

DURATION AND MOTION IN A (CARTESIAN) WORLD  
WHICH IS CREATED ANEW “AT EACH MOMENT”  
BY AN IMMUTABLE AND FREE GOD\*

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SUMMARY: I argue in this paper that Descartes’s goal with his doctrine of the continuous recreation of the world is to offer a *unified and ultimate causal explanation* for (1) the possibility of *motion and duration* in the world, (2) the *permanence* (of the existence) of created things, and (3) the continuation of their motion and duration. This unified explanation seems to be the only one which, according to Descartes, satisfies the two basic requirements any ultimate cause should meet: the cause (1) must be active and (2) not being in motion itself. God’s *recreations of the world* is Descartes’s solution to this search. I also show in this article, on the one hand, that this doctrine successfully overcomes, in particular, the four major conflicts which threaten its consistency, and, on the other, the *new meaning* which the laws of nature acquire under the doctrine of the continuous recreation of the world.

KEY WORDS: Descartes, duration, motion, recreation

RESUMEN: En este artículo defiendo que la pretensión principal de Descartes al proponer la doctrina de la recreación continua del mundo es encontrar una *explicación unificada y última* de (1) la posibilidad de *movimiento y duración* en el mundo, (2) de la *permanencia* (de la existencia) de las cosas creadas y (3) de la *continuación* del movimiento. Esta explicación unificada es la única que, según Descartes, satisface los dos requisitos que parece buscar en la explicación causal última del movimiento: la causa (1) debe ser activa y (2) no debe estar ella misma en movimiento. Las *recreaciones del mundo* (o su *recreación continua*) constituyen esa causa. Por una parte, también muestro cómo esta solución supera, en concreto, los cuatro conflictos mayores que amenazan su consistencia, y, por otra, el nuevo significado que las leyes de la naturaleza adquieren en consonancia con esta doctrina de la recreación continua del mundo.

PALABRAS CLAVE: Descartes, duración, movimiento, recreación

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### *Introduction*

This paper is an evaluation of the role Descartes's doctrine of the continuous recreation of the world plays in his philosophical system, and, in particular, of the implications of this doctrine for the ontological and epistemological status of the laws of nature. I will argue that Descartes's goal with this doctrine is to find a *unified and ultimate causal explanation* (1) for the possibility of *motion* and *duration* in the world, (2) for *the continuous existence* of created things (i.e. for their permanence as existing things), and (3) for the *continuation* of their motion and duration. This unified explanation seems to be the only one which satisfies the two basic requirements any ultimate cause of motion and duration should meet according to Descartes: the cause (1) must be *active*, (2) without being in motion itself. God's *recreations of the world* is Descartes's solution to this search.

I will also argue that this doctrine, successfully overcomes, in particular, the four major conflicts that threaten its consistency: (1) the apparent contradiction which rises from the characterization of God as *immutable* and *agent* at the same time; (2) the apparent impossibility of guaranteeing the reality of duration or continuation if, as Descartes says, conservation is creation and creation is creation *ex nihilo*; (3) the opposition between a succession of *instantaneous* creations and the production of a *continuous* effect; and (4) the conflict between Descartes's apparent commitment to the Aristotelian view that the cause must always be present and "act continually" on the object moved—in order to explain the conservation of physical existence—and, on the other hand, his rejection of that position in his explanation of the conservation of *local motion* (according to which explanation motion can continue without the continuous presence of the first causal agent).<sup>1</sup>

Finally, I will argue that the laws of nature both *complete* the doctrine of continuous creation in an important way, and *acquire a new meaning* within it. The laws of nature appear now as (1) a

<sup>1</sup> See Frankfurt 1987, pp. 455–472.

manifestation of God's immutable and free *agency*, (2) a trace of God's original creation of the world, (3) *the conservation of the world in action* (from our perspective), and (4) the expression of *how well the world is conserved*.

1. *The Terms of the Doctrine of the Continuous Recreation of the World in Descartes's Writings*

The continuous creation of the world is for Descartes the "creation afresh" [AT VII 49 (CSM II, 33)]<sup>2</sup> or "creation *de novo*", [AT III 505 (CSM III 208)] "at each moment of time" [AT VII 109 (CSM II 79)] of the whole world by God. And since for Descartes "the distinction between preservation and creation is only a conceptual one" [AT VII 49 (CSM II 33)], he sometimes refers to that "continuous creation" [AT VII 243 (CSM II 169)] also as continuous "concurrence" [AT III 429 (CSM III 193)] of God, or "continuous reproduction" [AT VIIIA 13 (CSM I 200)], or "continuous preservation" [AT XI 37 (CSM I 92)] of the world. "Creation" thus seems to be only the term reserved for the *first* creation of the world whereas "preservation", "conservation" or "recreation" would apply to each subsequent creation—each of them equal insofar as they are creations of *the whole world* which produce the *same* original world without reproducing the same original *state* [AT XI 37 (CSM I 93)]. The only being that is not created anew at each instant is God himself [AT VII 109 (CSM II 79)].<sup>3</sup>

The other term of the definition given above, "moment" [AT VII 49 (CSM II 33)],<sup>4</sup> in expressions such "at this moment", or "at each moment" [AT VII 109 (CSM II 79)] or "a moment from now" [AT VIIIA 13 (CSM I 200)] receives also, although not so often, other names: "instants" [AT XI 43 (CSM I 96)], "divisions of time" [AT VII 109 (CSM II 78)], simply "time" [AT VII 165

<sup>2</sup> See also AT VII 109 (CSM II 79). I use AT for R. Descartes 1964–1976. And I use CSM (I, II, or III) for *The Philosophical Writings of Descartes* (vols. I and II), 1985 [I], and 1984 [II]), and 1991 [III].

<sup>3</sup> See also AT VII 243 (CSM II 169).

<sup>4</sup> See also AT VII 109 (CSM II 79) and AT VII 369 (CSM II 254).

(CSM II 116)] “parts of a lifespan” [AT VII 49 (CSM II 33)], or the more ambiguous “a little while ago” [AT VII 49 (CSM II 33)], or even only “a little while” [AT VII 109 (CSM II 78)], or “immediately” [AT III 429 (CSM III 193)]. And sometimes there is no reference to any division of time besides the one implicit in terms like “continuous” or “continually” [e.g. AT XI 37 (CSM I 92)]. To make this a bit fuzzier, some of those who presented objections to Descartes, added other temporal expressions such as “a short time from now”, used by Gassendi [AT VII 300 (CSM II 209)], or “in future” used by Arnauld [AT VII 211 (CSM II 148)].

Although the argument in favor of a continual recreation of the world can be found in several writings, two of them major ones (*Meditations* III and *Principles* I.21), it never receives a lengthy or independent treatment in Descartes’s works. Given the centrality of the issue—as central as duration or motion is—the question of why this is so is a pertinent one. One reason might be that he considered his argument for the recreation of the world to be *well-known*. In fact, in the *Second Set of Replies* (1642) the doctrine appears as one among the “Axioms or common notions” [AT VII 165 (CSM II 116)]. And it is true that the doctrine is not new in Descartes. The argument can be found, in one of its forms at least, for example, in Thomas Aquinas, who, in turn, refers to Augustine (*Summa Theologica* I, q.104, art.1). Descartes does somehow acknowledge this debt, although without mentioning anybody in particular, by referring to this view as being known to “all metaphysicians” [AT VII 369 (CSM II 254)] and “among theologians” [AT VI 45 (CSM I 133)].<sup>5</sup> Another reason for his argumentative negligence might be that he saw the issue as evident to anyone willing to use the light of reason. In answer to one of Gassendi’s objections (*Fifth Set of Replies*, 1642), Descartes argued that what is at stake has been considered by many “as a manifest truth” (“you are disputing something which all metaphysicians affirm *as a manifest truth*” (my emphasis) [AT VII 369 (CSM II 254)]).

<sup>5</sup> Gilson sees this as an “affirmation” by Descartes of the “Scolastique origin” of the doctrine (Gilson 1967, p. 340).

Similarly, five years before (in the *Discourse* [1637]) Descartes had already written: “It is certain, and *it is an opinion commonly accepted* among theologians, that the act by which God preserves it is just the same as that by which he created it” (my emphasis) [AT VI 45 (CSM I 133)]. Notice that here the authority referred to is the “theologians”, not the “metaphysicians” mentioned in the answer to Gassendi, which suggests still another reason why the issue should not be discussed in depth: it is a *theological* matter.

I have found seven places in Descartes’s writings where the argument is given in a fashion which indicates that he considers it *complete* as offered. Two of those places are major writings, two of them are letters, and three are answers to objections. In chronological order of publication this is the structure of each of those arguments.

I) In *Meditations* III (Lat. 1641, Fr. 1647), Descartes reasons as follows [AT VII 48–49 (CSM II 33–34)]:

1. “I existed a little while ago”
  2. “I exist now”
  3. “A lifespan can be divided into countless parts, each completely independent of the others”
  4. “I experience no power [of creating myself]”
- Therefore, “There is some cause which as it were creates me afresh at this moment —that is which preserves me”

II) In a letter to Hyperaspistes of August 1641, he uses this argument [AT III 429 (CSM III 193)]:

1. Things are “kept in being”
  2. “All things were nothing until God created them”
  3. “If God withdrew his concurrence everything which he has created would immediately go to nothing”
- Therefore, [God creates the world anew at each moment]

Notice two things in this argument: (1) the implicit, and crucial, identification (taking together steps 1, 2 and 3) of “keeping in being” (or preserving) and creating; and (2) the reliance of the conclusion on what would happen *if God did not do anything* after creating the world (step 3).

III) In a letter to Regius of January 1642, Descartes argues as follows [AT III 505 (CSM III 208)]:

1. Substances “come into existence”
- Therefore, they are “created *de novo* by God”

This argument obviously is incomplete in this (literal) form. The steps necessary to complete it are: (1) substances have duration, and (2) for something to have duration the cause of its *being* must be acting on it.

IV) In the *First Set of Replies* (1642), the argument we find can be outlined like this [AT VII 109 (CSM II 78)]:

1. “I now exist”
2. “I regard the divisions of time as being separable from each other”
3. “That I now exist does not imply that I shall continue to exist in a little while”
- Therefore, “there is a cause which, as it were, creates me afresh at each moment of time”

This argument is basically the same Descartes gave in the *Meditations* (argument I) and the one he will give later on in the *Principles of Philosophy* (argument VII below). Here it is given with the primary purpose of showing that God, unlike any other created being, is, in fact, the only being that, strictly speaking, has duration *without the need of a continual recreation*. “The essence of God is such that he must always exist” [AT VII 109 (CSM II 78)].

V) In the *Second Set of Replies* (1642) the argument is [AT VII 165 (CSM II 116)]:

1. “There is no relation of dependence between the present time and the immediate preceding time”
- Therefore, “no less a cause is required to preserve something than is required to create it in the first place”

Again, there are here, at least, three implicit steps: (1) the presence of the cause of *being* is necessary for something to continue in existence, (2) *moments of time* and *moments of existence* are

different, and (3) the independence of the moments of time implies the independence of the moments of existence.

VI) Two linked arguments are put forth in a reply to Gassendi (1642) in the *Fifth Set of Replies* [AT VII 369 (CSM II 254)]:

- A)
  1. Created things become and are
  2. The *being* of created things is “kept in existence”  
Therefore, the cause (of being) of created things “must continually act” on them
  
- B)
  1. Created things endure
  2. “The individual moments of the thing which endures can be separated from those immediately preceding and succeeding them”  
Therefore, “the thing which endures may cease to be at any given moment”  
[Therefore, if (1) is correct something keeps created things in existence]  
[3. A created thing is kept in existence either by itself or by another cause]
  4. If a created thing “could continue in existence independently of anything else” we would be “attributing to a created thing the perfection of a creator”
  5. Created things (by definition) do not have the “perfection of the creator”  
Therefore, created things are not kept in existence by themselves but by someone with the perfection of a creator, i.e. God

VII) Finally, in the *Principles of Philosophy* (Lat. 1644; Fr. 1647) this argument is used to defend a continuous recreation of the world [AT VIIIA 13 (CSM I 200)]:

1. “I exist now”
2. “The nature of time is such that its parts are not mutually dependent, and never coexist”
3. [My existence has duration (given that I also exist “a moment from now”)]  
Therefore, “there is some cause —the same cause which originally produced us— which continually reproduces us, as it were, that is to say, which keeps us in existence”

If we now construct, in one single argument, all the above, together with the essential features the creator of the world should possess according to Descartes, the basic argument put forth by Descartes may be presented as follows:

1. God exists and is an immutable, free, and all-powerful creator (of everything)<sup>6</sup>
2. My (created) existence (and that of all created things) have certain duration.
3. Duration is existence in time, i.e. existence through a succession of moments of time.
4. Since (a) the “moments of time” are totally independent of one another, therefore
  - (b) the “moments of my existence” are independent of one another.
5. In order for any created being to remain in existence, the cause of its being must (a) “continually act” on that created being (i.e. at each “moment of time”), and (b) act always on it in the same way (i.e. producing always its being).  
Therefore, (a) duration requires conservation —i.e. creation of the independent “moments” of my existence (and of any other existing thing)  
Therefore, (b) if (created) things endure, there must be a continual re-creation of the world by the first creator, i.e. God.

Before starting a discussion of each of these steps, three important aspects of the argument should be noticed. First, note the centrality of the step in which Descartes concludes that, given the total independence of the *moments of time*, the *moments of my existence* should also be totally independent.<sup>7</sup> Neither the first assumption nor the latter implication are justified in any of the seven arguments. Descartes does not even provide a precise definition of the fundamental concept “moment of time”, or an explication of expressions like the ones used by Gassendi (“a short time from now”) or Arnauld (“in future”), for example. He does not either refer at any moment to his own conception of time [AT VIII A 27 (CSM I 212)] in order to clarify the issue. Yet he believes that “it will be impossible for anything to obscure the clarity of this proof, if we attend to the nature of time or of the duration of things” [AT VIII A 13 (CSM I 200)].

Second, notice that premise five sets Descartes’s causal demands to explain duration. The ideas have appeared explicitly in one argument (VI.A) [AT VII 369 (CSM II 254)], less explic-

<sup>6</sup> See AT VIII A 13 (CSM I 200), AT IV 166 (CSM III 348), and AT VII 187 (CSM II 132).

<sup>7</sup> See AT VII 369–370 (CSM II 255), AT VII 109 (CSM II 78), AT VII 165 (CSM II 116), and AT VIII A 13 (CSM I 200).

itly in argument V [AT VII 165 (CSM II 116)], and implicitly in III. Descartes is searching for an ultimate cause which (1) “acts continually” on the *lasting* object, (2) is not itself in motion (it acts always in the same way), and (3) unifies the conceptual oppositions between “cause of coming into being” and “cause of being” (VI.A and B), on one hand, and between *cause of duration* and *cause of motion*, on the other. Argument II includes a counterfactual that is important to understand Descartes’s view: if God withdrew his concurrence the world would “go to nothing”. Therefore, the world is maintained in existence (i.e. has duration) *only if* God’s concurrence lasts. And to say that God’s concurrence must last is, for Descartes, the same as to say that he has to do *everything again* at each instant (for to preserve and to create, as said above, are different only conceptually). Notice that although this seems to imply that God must create always *ex nihilo*, it can also be understood as God *acting continuously*—in the same sense that we need, for example, to apply *all the necessary force all the time* to hold a book in our hand. This understanding, however, puts some limits, as we will see, on the idea that each *recreation* is a “creation anew” of the world.

Finally, it should be noted, as Richard Arthur (1988) has done, that Descartes seems to avoid sometimes the complete identification of conservation and creation that appears to be essential in the argument. Descartes does not show any doubts about the *need for conservation* of the world in order to explain duration. But, instead of saying explicitly that conservation is creation (and vice versa), he uses sometimes expressions like “as it were” or “so to speak”. This is seen in arguments I, IV, and VII above. Although I do agree that there is an important sense in which Descartes is using the terms as an analogy—as it will be clear once we realize he does not seem to be supporting consistently the idea of creations *ex nihilo*—, I do disagree with Arthur’s conclusion that “Descartes himself is careful never to assert that there is an actual repeated production. He always qualifies his description with a ‘quasi’ or a ‘veluti’.”<sup>8</sup> Arthur has ignored expressions in Descartes’s writings which do favor

<sup>8</sup> Richard T. Arthur 1988, p. 355.

the identification of conservation and creation and which can be found, not only in the three arguments he refers to, but also in the other four arguments presented above (and which he does not mention), as well as in other parts of Descartes's writings.<sup>9</sup>

2. *First premise: God exists and is an immutable, free, and all-powerful creator (of everything)*

The idea of recreation cannot be understood without a detailed characterization of the creator and his act of creation. God is eternal, free, immutable, omnipotent, omniscient, “source of all goodness and truth” [AT VIII A 13 (CSM I 200), AT IV 166 (CSM III 348)], and, of course, creator of the world [AT VII 187 (CSM II 132)]. “Eternal” means that he himself has “existed from eternity and abide for eternity” [AT VII 68 (CSM II 47)]. God's freedom, unlike human freedom, is expressed rather in “his indifference from eternity with respect to everything” [AT VII 431–432 (CSM II 291)], than in the range of possibilities available to him before acting. His freedom is, thus, defined negatively: it is absolute lack of constraints. Any possible choice would deny this freedom —as well as his omnipotence. (Ibid.) And this means he must act *from zero*, which, in turn, means he must have created the world *ex nihilo* [AT V 156 (CSM III 340)].

That God is immutable means that his (free) will cannot change, a consequence of his “absolute indifference” [AT IV 166 (CSM III 348), AT I 145–146 (CSM III 23)]. But this does not

<sup>9</sup> See the explanations accompanying arguments I [AT VII 49 (CSM II 33)], and IV [AT VII 109 (CSM II 79)]. The third case mentioned by Arthur is, in this sense, more convincing because it is not followed by an explanation which reduces the value of that “as it were”: “unless there is some cause —the same cause which originally produced us— which continually reproduces us, as it were, that is to say, which keeps us in existence” [AT VIII A 13 (CSM I 200)]. However, in this case the “as it were” could affect simply to the verb “reproduce” with which Descartes might not be very happy. “To reproduce” has, for example, also the meaning of “producing something *from something*” which does not fit Descartes's view of creation as an action *ex nihilo*. Arthur does not mention arguments II, III, V, or VI.B, where that identification can also be found. It can also be found in other parts of his writings, e.g. AT XI 37 (CSM I 92) and AT VI 45 (CSM I 133).

impede, for Descartes, to understand freedom as “voluntariness” (“voluntariness and freedom are one and the same thing” [AT VII 191 (CSM II 134)]). Both immutability and voluntariness can be reconciled in God because he can will *only one action* (and will it always) (“God [...] always acts in the same way” [AT XI 37 (CSM I 93)]; “God accomplishes all things in a single act” [AT IV 166 (CSM III 348)]; “the idea that we have of God teaches that there is in him only a single activity, entirely simple and entirely pure” [AT IV 119 (CSM III 235)]). And if he can will and perform only one action, that action must be the one that defines him: the creation of the world (through which “he accomplishes everything” [AT VIIIA 13 (CSM I 200–201)]). God’s immutability affects also his *thought*, which lacks all the successiveness of human thought [AT V 193 (CSM III 355)].

Now, how should we understand the *actions* of an *immutable* creator? Sameness in action does not mean, in principle, immutability in the agent; we can expect the *continuity* of an action to produce a continuous change in the actor. But Descartes eliminates this possibility by redefining the idea of *divine action*. God’s (only) action is his very *act of willing*, and this, in turn, is not different from his perceiving (“in God *seeing* and *willing* are one and the same thing” [AT IV 119 (CSM III 235)]); or from his understanding or knowing (“In God willing and knowing are a single thing in such a way that by the very fact of willing something he knows it and it is only for this reason that such a thing is true” [AT I 149 (CSM III 24)]); or from *his creating* (“From all eternity he willed and understood them [the eternal truths] to be, and by that very fact he created them. Or, if you reserve the word created for the existence of things, then he established them and made them. In God, willing, understanding and creating are all the same thing without one being prior to the other even conceptually” [AT I 152–153 (CSM III 25–26)]). Now, since all of these *actions* lack successiveness (it must be so if God’s thought lacks it), and a beginning in any of them would imply a break in God’s immutability, they all—which in reality are only one—must have been taking place since eternity. “I do not see why God should not have been able to create something from eternity. Since God possessed his

power from all eternity, I do not see any reason why he should not have been able to exercise it from all eternity” (Descartes 1976 [23] 15). This means that, not only it does not make any sense, according to Descartes, to talk about the possibility of an earlier or later creation [AT V 52–53 (CSM III 320)], but we should not even talk about the temporal priority of God with respect to his creation (“the restriction ‘prior in time’ can be deleted from the concept while leaving the notion of an efficient cause intact” [AT VII 240 (CSM II 167)]).<sup>10</sup>

That God is omnipotent means that he is “the universal cause of everything in such a way as to be also the total cause of everything; and so nothing can happen without his will” [AT IV 314 (CSM III 272)]. His absolute power places him, again, *before anything else*. “The supreme indifference to be found in God is the supreme indication of his omnipotence” [AT VII 432 (CSM II 292)]. Everything depends on him. This, as creator, means that he creates *everything*, including everything “we can think of or ought to think of” [AT V 160 (CSM III 343)]. His omnipotence “applies not just to everything that subsists, but to all order, every law, and every reason for anything’s being true or good” [AT VII 435 (CSM II 293–294)]. The laws of nature are, thus, also created by God —and have been created since eternity as everything else. And the same can be said, in general, of all eternal truths which “God alone, who, as supreme legislator, has ordained from eternity” [AT VII 436 (CSM II 294)]. God’s eternal omnipotence also means that he himself has never been created —either by himself or by an external cause. He is also the only being that has never been *recreated* either [AT VII 109 (CSM II 78–79)].<sup>11</sup>

God’s omnipotence —together with his omniscience and goodness— results in a world that is perfect since the moment of its creation. “There is no doubt that the world was created right from the start with all the perfection which it now has” [AT VIII A (CSM I 256)]. About that world we know a few important features which tell us something more specific about

<sup>10</sup> See also AT IV 166 (CSM III 348).

<sup>11</sup> See also AT VII 236 (CSM II 165).

what God does: (1) there is no void, (2) the extension of matter is “not an accident but its true form and essence”, (3) matter “may be divided into as many parts having as many shapes as we can imagine”, (4) “each of its parts [of matter] is capable of taking on as many motions as we can conceive”, (5) the “diversity of motions” is the real distinction between parts of matter (“let us regard the differences he creates within this matter as consisting wholly in the diversity of the motions he gives to its parts”), (6) God has imparted on each of those parts of matter a specific motion in the moment of creation, (7) those original motions continue according to the laws of nature, and (8) motions differ in their determination (speed, direction, . . .) but not in type: all motions are “motion which makes bodies pass from one place to another and successively occupy all the spaces which exist in between” [AT XI 32–41 (CSM I 90–94)].

On the other hand, God’s omnipotence, as paradoxical as it may seem, has certain *limitations*. His omnipotence does *not* mean, Richard R. La Croix has argued,<sup>12</sup> that God can violate or change the eternal truths and laws he himself has created. There are, at least, two reasons for this. First, God cannot change the eternal truths because his will cannot change (he is immutable) [AT VII 146 (CSM III 23)]. And second, the possibility that God could do what is logically impossible would imply that God can change (or is changing) his world. And since this change is not a possibility —*given* that this world exists— the extent of his omnipotence is not affected. In other words, to be omnipotent is, for Descartes, to be able to do what is possible. “We do not take it as a mark of impotence when someone cannot do something which we do not understand to be possible but only when he cannot do something which we distinctly perceive to be possible” [AT V 273 (CSM III 363)]. This means that, although God could have created a different world —since he is free—, the world is as it is, and what is true is true, because he wanted it like this. “He necessarily willed what was best, even if it was of his own will that he did what was best” [AT V 166

<sup>12</sup> R.R. La Croix 1984, pp. 455–475. La Croix is refuting, in particular, Frankfurt 1977’s view that God can do what is logically impossible.

(CSM III 3480)]; “It is because he willed that three angles of a triangle should necessarily equal two right angles that this is true and cannot be otherwise” [AT VII 432 (CSM II 291)]. Thus, the creation of *this* world is also a self-determination of God’s power and action.<sup>13</sup> But, on the other hand, the doctrine of the continual recreation of the world, strictly understood, limits that self-determination to the period of existence of each of those “momentaneous” creations. This makes that self-determination not only perfectly compatible with God’s absolute freedom, but also the very expression of that freedom—insofar as God can *self-determine* himself differently at “each moment”.

An even more important limitation of God’s power—for the purpose of this paper—is that, once the world has been created, God not only cannot act against the eternal truths, but cannot even *actively* undo or destroy anything in it. “We do not perceive it to be possible for what is done to be undone—on the contrary, we perceive it to be altogether impossible, and so it is no defect of power not to do it” [AT V 273 (CSM III 363)]. God can only negatively undo his creation. In fact, if he withdrew his concurrence from the world, as seen above in argument II, the world would “go to nothing”:

It is impossible that God should destroy anything except by withdrawing his concurrence, because otherwise he would be tending towards non-being by a positive activity. But in admitting that I am not falling into any trap of my own devising. For there is a great difference between what happens by God’s positive activity and what results from the cessation of positive activity: the former cannot be anything but excellent, and the latter includes evils and sins and the destruction of some being, if any existent being is ever destroyed. [AT III 429–430 (CSM III 194)]

Now, is it possible, at all, that God withdraws his concurrence from the world? If we take into account that he is “source of goodness”, that his creation is perfect, and that what is proper of him is to create, there is no reason to assume he would do it. I will return to this crucial issue in the fifth section.

<sup>13</sup> La Croix 1984, p. 467.

From the features of God as creator—in particular his immutability, his goodness, and omniscience—and from the characterization of his created world, it follows, according to Descartes, that the laws of nature should be *laws of conservation of his original action*, that is laws of conservation of his creation. And this means, in particular, the conservation of the matter and the motion he has created [AT XI 43 (CSM I 96)]. “We must necessarily think that God causes them [matter and motion] to continue always doing so [i.e. being and becoming as God created them].” (Ibid.) Now—and this is a fundamental step in Descartes’s reasoning—, although he refers to these laws sometimes as if they were *autonomous* (“the laws of nature are sufficient to cause the parts of this chaos to disentangle” [AT XI 34 (CSM I 91)]), God is the only real agent here. In fact, Descartes does justify the need for the conserving action of the laws of nature by arguing that, otherwise, we would have to deny that *God acts always in the same way*: “we must either admit that he always preserves the same amount of motion in it [the world], or not believe that he always acts in the same way” [AT XI 43 (CSM I 96)]. By identifying those laws with God’s own actions, he is depriving the latter both of autonomy and agency.

Those laws are not but the *regularity* of God’s actions *from our perspective*. “To occur ‘naturally’ is nothing other than to occur through the ordinary power of God, which in no way differs from his extraordinary power—the effect on the real world is exactly the same” [AT VII 434–435 (CSM II 293)]. Whereas, when we talk about God’s creation, Descartes said in Argument VI.A above, “we are talking about the total cause, the cause of being itself” [AT V 156 (CSM III 340)], the laws of nature are *not the cause*, but the “rules” of the becoming of things, i.e. the rules *according to which* the changes of “state” or in “the parts of nature” take place (“the rules by which these changes take place I call the ‘laws of nature’” [AT XI 37 (CSM I 92–93)]). To say that God *conserves (or recreates) the world* has, thus, the literal meaning of saying that *he conserves the original motion and matter* he created. In other words, he *produces* motion by *conserving* it. And to say, phenomenologically, that motion in the world takes place *according to the same laws* is to

say, ontologically, that God preserves always the same original motion. Each new state of the world is, in fact, the result of merely preserving the production of the world's original capability for motion together with the matching new arrangement of the original matter.

Now, even if God is the (only) *real* cause of the becoming, the distinction between a cause of being and a cause of motion is still relevant. But rather than from the point of view of the cause, from the point of view of the *effect*, that is insofar as one (the cause of being) points towards *duration* (of existence) and the other (cause of becoming) towards *continuation* (of motion). Descartes's equal treatment of both is one of the pillars on which the strength of the doctrine of continual creation rests. This will be clearer below.

3. *Second, third, and fourth premises: [2] My (created) existence (and that of nature) have certain duration. [3] Duration is existence in time, i.e. existence through a succession of moments of time. [4] Since (a) the "moments of time" are totally independent of one another, we can conclude that (b) the "moments of my existence" are independent of one another*

The discussion of the second, third, and fourth premises of what I took above as Descartes's complete argument for the continuous recreation of the world is particularly relevant for understanding Descartes's view of what God does in *each* of those recreations of the world—and, therefore, relevant also to understand the idea of *a continuous* recreation of the world. Descartes's views on duration, and on *instantaneous* creation are especially significant in this sense.

As for duration, its most relevant aspect for our purposes is its relationship to time and motion. The difference between time and duration, according to Descartes, seems to reside only "in the sense" (general or particular) in which time is understood. Although both time and duration are *modes*, whereas time is used as a *mode* "in our thought", duration is a mode "in the very things" (i.e. time in the particular things). Time, in other words, is duration "taken in its general sense":

Now some attributes or modes are in the very things of which they are said to be attributes or modes, while others are only in our thought. For example, when time is distinguished from duration taken in the general sense and called the measure of movement, it is simply a mode of thought. For the duration which we understand to be involved in movement is certainly no different from the duration involved in things which do not move. [...] But in order to measure the duration of all things, we compare their duration with the duration of the greatest and most regular motions which give rise to years and days, and we call this duration “time”. Yet nothing is thereby added to duration, taken in its general sense, except for a mode of thought. [AT VIII A 27 (CSM I 212)]

Notice two other important ideas here: (1) if time is the “duration of the greatest and most regular motions which give rise to years and days”, then there is qualitatively no difference between time and the duration of any other created things. But, since all duration of *motion* is part of the created world, then God does not have duration. He is out of time. This is consistent with God’s features: God’s duration cannot be *duration of motion* because he is absolutely immutable. Another consequence of this is that there cannot be passage of time between recreations —because God is the only possible existing being between them, but he is out of time. In this sense, the recreations of the world —whether they are understood as independent of each other or not— will always be temporally continuous *from our perspective* (because time is a feature of the world and we are part of it) even if they are discontinuous in reality (from God’s perspective). In other words, if temporally continuous is that with no temporal breaks in it, then it can be said that the succession of independent recreations can generate a succession which is epistemically continuous even if they are metaphysically discrete (like the successive pictures of a film can account for the motion we perceive).

There is another relevant idea in the fragment quoted above: (2) “the duration that we understand to be *involved in movement* is certainly no different from the duration *involved in things which do not move*” (my emphasis). This is quite important for understanding Descartes’s purpose with the doctrine of the

continuous recreation —and for what I called above his unifying solution. By identifying “duration in motion” and “duration without motion” Descartes is saying that no less (and no more) is required to explain why this cup of coffee *lasts* while it sits on the table (duration without motion) than to explain why *it keeps on moving* (in a frictionless world) if I push it (duration in motion). Both durations require a similar causal explanation: in both cases, whatever is *maintained* (duration in motion or duration without motion) needs to be *continuously produced*. Descartes reveals thus that the search for causes must, ultimately, answer the question of *where the action which produces this particular effect started* —where *effect* is both any new state of the world and the duration of previous ones. Presented the problem in these terms, “each moment” of existence requires a causal explanation regardless of whether that moment correspond to a new state of the world or not. And this is, again, what it means to say that creation and conservation are different only conceptually: no more is required to give a causal account of a new state of the world than to explain the same state “one moment” later. And no more is required either for the actual existence of one or the other.

The only duration that does not require a similar causal explanation is, precisely, God’s —because his duration is not equivalent to the “duration of motion”— and, for this reason, he is the only being which, since he is not in motion itself, could count as a possible ultimate (motionless) cause of motion and duration.

I mentioned at the beginning of this paper the ambiguity generated by the lack of a definition —at least in the context of Descartes’s argument for a continuous recreation of the world— for such crucial terms in this argument as “instant”, “divisions of time”, or “moment”. Whereas some terms like *moment* or *divisions of time* seem to imply duration, not so *instant*. The issue of whether Descartes is considering a temporal division with duration or not is important because it affects directly the nature of the recreations. There are, I believe, three basic ways of understanding the recreations from this temporal point of view: (1) as instantaneous (i.e. creations without duration), (2) mo-

mentaneous (i.e. with certain duration), or (3) as mathematical or conceptual divisions of a continuous action.

The possibility of motion in the world seems to be enough to discard that Descartes may favor a view in which the recreations do not have duration. Motion requires certain duration in order to be called *motion*, otherwise we can only talk of *states*. However, Descartes does not seem to be defending this view in his writings. Although he does not say much about the issue, we know, at least, that he believes that (1) time can be broken up in *independent* “parts”, (2) that *instants* do not have duration, and (3) that instants is all God’s recreations require to be realized:

This rule is based on the same foundation as the other two: it depends solely on God’s preserving each thing by a continuous action, and consequently on his preserving it not as it may have been some time earlier but precisely as it is at the very instant that he preserves it. So it is that of all motions, only motion in a straight line is entirely simple and has a nature which may be wholly grasped in an instant. For in order to conceive such motion it suffices to think that a body is in the process of moving in a certain direction, and that this is the case at each determinable instant during the time it is moving. By contrast, in order to conceive circular motion, or any other possible motion, it is necessary to consider at least two of its instants, or rather two of its parts, and the relation between them. But so that the philosophers (or rather the sophists) do not find occasion here to exercise their useless subtleties, note that I am not saying that rectilinear motion can take place in an instant, but only that everything required to produce it is present in bodies at each instant which might be determined while they are moving, whereas not everything required to produce circular motion is present. [AT XI 44–45 (CSM I 96–97)]

Thus, ontologically, (1) God creates *states of matter with the capability of motion* rather than motion itself, and (2) in each *recreation* “everything required to produce [rectilinear motion] is present in bodies *at each instant* which might be determined while they are moving, whereas not everything required to produce circular motion is present” (my emphasis). Hence, whereas one *instant* (and one creation) is needed to produce rectilinear motion, in the case of circular motion “at least two instants”

are needed, which means that either the *action* of the laws of nature or God's concurrence is required. "It must be said that God alone is the author of all the motions in the world in so far as they exist and in so far as they are rectilinear; but it is the various dispositions of matter which render them irregular and curved." (Ibid.)<sup>14</sup>

As to what God actually produces in each recreation, now we can say that, since in each *instantaneous creation* we do not have motion but we can have "everything required to produce" it, this capability (to produce motion) is all God needs to create, together with matter, in each *recreation* of the world. And we can also say that the original capability for motion implanted in matter (in the first creation of the world) accounts for all subsequent changes *as long as God's concurrence is not withdrawn*. This view adds another reason not to see the laws of nature as agents: there is *no room* for two successive agents (God and laws) in each of those *instantaneous* recreations.

There are two pending problems here. If God's creations are instantaneous, (1) how does motion actually take place in the world?, and (2) how can that *series of actions* be attributed to an *immutable* being? There is one way, at least, of solving both problems and preserving, at the same time, the consistency of the doctrine: understanding God's only possible action as *one continuous action*, and viewing his recreations of the world in the third way mentioned above, i.e. as conceptual (or mathematical) divisions of that continuous action. This seems to be supported also by Descartes's identification—insofar as a causal explanation is sought—of duration and motion. If these are not different it can be said that God is not *less* immutable if viewed as *continually acting* than if viewed as simply *eternally lasting*. The latter is, strictly speaking, as difficult to reconcile with his immutability—from Descartes's view—as the former (a continuous action) is. And so, if his eternity is possible at all, and it is compatible with his immutability, so is a continuous action

<sup>14</sup> Given that there is no void in Descartes's world—and therefore no purely inertial motion—all motions should require at least two instants insofar as the "dispositions of matter" are always a factor.

in him (which, in fact, is not different from his (*continuous existence*)).

4. *Fifth premise: In order for any created being to remain in existence, the cause of its being must (a) “continually act” on that created being (i.e. at each “moment of time”), and (b) act always on it in the same way (i.e. producing always its being)*

Another major problem has still to be solved. If it is true that each recreation is a creation *anew* of the world, and any creation is also —as it is proper of God— *ex nihilo*, then each creation should be preceded by an annihilation of the world. And if so, again, how can duration be ontologically preserved? Although Descartes does talk, at least once, about the “destruction of the world” as if it was indeed what happens between each two recreations, [AT V 343 (CSM III 373)], we should notice that he does not use the idea of creation from nothing as one of the features of God’s act of creating in any of the seven arguments given above. This fact, and the preservation of the consistency of the *pieces* of the argument discussed so far, suggest that Descartes does not seem to be strongly committed to the view of creation *ex nihilo* when it comes to the *recreations* of the world. And, if he is, that view is subordinated to others that are predominant here.

Let us suppose that Descartes is committed to the view that *all creations* are *ex nihilo*. If so, we have to face two important questions: (1) how does that annihilation come about? and (2) why? If it is the result of someone’s active action (i.e. destruction of the world), God should be the one responsible for it, for if creation is the result of an omnipotent being, only an all-powerful being would be able to bring the world to nothing.<sup>15</sup> But why would God annihilate the world? Descartes says, as we saw in the discussion of the first premise of the complete

<sup>15</sup> According to Bréhier (1940, p. 135) this argument was already offered by Pierre Bernier in his 1685, pp. 87–94, and a similar one was used in 1690 by the theologien Jaquelot in his *Avis sur le tableau du socialisme* (Bréhier 1940, p. 136).

argument, that God cannot destroy the world he creates by a positive action but only by *lack of action*, that is by withdrawing his concurrence. And if God did so—as Descartes explicitly said in argument II—then the world would “go to nothing”. To withdraw his concurrence is then what God *would do* between recreations—supposing that Descartes believes *all* creations are *ex nihilo*.

But is this withdrawal possible in Descartes’s world? The world is perfect, and God is both “source of all goodness” and (essentially) creator. The withdrawal of his concurrence from the world he has created does not satisfy these features. “God cannot incline to nothingness, since he is supreme and pure being” [AT V 147 (CSM III 334)]. Therefore, since none of the possible ways in which the world can disappear are compatible with Descartes’s view of God, we have to reject that there is a *destruction* of the world after each recreation, and admit that the new *recreations* are *not ex nihilo*. And this is so, not because to create from nothing is not proper of God, but because it is also proper of God *not to let his creation “go to nothing”*. “[To incline to nothingness] would be a case of God’s deceiving me and so tending to non-being.” (Ibid.)

This solution—i.e. subordinating the view of creation *ex nihilo* to the intrinsic *goodness* of God’s nature—would have allowed Descartes also to avoid easily one of the most difficult of Gassendi’s objections, namely, the question why the absence of the cause of *existence* (i.e. of being) means the annihilation of all created things, when a similar causal absence in local motion does not mean end of that motion. (This is what I referred to above as Descartes’s apparent commitment to an Aristotelian view of motion—in which the cause of motion must be in contact with the moved object—when it comes to duration of existence, but not when it comes to explain duration of motion.)<sup>16</sup> The “effects” of creation are, Gassendi argues, among those that “we see continuing not only when the acknowledged cause is no longer active, but even, if you like, when it is destroyed and reduced to nothing” [AT VII 300–301 (CSM II 209–10)]. This

<sup>16</sup> See Aristotle, *Physics* 7.1.241b34, and 7.1.243a3–11.

was precisely the objection Descartes attempted to reject with his “you are disputing something which all metaphysicians affirm as a manifest truth”. Descartes also added: “You are attributing to a created thing the perfection of a creator, if the created thing is able to continue in existence independently of anything else” [AT VII 369 (CSM II 254)]. By saying that to be able *to keep on* existing requires the *same* “perfection” than to be able *to come into existence* (i.e. creation), Descartes is considering both continuation of motion, and duration of existence as the *continuous result of an action*. That is why “the same power and action are needed to preserve anything at each individual moment of its duration as would be required to create that thing anew” [AT VII 49 (CSM II 33)]. Thus, Gassendi’s attempt to separate the need for a continuous cause of “being” and for a continuous “cause of coming into being” (argument VII) is not acceptable for Descartes. Both phenomena require the same “perfection” to occur, i.e. the same cause.

Leibniz presents the other side of the objection: why continuation of existence should require the presence of the cause if this is not the case for the *continuation of motion*. “The same movement endures naturally unless some new cause prevents or changes it, because the reason which makes it cease at this instant, if it is no new reason, would have already made it cease sooner” (*Theodicy*, p. 383).<sup>17</sup> This objection is for two reasons: it assumes that the duration of things is *guaranteed* by their mere existence, and that the continuation of motion can be explained just by saying ‘because nothing stops it’.

Both Gassendi and Leibniz are rightly demanding for one single causal standard, either for creation and duration (Gassendi), or for duration and continuation of motion (Leibniz). But they are wrongly (1) pointing at the duration of things or the law of conservation of motion as the *model* to follow and (2) assuming that the latter (duration and continuation) do not require explanation. Descartes is defending that an acceptable causal explanation must find an active cause —as can be easily found

<sup>17</sup> Cf. Descartes’s first and second laws of nature (*Principles* II.37 & 39, in *Phil. Writ.* I, CSM I pp. 240–241).

in the act of creation but not immediately in the continuation of motion— since duration and continuation of motion cannot satisfactorily be explained by themselves. Consequently, duration appears in Descartes's search as a case of *motion*.

The doctrine of the continuous recreation implies that, instead of demanding of the conservation of existence *as much as we demand of the conservation of motion*, (1) *we should demand of the conservation of motion as much as we demand of the conservation of being*, and (2) *of both (duration and continuation of motion) as much as we demand of creation*. And this means that there is no possible explanation of motion (including duration) without a first cause which actually *acts* on the moved and is not itself in motion. God's action on the *being* of created things fulfills that role, and insofar as he is immutable and does it through *a continuous action* —understood as *instantaneous recreations of the world* (which produce a continuous effect)— he is also a cause which is *not* in motion itself.

### *Conclusions*

Descartes's theory of continuous recreation has a clear explicit goal: to guarantee duration in the created things. Not so explicit, but answered at the same time, is the goal of explaining the possibility of motion in general, and of duration as a particular case. In the process of *discovery*, Descartes has set himself a number of non-explicit conditions the cause he is looking for should meet: (1) it must be *in contact*; (2) it must be the same for both duration and motion (since duration is treated as simply an extreme case of motion); and (3) must not be in motion itself (in order to avoid a *regressio*). God's *instantaneous active causations* (recreations) do meet all these conditions and are conceptually consistent with his view of an immutable and free God.

The root of the originality of this solution is, I believe, in the consideration of duration as one instance of motion and in Descartes's determination to find a particular kind of cause and reject those which do not satisfy the requirements. The result does have obvious features in common with Aristotle's

unmoved mover. But it goes further in a double sense: it explains *duration* also (not only motion), and it explains both duration and motion *avoiding the circularity of the view that “motion explains motion”*.

Descartes’s doctrine overcomes quite successfully the four major conflicts (outlined at the beginning of this paper) it encounters. The first and third ones —how God can be *immutable* and *agent* at the same time, and how he can be immutable and still recreate the world *continuously*— are the most difficult ones to solve from Descartes’s seven arguments for a continuous recreation of the world. It is not completely clear whether the recreations should indeed be viewed as *instantaneous actions* —and what an instantaneous *action* is—, as momentaneous, or as conceptual divisions of *one single continuous action*. The last possibility, however, is the only one that satisfies God’s immutability, his love for this world, and a world where there is, ontologically and not only phenomenologically, duration and motion.

The second major conflict in the doctrine —the apparent impossibility of guaranteeing duration or continuation if conservation *is* creation, as Descartes says, and creation is creation *ex nihilo*— can be also consistently solved. We should understand God’s conservation of the world as the realization of the same action of creation —literally: create the same matter and motion— but *without being preceded by nothingness*. But what about Descartes’s insistence on the views that (1) each new recreation is, in fact, a “creation anew”, that (2) each of those creations is creation *ex nihilo* (the only creation “proper”, in Descartes’s words, to God), and that (3) there is only a “conceptual” distinction between the creation of the world and its subsequent recreations? Why then all this, if God is *simply conserving*, without creating from nothing his original creation? Well, Descartes would say, we are *simply* talking of *conservation* of the world but that requires, precisely, a cause that *continuously recreates the world*. Furthermore, this action is not only the maximum expression of God’s omnipotence, love, immutability and freedom, but it also constitutes the *cause* of both origin and duration of the world (which implies conservation of motion and matter).

The solution Descartes provides to the fourth conflict in the theory —his apparent Aristotelianism regarding *duration* and his inertial view regarding local motion— is, I believe, his master and subtlest stroke in this issue. His answer to Gassendi (and indirectly to Leibniz) is asking for a reversal in causal demands: not only duration and continuation of motion *do* require a causal explanation but *there must* be such an *ultimate cause* for them.

As to the status of the laws of nature, we see them now in a new light. They are the immutability of God’s continuous active causations from our perspective. To say that the world is preserved according to God’s will or according to the laws of nature is not, metaphysically speaking, different. The laws, in any case, cannot satisfy Descartes’s search for an ultimate cause. They are not agents. God is, and his actions are the recreations.

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