interpretation, Descartes’s doctrine amounts to a view Plantinga calls *limited possibilism*, according to which necessary truths themselves are not within God’s control. Instead, only propositions ascribing modality to other propositions are subject to God’s will [Plantinga (1980), pp. 112-113]. Alanen has rightly pointed out that limited possibilism is in conflict with Descartes’s explicit claim that God could make it false, for instance, that the three angles of a triangle are equal to two right angles [Alanen (1988), p. 186; see also Letter to Mesland, 2 May 1644, CSMK III, p. 235; AT IV, p. 118].

¹⁰ [Curley (1984), p. 591.] I shall not present all the requirements of the Lewis system S6 which Curley discusses, but instead formulate the rules which concern only non-normal worlds.

¹¹ w_1^* is the actual world, the arrows represent accessibility relations and below the name of each world there is a list of propositions that are true in it.

¹² That is, models in which every world is a dead end.

¹³ That is, models in which every world is non-normal.

¹⁴ James Van Cleve has argued, with a different argument, for a similar conclusion than I do. [See Van Cleve (1994), pp. 58-62.]

¹⁵ To repeat: for every subject s and every proposition p , if s wills that p , it is possible for s not to will that p .

¹⁶ To repeat: for every proposition p , p is true if and only if God wills that p .

¹⁷ It has been pointed out to me that (P2) does not license the inference from “It is possible for God not to will that p ” to “It is possible that p is false”, for (P2) does not relate the truth of “It is possible for God not to will that p ” to the truth or falsity of p . However, my argument does not invoke this relation. Instead, I have only claimed that (P2) relates the truth of “It is possible for God not to will that p ” to the *possibility*

that p is false. If (P2) holds in every world — as I believe it should — then it seems unquestionable that the relation involved in my argument holds.

¹⁸ I am grateful to Lilli Alanen, Charles Jarrett, Olli Koistinen, Arto Repo, and Mikko Yrjönsuuri for helpful comments on earlier versions of this paper. My work on the current version has been financially supported by the Academy of Finland (grant 8114178).

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