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# Descartes, Bergson, and Continuous Creation

Khafiz Kerimov

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## Introduction

- 1 In his 1896 work *Matière et mémoire* Henri Bergson distinguishes between two modes of explaining the universe's endurance:

« Ou bien donc vous aurez à supposer que cet univers périt et renaît, par un véritable miracle, à tous les moments de la durée, ou vous devrez lui transporter la continuité d'existence que vous refusez à la conscience, et faire de son passé une réalité qui se survit et se prolonge dans son présent »<sup>1</sup>.
- 2 The fundamental innovation of Bergson's philosophy lies in preferring the latter mode of thinking to the former. Thus, Bergson's time of duration (*durée*) is a time of reciprocal penetration of moments, whereby the past cannot be separated from the present. Duration refers to

« une pénétration mutuelle, une solidarité, une organisation intime d'éléments, dont chacun, représentatif du tout, ne s'en distingue et ne s'en isole que pour une pensée capable d'abstraire »<sup>2</sup>.
- 3 If one chooses the latter mode of thinking, *i.e.* that of interpenetration rather than independence, then the question of endurance becomes redundant. For endurance can be said to be built into Bergson's understanding of time: lack of duration is only conceivable if we take moments of time as potentially isolated from one another. Nevertheless, while Bergson claims that the former mode has dominated the history of metaphysics, it is René Descartes with his doctrine of continued creation that is a permanent target of Bergson's

criticism. Throughout his *œuvre* Bergson makes use of Descartes to show the absurd consequences of representing time as a juxtaposition of moments rather than duration.

- 4 Yet, Bergson's relationship to Descartes' theory of continued creation is not as unambiguous as it might appear at first sight. In his 1907 work *L'évolution créatrice* Bergson hesitates in his criticism of Descartes' doctrine of creation.<sup>3</sup> Bergson hesitates because he discovers what he considers to be Descartes' own hesitation: on the one hand, Descartes affirms universal mechanism; on the other hand, he affirms freedom of the human will<sup>4</sup>. This hesitation appears most evidently in Descartes' theory of continued creation. To account for this hesitation, Bergson distinguishes between two irreconcilable aspects of creation in Descartes: *continued* creation and *continuous* creation. The aim of this essay is to consider exactly these two aspects of creation. To this end, I will first explain Descartes' motivation for continued creation in the *Meditationes de prima philosophia* and *Principia philosophiae*, as well as Bergson's criticism of it. Secondly, I will pay close attention to Bergson's discussion of Descartes in the concluding chapter of *L'évolution créatrice*, where the question of Descartes' (and Bergson's own) presumed hesitation comes up. By drawing a distinction between continuous and continued creation, I will first examine these two aspects in Descartes' philosophy, and then, finally, consider whether Bergson was right to describe Descartes as oscillating between them.

## Descartes' Continued Creation and Bergson's Anti-Cartesianism

- 5 Continued creation is a recurrent theme in Descartes' philosophy, expounded in the *Meditationes* and the *Principia* alike<sup>5</sup>. Let us first begin with Descartes' account of continued creation in the *Principia* I, 21, for it is more focused than the one in the *Meditationes*:

« 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. For the nature of time is such that its parts are not mutually dependent, and never coexist. Thus, from the fact that we now exist, it does not follow that we shall exist a moment from now, 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 »<sup>6</sup>.

- 6 Now, Descartes takes temporal moments and moments of existence, *i.e.* duration and existence, to be strictly equivalent: « a substance cannot cease to endure without also ceasing to be »<sup>7</sup>. The core of Descartes' demonstration depends exactly on the nature of duration (or existence), *i.e.* the reciprocal independence of temporal parts. The kind of reciprocal independence that Descartes has in mind here is logical: there is no logical transition from one moment of duration to another<sup>8</sup>. If time is divisible by the operation of human mind, then we can conceive of one moment existing without the other—such is Descartes' "no necessary connection" argument<sup>9</sup>. The existence of one moment of time, in other words, does not logically necessitate the existence of another moment. On the other hand, and this would be an example of a necessary logical connection, the idea of a valley cannot be separated from the idea of a mountain—where there is the latter, there is the former, and *vice versa*<sup>10</sup>. Moments of time are thus irreducible to each other, cut off from each other. Descartes is led to conclude that from the fact that I now exist it does not follow that I shall exist a moment from now. If the present moment of my existence is logically disconnected from all future ones, then my present existence does not entail my

future existence. In the absence of necessary connection between my present and future existence, therefore, my existence can and must stop at the next moment. Yet, how can we account for the fact that we nonetheless continue to exist, *i.e.*, that existence has duration?<sup>11</sup> As Descartes explains in the *Third Meditation*, it is certain that we are not capable of keeping ourselves in existence:

« I must therefore now ask myself whether I possess some power enabling me to bring about that I who now exist will still exist a little while from now. For since I am nothing but a thinking thing [...] if there were such a power in me, I should undoubtedly be aware of it. But I experience no such power, and this very fact makes me recognize most clearly that I depend on some being distinct from myself »<sup>12</sup>.

- 7 From this it follows that the transition from one moment of existence to another must be accomplished by some being other than myself. In other words, the existence of finite creatures will cease if it is not continually sustained by some external cause. Ultimately, then, Descartes understands God as sustaining entities from one moment to another—otherwise, there is nothing<sup>13</sup>. Here it is important to distinguish between those effects that need the cause that produced them to be continuously active if they are not to give out at any moment and those that continue to be even when their cause is no longer active. The light of the sun can serve as an example of the former, while building and manufacture can serve as an example of the latter. Descartes explains in the *Replies to the Fifth Set of Objections* that God’s activity of conservation ought to be understood on the model of the sun’s causality:

« [The] sun is the cause of the light which it emits, and God is the cause of created things, not just in the sense that they are causes of the *coming* into being of these things, but also in the sense that they are causes of their *being*; and hence they must always continue to act on the effect in the same way in order to keep it in existence »<sup>14</sup>.

- 8 Then, what Descartes’ God conserves is not a particular finite thing in its specific form but its being or existence<sup>15</sup>. In turn, given that God has the power to keep us in existence (which finite creatures lack) he surely also has the power to keep himself in existence<sup>16</sup>. In Descartes’ *Principia* I, 21, therefore, duration of existence is by itself sufficient to demonstrate that God exists.

- 9 The argument in the *Meditations* is virtually identical to the one in the *Principles* I, 21. Firstly, Descartes establishes that there is no necessary connection between parts of time, such that existence can stop at the next moment:

« [A] lifespan can be divided into countless parts, each completely independent of the others, so that it does not follow from the fact that I existed a little while ago that I must exist now »<sup>17</sup>.

- 10 Next, Descartes concludes that I would not exist in the present moment,

« unless there is some cause which as it were creates me afresh [*rursus*] at this moment—that is, which preserves me »<sup>18</sup>.

- 11 Yet, there is a small albeit important difference between these two demonstrations: although in the *Principia* Descartes makes it clear that the cause of conservation is the same as the cause of creation, in the *Third Meditation* he emphasizes that God’s conservation of existence is really just *repeated creation*. Herein lies the significance of the adverb “*rursus*” in the former text: to show that God reproduces existence all over again at each moment rather than simply prolongs it<sup>19</sup>. Therefore, it is not literally the same act by which God conserves created things but many numerically distinct albeit identical

acts. This insight follows from the *ex nihilo* nature of creation: while, say, the sculptor creates a statue out of a pre-existing block of marble, the creative activity of Descartes' God is absolutely originary, *i.e.* preceded by nothing<sup>20</sup>. If there is no eternal matter in Descartes (like in ancient Greek cosmogonies), then Descartes' God does not act upon something antecedently existing (even if only potentially), but causes existence in the first place<sup>21</sup>. As Bergson puts it in his 1904-1905 lecture course at the *Collège de France*:

« Or l'idée de création est absolument absente [...] de la philosophie grecque : quand Dieu intervient dans le monde, c'est comme arrangeur du monde, il ne crée pas les choses, au lieu que dans théologie juive il y a cette idée que Dieu a créé le monde »<sup>22</sup>.

- 12 Given that Descartes understands creation within the parameters of *ex nihilo*, existence can endure only by means of creation repeated at every moment. When God conserves something in existence, it is created as much out of nothing, as if there had been nothing before. Descartes sums up this idea by writing that

« it is quite clear to anyone who attentively considers the nature of time that the same power and action are needed to preserve anything at each individual moment of its duration as it would be required to create that thing anew as if it were not yet in existence »<sup>23</sup>.

- 13 The distinction between creation and conservation is thus a conceptual rather than real distinction. Stated differently, it is merely circumstantial or numerical: conservation of existence follows preceding acts of the same kind in the order of time, hence, it is called conservation rather than creation. Ultimately, however, Descartes' continued creation is but an unceasing interruption of (and conquest over) nothingness, each time anew<sup>24</sup>.

- 14 It is exactly on the basis of Descartes' conception of divisible time that Bergson's anti-Cartesianism can be reconstructed<sup>25</sup>. Descartes' continued creation follows what Bergson calls a cinematographical model of thinking. In terms of this cinematographic conception of reality, all duration is but a juxtaposition of disconnected moments<sup>26</sup>. In Frankfurt's words (who resorts to the same language as Bergson here),

« [continuity] and duration are no more inherent in any of these successive worlds than motion is inherent in the still photographs whose succession provides the illusion of movement in a motion picture »<sup>27</sup>.

- 15 Given that Descartes sees no "necessary connection" between instantaneous moments of time, it is not surprising he has to resort to the idea of continued creation. As early as in his *Les données immédiates* Bergson writes:

« [Car] les moments successifs du temps réel ne sont pas solidaires les uns des autres ; et aucun effort logique n'aboutira à prouver que ce qui a été sera ou continuera d'être [...] Descartes l'avait si bien compris qu'il attribuait à une grâce sans cesse renouvelée de la Providence la régularité du monde physique, et la continuation des mêmes effets »<sup>28</sup>.

- 16 Ultimately, then, Bergson appears to reverse Descartes' demonstration: it is not duration of existence which serves as a proof for the existence of God (as in the *Principia* I, 21), but *the latter is introduced to explain the former*. As Bergson puts it in his 1904-1905 lecture course on freedom:

« Sans l'acte créateur sans cesse renouvelé de Dieu le monde ne subsisterait pas un seul instant ; il faut qu'à chaque moment de la durée Dieu recommence l'acte créateur »<sup>29</sup>.

- 17 Indeed, it is not at all clear whether Descartes' argument here demonstrates or relies on the existence of God. If one sets moments of existence side by side like the beads of a necklace, must one not perforce suppose some thread to hold them together?<sup>30</sup>

## Bergson's Hesitation: Continuous or Continued Creation?

- 18 In spite of his apparent anti-Cartesianism, Bergson seems to hesitate regarding Descartes' theory of continued creation in the final chapter of *L'évolution créatrice*. The passage in which this hesitation emerges is worth quoting at length:

« L'oscillation est visible dans le cartésianisme. D'un côté, Descartes affirme le mécanisme universel : de ce point de vue, le mouvement serait relatif, et comme le temps a juste autant de réalité que le mouvement, passé, présent et avenir devraient être donnés de toute éternité. Mais d'autre part (et c'est pourquoi le philosophe n'est pas allé jusqu'à ces conséquences extrêmes) Descartes croit au libre arbitre de l'homme. Il superpose au déterminisme des phénomènes physiques l'indéterminisme des actions humaines, et par conséquent au temps-longueur une durée où il y a invention, création, succession vraie. Cette durée, il l'adosse à un Dieu qui renouvelle sans cesse l'acte créateur et qui, étant ainsi tangent au temps et au devenir, les soutient, leur communique nécessairement quelque chose de son absolue réalité. Quand il se place à ce second point de vue, Descartes parle du mouvement, même spatial, comme d'un absolu. Il s'est donc engagé tout à tour sur l'une et sur l'autre voies, décidé à ne suivre aucune des deux jusqu'au bout. La première l'eût conduit à la négation du libre arbitre chez l'homme et du véritable vouloir en Dieu. C'était la suppression de toute durée efficace, l'assimilation de l'univers à une chose *donnée* qu'une intelligence surhumaine embrasserait tout d'un coup, dans l'instantané ou dans l'éternel. En suivant la seconde, au contraire, on aboutissait à toutes les conséquences que l'intuition de la durée vraie implique. La création n'apparaissait plus simplement comme *continué*, mais comme *continue*. L'univers envisagé dans son ensemble, évoluait véritablement. L'avenir n'était plus déterminable en fonction du présent »<sup>31</sup>.

- 19 It is vital to note that Bergson's distinction between continued and continuous creation is not limited to the passage quoted above but is consistent throughout *L'évolution créatrice*. While Bergson reserves the expression "création continue" to describe duration, he uses the expression "création continuée" to talk about Descartes (with one notable exception).<sup>32</sup> Bergson writes, for example, that life ought to be considered as « une création continue d'imprévisible forme »<sup>33</sup>. But let us begin by considering the first horn of Descartes' indecision, which Bergson describes as *continued* creation (to be distinguished from continuous creation). Now, as the past participle « continue » suggests, continued creation refers to a mere continuation of creation, where continuation entails sameness<sup>34</sup>. Indeed, in the *Principia* I, 23 Descartes explains that God acts but « by one same and very simple action »<sup>35</sup>. But is this sameness of divine action not belied by the continual state of change of the world? While Descartes does not deny change, his solution to this problem lies in his conception of natural laws. Descartes translates the immutability of God's action into selfsame laws of nature (e.g., the principle of kinetic inertia), in accordance with which all change, however diverse, takes place<sup>36</sup>. As Descartes puts it in the *Principia* II, 42, « [the] very fact that creation is in a continual state of change is thus evidence of the immutability of God »<sup>37</sup>. The most important sign of God's immutability, however, is the preservation of the same quantity of motion in the universe as when God first created it. Despite various changes in any given part of the universe, that is, God always preserves the same quantity of motion in the universe<sup>38</sup>. In his 1904-1905 lecture course at the *Collège de France* Bergson explains:

« Dieu a créé une quantité déterminée de mouvement. Cette quantité ne pourrait être modifiée que si Dieu voulait y retrancher ou y ajouter quelque chose, mais cela serait contraire à la stabilité habituelle, à la constance habituelle chez Dieu. Voilà pourquoi il y a toujours la même quantité de mouvement dans l'univers »<sup>39</sup>.

- 20 Herein lies the role of continued creation: to reduce the diversity of change to the immutability of God's activity of creation. Appropriately, Wahl concludes:

« [The] doctrine of *continued* [*continué*] creation is presented here under a new aspect; and the word 'continued' attains its full meaning. It is a solution to the problem of diversity and unity, as well as of change and immutability »<sup>40</sup>.

- 21 Thanks to the selfsameness of God's activity of creation, therefore, the future of the universe is determinable entirely on the basis of its past. Accordingly, Bergson writes:

« Une intelligence surhumaine qui connaîtrait à un moment donné la situation, la vitesse et la direction de toutes les particules de la matière pourrait prévoir, prédire, si elle était douée d'une aptitude mathématique infinie, tout ce qui se passerait »<sup>41</sup>.

- 22 On the one hand, Descartes' conception of divisible time is dictated by the law of conservation of motion; on the other hand, it is dictated by the exigencies of his mathematical physics. Given the impossibility of void in Descartes' physics, motion in the cosmos has to be roughly circular: in this circle one body entering a given place expels the other, and so on to infinity<sup>42</sup>. Furthermore, in order that no space in the universe, however narrow, be empty, matter has to be taken as indefinitely divisible<sup>43</sup>. Then, the narrower is the space to be filled, the greater must be the speed of the particles of matter filling it:

« At every [...] location an increase in speed must [ ] compensate for a narrower space. In this way, the amount of matter passing any given part of the circle in any given time will always be equal »<sup>44</sup>.

- 23 But such increases in speed (or, rather, their calculability) are intrinsically tied to the divisibility of time—the divisibility of matter thus entails the divisibility of time.

« The conception of the divisibility of time being necessary for Cartesian mechanics, the idea of motion implicates at once the divisibility of time and the divisibility of matter »<sup>45</sup>.

- 24 Indeed, this is how all natural phenomena can be explained with the principles of geometry and pure mathematics. In Bergson's words:

« Si on admettait cette loi de conservation de mouvement dans toute sa rigueur, il en résulterait, semble-t-il, que tout est calculable dans l'univers »<sup>46</sup>.

- 25 In the beginning of *L'évolution créatrice* Bergson emphasizes exactly this connection between Descartes' conception of time and mathematical physics:

« Et, de fait, les systèmes sur lesquels la science opère sont dans un présent instantané qui se renouvelle sans cesse [...] Quand le mathématicien calcule l'état futur d'un système au bout du temps  $t$ , rien ne l'empêche de supposer que, d'ici là, l'univers matériel s'évanouisse pour réapparaître tout à coup [...] Bref, le monde sur lequel le mathématicien opère est un monde qui meurt et renaît à chaque instant, celui-là même auquel pensait Descartes quand il parlait de création continuée »<sup>47</sup>.

- 26 Indeed, in light of the above presentation of continued creation, Bergson's description of the universe as vanishing and reappearing at every moment should not sound unfamiliar. Herein lies the provenance of Descartes' doctrine of continued creation: first, Descartes takes time to divisible into moments (for reasons described above); second, he perceives no necessary connection between them. At this point, the project of mechanism, of physical determinism, appears to exhaust Descartes' theory of continued creation.

- 27 At the same time as he affirms universal determinism, however, Descartes affirms the freedom of the human will as a self-evident truth. Then, human freedom is an exception to the universal power of explanation afforded by mechanistic physics. Descartes considers the freedom of the will to be indivisible, *i.e.* incapable of either increase or decrease—the will is either free or unfree.

« For since the will consists of simply of one thing which is, as it were, indivisible, it seems that its nature rules out the possibility of anything being taken away from it »<sup>48</sup>.

- 28 Insofar as human will is indivisible, however, it has to be infinite rather than finite. Thus, human will resembles divine will<sup>49</sup>. Appropriately, Descartes writes in the Fourth *Meditation*:

« It is only the will, or freedom of choice, which I experience within me to be so great that the idea of any greater faculty is beyond my grasp; so much so that it is above all in virtue of the will that I understand myself to bear in some way the image and likeness of God »<sup>50</sup>.

- 29 But the exceptional character of human freedom in Descartes' philosophy results in what we may call a placement issue, as it is hard to see how human freedom could fit into a mechanistic world envisioned by Descartes. In his 1904-1905 lecture course at the *Collège de France* Bergson suggests that Descartes attempted to resolve this question in the *Principia* II, 41. There Descartes writes that

« there is a difference between motion considered in itself and its determination in a certain direction; for the determination of the direction can be altered, while the motion remains constant »<sup>51</sup>.

- 30 The passage seems to suggest that, while there is an essential connection between the constancy of God's action and the law of conservation of motion, this constancy is not disturbed by alterations in direction of motion. In Bergson's own words,

« Descartes croit que la quantité du mouvement est constante dans l'univers. Il ne s'ensuit pas que la direction de chaque mouvement soit déterminée nécessairement; pourvu que la quantité du mouvement subsiste, il n'est pas nécessaire que la direction soit considérée comme déterminée »<sup>52</sup>.

- 31 By leaving direction of motion undetermined with regard to the law of conservation of motion, then, Descartes makes room for freedom of choice. Indeed, in the immediately preceding section 40 Descartes raised exactly the question of the relationship between human mind and material motion. Descartes wrote that while the third law of motion applies to all corporeal change, he is

« not [thereby] inquiring into the existence or nature of any power to move bodies which may be possessed by human minds, or the minds of angels »<sup>53</sup>.

- 32 On the basis of this Bergson concludes:

« Il est donc bien possible que dans la pensée de Descartes la liberté humaine soit compatible avec le mécanisme de la nature, puisque [...] on peut concevoir que certains mouvements soient indéterminés, et que c'est de cette indétermination que notre liberté profiterait »<sup>54</sup>.

- 33 Yet, it is not clear that section 41 of part II of Descartes' *Principia* ought to be interpreted in the way that Bergson does<sup>55</sup>. Hence, Descartes' oscillation between freedom and mechanism cannot be decided on the basis of section 41 alone. Therefore, in order to settle this question, I turn to the Fourth *Meditation* (as well as the Second *Meditation*), where Descartes expounds his conception of human freedom most fully, and where something like the idea of *continuous* creation (*pace* Bergson) can be glimpsed.



## The Time of Doubt, the Time of Freedom

34 Human freedom is nowhere more evident than in hyperbolic doubt, for it is there that assent is withheld even from what is most certain. In the beginning of the *Second Meditation* Descartes summarizes the steps taken in hyperbolic doubt (in the *First Meditation*):

« I will suppose then, that everything I see is spurious. I will believe that none of the things my mendacious memory reports ever happened. I have no senses. Body, figure, extension, motion, and place are chimeras. So what remains true? Perhaps just the one fact that nothing is certain »<sup>56</sup>.

35 While doubting the senses (as well as memory) is possible if we imagine that we are dreaming, it is only insofar as simple notions such as figure and extension are dependent upon God that we can subject them to doubt. Thus, Descartes was capable of doubting mathematical truths in the *First Meditation* because he presupposed that there is « some omnipotent God »<sup>57</sup> or, better, « some malicious demon of the utmost power »<sup>58</sup>. Indeed, Descartes imagines that some omnipotent God is deceiving him whenever he adds two and three together or counts the sides of a square<sup>59</sup>. But a deception of this sort is imaginable in the *Meditationes* only because ten years earlier Descartes included eternal truths within the limits of God's creation. Descartes wrote to Mersenne on April 15th, 1630:

« The mathematical truths which you call eternal have been laid down by God and depend on him entirely no less than the rest of his creatures. Indeed to say that these truths are independent of God is to talk of him as if he were Jupiter or Saturn and to subject him to the Styx and the Fates »<sup>60</sup>.

36 If mathematical truths are subject to God's will, then

« [God] was free to make it not true that all the radii of the circle are equal—just as free as he was not to create the world »<sup>61</sup>.

37 Although it is incomprehensible to us how anything like that could be possible,

« [it] would be rash to think that our imagination reaches as far as his power »<sup>62</sup>.

38 Thus, reality as it appears to God might be radically different from what we understand it to be. Therefore, it is possible to doubt the fundamental structures of reality, namely, the eternal truths. Such is the intimate link between the opinion about God's omnipotence and Descartes' hyperbolic doubt—the latter is impossible without the former<sup>63</sup>. At this juncture we might conclude that in the same way as nothing can be said to be independent of God, nothing can be immune from the human power of doubt. We can doubt as many things as were created by the omnipotent God.

39 However, the resemblance between human will and divine will issues not only in the possibility of doubt but also in certainty. Now, the sole truth by which God can be said to be bound unconditionally is the truth of his own existence, which is described by Descartes as

« the first and the most eternal of all possible truths and the one from which alone all others proceed »<sup>64</sup>.

40 In other words, the only exception to God's arbitrary power is his own existence; God cannot make himself not exist. But, just as God could not make himself not exist, the Cartesian self cannot doubt its own existence while it is doubting. Such is Descartes' famous exit from the hyperbolic doubt:

« But I have convinced myself that there is absolutely nothing in the world, no sky, no earth, no minds, no bodies. Does it now follow that I too do not exist? No: if I convinced myself of something then I certainly existed. But there is a deceiver of supreme power and cunning who is deliberately and constantly deceiving me. In that case I too undoubtedly exist, if he is deceiving me; and let him deceive me as much as he can, he will never bring it about that I am nothing so long as I think that I am something. So after considering everything very thoroughly, I must finally conclude that this proposition, *I am, I exist*, is necessarily true whenever it is put forward by me or conceived in my mind »<sup>65</sup>.

41 First, we engage doubt in a manner that is parallel to God's omnipotence, subjecting to suspicion even the eternal truths. Then, we conclude that if we are doubting, then our existence is as undeniable and as immune to skepticism as the existence of God himself. In the same way as God is bound by his own necessary existence, therefore, it is contradictory for me to doubt my own existence while I am doubting<sup>66</sup> Descartes' doctrine of resemblance thus culminates in the necessity of the self's existence, which is on par with the necessity of God's existence.

42 Yet, the resemblance between human and divine will is not to be confused with sameness and identity. Resemblance presupposes difference, non-identity. First, the discontinuity between human and God's will lies in what we may call the facticity of human existence. In Bergson's words, « l'homme trouve devant lui la nature déjà créée et la vérité déjà créée »<sup>67</sup>. This is exactly why, whereas God's willing is originally creative, we human beings can merely doubt what God has already created. Second, while the existence of God is eternally necessary, the existence of the self is only necessary while it is cogitating<sup>68</sup>. Indeed, from the fact that I now exist it does not follow that I existed always and will always exist. At any given time a human being can doubt its own existence at some other time. If doubt at the very least vouches the certainty of existence, then this existence can be fully counted on only at the time of doubt. Now, one of the steps of Descartes' doubt was to reject that anything that memory reports has ever happened. By taking memory to be mendacious, therefore, Descartes cuts himself off from the past<sup>69</sup>. But insofar as Descartes' hyperbolic doubt signifies a break with the past, it also waives all certainty concerning the future. As we have already seen, « *ego sum, ego existo* » is necessarily true only as long as it is conceived in my mind. Appropriately, Descartes writes in the *Second Meditation*:

« At last I have discovered it—thought; this alone is inseparable from me. I am, I exist—that is certain. But for how long? For as long as I am thinking. For it could be that were I totally to cease from thinking, I should totally cease to exist »<sup>70</sup>.

43 My existence while I am thinking does not translate into my future existence—I could cease from thinking at any moment. Then, the certainty of my existence is limited to the present moment, while the future and the past are fundamentally uncertain.<sup>71</sup> My suggestion is that it is this same uncertainty that lies at the heart of Descartes' thesis about the reciprocal independence of moments of time in the *Principia* I, 21 and the *Third Meditation*: « it does not follow from the fact that I existed a little while ago that I must exist now »<sup>72</sup>. By the same token: « from the fact that we now exist, it does not follow that we shall exist a moment from now »<sup>73</sup>. Such is the link between the time of « *ego sum, ego existo* » and Descartes' thesis about the reciprocal independence of temporal moments (*i.e.*, the time of continued creation). If in the context of Descartes' physics this reciprocal independence is merely theoretically posited, in hyperbolic doubt it is lived, experienced by consciousness. Indeed, Descartes' method of hyperbolic doubt can be said to be based

in the very human, finite condition—we human beings are always in some doubt. Descartes writes to Arnauld on June 4th, 1648:

« We dearly understand that it is possible for me to exist at this moment, while I am thinking of one thing, and yet not to exist at the very next moment »<sup>74</sup>.

44 Then, if my future existence could never arrive, a certain independence of moments of time is undeniable. In Wahl's words,

« [the] thought of death and the thought of forgetting—it is under this double form that the idea of the independence of moments of time is affirmed here »<sup>75</sup>.

45 Above all, then, human beings are in doubt concerning the past and the future. Consequently, Descartes' methodical doubt is thus but a radicalization of the doubt that is endemic to the human condition. But if Descartes' method of doubt is grounded in human condition, so is his doctrine of continued creation, except that at this juncture it is no longer continued but *continuous* (as I will show shortly). Thus, Descartes' demonstration of continued creation can be reversed in yet another way: it is not the (logical) independence of moments of time which entails that I could not exist at the very next moment, but *the latter produces the thought of the former*. This is what Worms calls an « existential experience of the discontinuity of time »<sup>76</sup>. From this it follows that human finitude can explain the reciprocal independence of temporal moments, thus Descartes' theory of continued creation, as well and as exhaustively as the law of conservation of motion. At this point what Bergson calls Descartes' indecision might very well refer to this very situation of two divergent interpretations of creation and conservation.

46 At the same time as Descartes' methodical doubt ascertains the self's existence, it proves the existence of an infinite being. In other words, we are aware of God's infinite existence precisely by virtue of our finitude. Thus, my admission of finitude is at the same time an admission of God's existence. Accordingly, in the *Third Meditation* Descartes writes that

« I clearly understand that there is more reality in an infinite substance than in a finite one, and hence that my perception of the infinite, that is God, is in some way prior to my perception of the finite, that is myself. For how could I understand that I doubted or desired—that is, lacked something—and that I was not wholly perfect, unless there were in me some idea of a more perfect being which enabled me to recognize my own defects by comparison? »<sup>77</sup>.

47 Although I am capable of gradually perfecting myself, I could never hope to reach the infinite perfection of God, « for this gradual increase [...] is itself the surest sign of imperfection »<sup>78</sup>. The distance between my finite self and the infinite being, *i.e.* God, is thus, quite precisely, infinite and unbridgeable. From this it follows that God is utterly incomprehensible from the human standpoint. But Descartes does not consider this incomprehensibility as problematizing his demonstration of God's existence. On the contrary, it is a corroborating evidence:

« It does not matter that I do not grasp the infinite [...] for it is in the nature of the infinite not to be grasped by a finite being like myself »<sup>79</sup>.

48 In spite of God's incomprehensibility, Descartes is able to conclude that God is benevolent. Descartes writes towards the end of the *Third Meditation*:

« It is clear enough from this that he cannot be a deceiver, since it is manifest by the natural light that all fraud and deception depend on some defect »<sup>80</sup>.

49 Provided that deception signifies defect, it is a self-contradiction for God to be a deceiver. In turn, God's benevolence permits Descartes to restore confidence in all the objects that were subjected to doubt in the *First Meditation*. Towards the end of the *Sixth Meditation*

Descartes returns to the question of memory, « which connects present experiences with preceding ones »<sup>81</sup>. Descartes argues that, owing to the fact that God is not a deceiver, I can use my memory to « connect my [present] perception [...] with the whole of the rest of my life without a break »<sup>82</sup>. In this way my memory can corroborate my present perceptions, thereby reducing the risk of error. The distinction that Descartes draws between dreaming and being awake here is that « Dreams are never linked by memory with all the other actions of life as waking experiences are »<sup>83</sup>. When I am dreaming, it occurs quite often for something (e.g., a ghost or a vision) « suddenly to appear to me and then disappear immediately [...] so that I could not see whence it had come or whither it had gone »<sup>84</sup>. On the other hand, in wakeful state it is always possible to keep track of « where things come from and where and when they come to me »<sup>85</sup>. Then, while dreams admit breaks in the continuity of experience, wakeful existence does not. The latter thus entertains a much more considerable connection with memory than the state of dreaming (which can be said to be somewhat independent from remembering). Indeed, there is no wakeful experience as we know it without memory. Ultimately, then, it is exactly memory, *i.e.* continuity of experience without any break, that allows Descartes to exit from doubt concerning the senses. Indeed, we neither ever fully remember what happens to us in dreams nor employ memory in an ordinary manner while we are dreaming. Somewhat similarly, at the end of the *Fifth Meditation* the benevolence of God allows Descartes to regain trust in conclusions of geometrical demonstrations, when the demonstrations themselves are not remembered. For as long as I remember that I perceived a demonstration clearly and distinctly at some past time, it is permissible to trust its conclusion at the present time. Thus, memory is what gives rise to the unbrokenness of experience, just as the unbrokenness of God's creative activity makes memory possible. This is how Descartes' time of doubt is ultimately overcome by reference to the permanence of divine substance<sup>86</sup>.

- 50 While memory endows the past of my existence, *i.e.* where I come from, with sufficient certainty, the future of my existence is not thereby made certain. Herein lies the outcome of Descartes' critique of finalism in the *Fourth Meditation*: given that the nature of God surpasses my understanding, « there is considerable rashness in thinking myself capable of investigating the impenetrable purposes of God »<sup>87</sup>. It follows that the ends of God are inscrutable from the human standpoint. Hans Blumenberg explains:

« Man should not presume to possess insight into the intentions behind the world. The assumption of God's infinite power means above all that finite reason cannot determine that any of its hypotheses should correspond to the actual constructive principle of nature »<sup>88</sup>.

- 51 Now, it is this very denial of finalism that allows Descartes to settle a conflict between human freedom and divine providence in the *Principia I*, 40-41. If finite beings are incapable of inquiring into the ends of creation, then neither can providence be comprehended by them. Descartes describes the contradiction between freedom and providence as follows:

« [Now] that we have come to know God, we perceive in him a power so immeasurable that we regard it as impious to suppose that we could ever do anything which was not already preordained by him. And we can easily get ourselves into great difficulties if we attempt to reconcile this divine preordination with the freedom of our will, or attempt to grasp both these things at once »<sup>89</sup>.

- 52 Indeed, although it is impious to deny that everything in the universe is preordained by God, it is contradictory to affirm human freedom and providence simultaneously. Thus,

human freedom appears to enter into conflict with divine necessity. Yet, Descartes resolves the conflict in the following fashion:

« But we shall get out of these difficulties if we remember that our mind is finite, while the power of God is infinite—the power by which he not only knew from eternity whatever is or can be, but also willed it and preordained it [...] Nonetheless, we have such close awareness of the freedom and indifference which is in us, that there is nothing we can grasp more evidently or more perfectly. And it would be absurd, simply because we do not grasp one thing, which we know must by its very nature be beyond our comprehension, to doubt something else of which we have an intimate grasp and which we experience within ourselves »<sup>90</sup>.

- 53 Although freedom and divine necessity seem to contradict each other, it is only if we were to comprehend providence that the possibility of freedom would be endangered. In other words, a pair of contradictories is possible only if both contradictories are within our comprehension. Thus, something that we do not comprehend cannot contradict something that we do comprehend, save in appearance. Given the divine providence is inscrutable from the human standpoint, therefore, it cannot conflict with human freedom (of which we have an intimate grasp). Hence, if it is indeed impious to deny providence, then, according to the *Fourth Meditation*, it is equally rash to pretend to comprehend it. This is how Descartes leaves open the possibility for the indeterminacy of human choice, thus of the future. Indeed, if we are in doubt regarding the future, then the future is not determinable by the present. We are in doubt concerning the future precisely because we are free in regard to it. At this point the Cartesian universe ceases to be a thing preordained, and duration regains its efficiency. From this perspective, although human existence depends on God's continued creation at individual moments, creation can nonetheless be said to be continuous<sup>91</sup>. That is to say: it is exactly in Descartes' performance of doubt that something like *continuous* (as opposed to continued) creation can be glimpsed. What the adjective « continue » suggests here is a kind of creation that never ceases to be creative (in the full sense of the word), inventive, free. It is a creation whose future is indeterminate, unforeseeable, a creation that cannot but unfold « from one moment to another [d'un instant à l'autre] »<sup>92</sup>. There is something dreamlike or ghostlike about human beings in their freedom. What makes us free is that we comprehend neither whence we are coming nor whither we are going.

## Conclusion

- 54 In light of the foregoing it should be clear that it is not entirely accurate to speak of Descartes' oscillation between human freedom and universal mechanism. That is, Descartes is well aware that these two notions are irreconcilable; so, he never attempts to reconcile them. Indeed, if one succeeds in reconciling freedom and mechanism, then one has either lost freedom or both. Thus, freedom must not be subjected to agreement with mechanism; otherwise, it is no longer freedom. Such is indeed the reason why Descartes makes human (as well as divine) freedom an exception to mechanism. Then, as far as the question of freedom is concerned, there is no oscillation (or indecision) on Descartes' part: Descartes decides to leave freedom undecided from the standpoint of mechanism. Yet, Descartes' decision to make freedom an exception to mechanism has some ramifications for the theory of continued creation. From the standpoint of universal mechanism, creation is indeed continued: due to the selfsameness of God's activity, the future is determinable on the basis of the present. From the standpoint of human

freedom, on the other hand, creation is continuous, which means that the future is unforeseeable, indeterminate. The time of continuous creation is the time of freedom. Yet, human freedom is inextricably connected with human finitude. To be free for a human being is to be in doubt concerning the future, concerning one's destination. If Descartes' chief motivation for continued creation stems from the thesis about the reciprocal independence of temporal moments, then it can be explained equally well by the project of mechanism and by human finitude. If I may cease to exist at the next moment, then the present moment does not entail the existence of the next one. Thus, we see Descartes' decision to make freedom an exception to mechanism result in two divergent aspects of one and the same doctrine of creation: continued versus continuous creation.

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## NOTES

1. Henri Bergson (1896), *Matière et mémoire*, éd. Camille Riquier, 2008, Paris, PUF, p. 165-166. I make use of the following English translation: *Matter and Memory*, translated by Nancy Margaret Paul and W. Scott Palmer, 1988, New York, Zone Books: « Either [...] you must suppose that this universe dies and is born again miraculously at each moment of duration, or you must attribute to it [...] continuity of existence [...] and make of its past a reality which endures and is prolonged into its present ».
2. Henri Bergson (1889), *Essai sur les données immédiates de la conscience*, éd. Arnaud Bouaniche, 2007, Paris, PUF, p. 75. I make use of the following English translation: *Time and Free Will: An Essay on the Immediate Data of Consciousness*, translated by F. L. Pogson, 2001, New York, Dover Publications: « an interconnection and organization of elements, each one of which represents the whole, and cannot be distinguished or isolated from it except by abstract thinking » (translation modified).
3. Henri Bergson (1907), *L'évolution créatrice*, éd. Arnaud François, 2007, Paris, PUF, p. 344-346. I make use of the following English translation: *Creative Evolution*, edited by Keith Ansell Pearson, Michael Kolkman, and Michael Vaughan, translated by Arthur Mitchell, 2007, New York, Palgrave Macmillan.
4. As I will show, what Bergson takes to be Descartes' hesitation is in fact his distinction between *res extensa* (which is subject to mechanism) and *res cogitans* (which possesses freedom).
5. In the *Discourse on Method* Descartes acknowledges the indebtedness of his theory of continued creation to the preceding theologians (e.g., Aquinas, Suarez, etc.): « [It] is an opinion commonly received by the theologians, that the action by which He now preserves the world is just the same as that by which He at first created it » (AT VI 45). The question whether Descartes' theory of continued creation signifies a point of continuity with the theologians or a point of discontinuity, although it is fundamental, is, of course, beyond the scope of this article.
6. Descartes, AT VIII 13. I make use of the following Latin edition of Descartes: Charles Adam and Paul Tannery (eds.) (AT hereafter), *Œuvres de Descartes*, 1964-1976, Paris, Vrin/C.N.R.S., volumes I-XI: « *Nihilque hujus demonstrationis evidentiam potest obscurare, modò attendamus ad temporis sive rerum durationis naturam; quae talis est, ut ejus partes à mutuò non pendeant, nec unquam simul existant; atque ideò ex hoc quòd jam simus, non sequitur nos in tempore proximè sequenti etiam futuros, nisi aliqua causa, nempe eadem illa quae nos primum produxit, continuò veluti reproducat, hoc est, conservet* ». I make use of the following English translation: *The Philosophical Writings of Descartes*, edited and translated by John Cottingham, Robert Stoothoff, and Dugald Murdoch, 1984-1991, New York, Cambridge, volumes I-III.
7. Descartes, AT VIII 30: « *Ut, quia substantia quaevis, si cesset durare, cessat etiam esse* ».
8. See Harry Frankfurt (1999), « Continuous Creation, Ontological Inertia, and the Discontinuity of Time », in *Necessity, Volition, Love*, Cambridge, CUP, p. 66.

9. Essentially, this is what Descartes calls a real distinction (*distinctio realis*) (AT VIII 28-29).
10. See Descartes, AT VII 66.
11. Given that Descartes' theory of continuous creation arises out of the question of duration, it is not at all surprising that another thinker of duration, namely, Bergson, was so attracted to it (even though he did not agree with it).
12. Descartes, AT VII 49: « *Itaque debeo nunc interrogare me ipsum, an habeam aliquam vim per quam possim efficere ut ego ille, qui jam sum, paulo post etiam sim futurus: nam, cum nihil aliud sim quam res cogitans, vel saltem cum de ea tantum mei parte praecise nunc agam quae est res cogitans, si quae talis vis in me esset, ejus proculdubio conscius essem. Sed & nullam esse experior, & ex hoc ipso evidentissime cognosco me ab aliquo ente a me diverso pendere* ».
13. For Bergson's criticism of the idea of nothingness as a pseudo-idea, see Henri Bergson (2007), *L'évolution créatrice*, p. 272-298.
14. Descartes, AT VII 369: « *sed sol est causa lucis ab ipso procedentis, & Deus est causa rerum creaturarum, non modò secundum fieri, sed etiam secundum esse, ideoque debet semper eodem modo influere in effectum, ut eundem conservet* ».
15. See Harry Frankfurt (1999), « Continuous Creation, Ontological Inertia, and the Discontinuity of Time », p. 63.
16. Concerning the question of God sustaining himself in existence, see Jean-Luc Marion (1991), *Sur la théologie blanche de Descartes : analogie, création des vérités éternelles et fondement*, Paris, PUF, p. 436.
17. Descartes, AT VII 48-49: « *Quoniam enim omne tempus vitae in partes innumeras dividi potest, quarum singulae a reliquis nullo modo dependent, ex eo quòd paulo ante fuerim, non sequitur me nunc debere esse* ».
18. Descartes, AT VII 49: « *nisi aliqua causa me quasi rursus creet ad hoc momentum, hoc est me conservet* ». See also AT VII 53.
19. See Descartes, AT VIII 64.
20. On Descartes' elimination of the notions of matter and potentiality, see Jean Wahl (1920), *Du rôle de l'idée de l'instant dans la philosophie de Descartes*, éd. Frédéric Worms, 1994, Paris, Descartes & Cie, p. 62-63 and p. 77-78. Frédéric Worms (1994) suggests that Wahl's treatise on the role of instant in Descartes' philosophy cannot be understood without reference to Bergson (to whom the treatise is dedicated): « *De l'instant à l'autre : Descartes, Bergson, Jean Wahl et nous* » in Frédéric Worms (éd.), *Du rôle de l'idée de l'instant dans la philosophie de Descartes*, Paris, Descartes & Cie, p. 22.
21. Bergson (2017) suggests that there are two fundamental cosmogonic possibilities, that of creation and that of uncreated, eternal matter: *L'évolution du problème de la liberté: Cours au Collège de France 1904-1905*, éd. Arnaud François, Paris, PUF, p. 241.
22. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 204: « [The] idea of creation is altogether absent [...] in Greek philosophy: when the Greek divinity intervenes in the world, it does so by arranging it rather than creating, while in Jewish theology God creates the world ». This and all other quotations are my translations.
23. Descartes, AT VII 49: « *Perspicuum enim est attendenti ad temporis naturam, eàdem plane vi & actione opus esse ad rem quam libet singulis momentis quibus durat conservandam, quâ opus esset ad eandem de novo creandam, si nondum existeret* ».
24. Given that for Descartes time is indefinitely divisible, Frankfurt (1999) goes as far as to conclude that « there can be no existing thing whose duration is so short that it does not require continuous creation », such that « all creation entails continuous creation » and « God cannot create anything without conserving it for some period of time by continuous creative activity »: « Continuous Creation, Ontological Inertia, and the Discontinuity of Time », p. 62.



25. Descartes takes time to be indefinitely rather infinitely divisible. On the difference between the indefinite and the infinite, see Descartes, AT VIII 15, as well as Étienne Gilson (1913), *La liberté chez Descartes et la théologie*, Paris, Félix Alcan, p. 114.
26. See Henri Bergson (2007), *L'évolution créatrice*, p. 304-306.
27. Harry Frankfurt (1999), « Continuous Creation, Ontological Inertia, and the Discontinuity of Time », p. 65.
28. Henri Bergson (2007), *Essai sur les données immédiates de la conscience*, p. 156: « [The] successive moments of real time are not bound up with one another, and no effort of logic will succeed in proving that what has been will be or will continue to be [...] Descartes understood this so well that he attributed the regularity of the physical world and the continuation of the same effects to the constantly renewed grace of Providence ».
29. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 214: « Without the unceasing renewal of the creative act of God the world would not subsist even for a single instant; it is necessary that God restarts the act of creation at every moment of duration »
30. See Henri Bergson (2007), *L'évolution créatrice*, p. 3.
31. Henri Bergson (2007), *L'évolution créatrice*, p. 344-345: « The oscillation is visible in Cartesianism. On the one hand, Descartes affirms universal mechanism: from this point of view, movement would be relative, and, as time has just as much reality as movement, it would follow that past, present, and future are given from all eternity. But, on the other hand (and that is why the philosopher has not gone to these extreme consequences), Descartes believes in the free will of man. He superposes on the determinism of physical phenomena the indeterminism of human actions, and, consequently, on time-length a time in which there is creation, invention, true succession. This duration he supports on a God who is unceasingly renewing the creative act, and who, being thus tangent to time and becoming, sustains them, communicates to them necessarily something of his absolute reality. When he places himself at this second point of view, Descartes speaks of movement, even spatial, as of an absolute. He therefore entered both roads one after the other, having resolved to follow neither of them to the end. The first would have led him to the denial of free will in man and of real will in God. It was the suppression of all efficient duration, the likening of the universe to a thing *given*, which a superhuman intelligence would embrace at once in a moment or in eternity. In following the second, on the contrary, he would have been led to all the consequences which the intuition of true duration implies. Creation would have appeared not simply as *continued*, but also as *continuous*. The universe, regarded as a whole, would really evolve. The future would no longer be determinable by the present ». For a brief discussion of this passage, see Camille Riquier (2009), *Archéologie de Bergson: temps et métaphysique*, Paris, PUF, p. 261-269.
32. For “*création continuée*”, see Henri Bergson (2007), *L'évolution créatrice*, p. 22, 179. For “*création continue*”, see Henri Bergson (2007), *L'évolution créatrice*, p. 11, 30, 224.
33. Henri Bergson (2007), *L'évolution créatrice*, p. 30: « a continuous creation of an unforeseeable form ».
34. For a similar point concerning Descartes' distinction between *res cogitans* and *res extensa*, see Jean-Marie Beyssade (1979), *La philosophie première de Descartes: le temps et la cohérence de la métaphysique*, Paris, Flammarion, p. 174.
35. Descartes, AT VIII 14: « *per unicam, semperque eandem & simplicissimam actionem* ».
36. For Descartes' account of the laws of nature, see AT VIII 61-66. See also Chapter VII of Descartes' *Le Monde* (AT XI 36-37).
37. Descartes, AT VIII 66: « *Sicque hae ipsa creaturarum continua mutatio immutabilitatis Dei est argumentum* ».
38. See Descartes, AT VIII 61.
39. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 234: « God has created a determinate quantity of motion. This quantity could only be changed if God willed to either

subtract or add something, but this would be contrary to the regular stability and constancy of God. That is why there is always the same quantity of motion in the universe ».

40. Jean Wahl (1994), *Du rôle de l'idée de l'instant dans la philosophie de Descartes*, p. 84. This and all other quotations are my translations.

41. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 236: « A superhuman intelligence that would know the position, speed and direction of all the particles of matter at a given moment could foresee, foretell, if it were endowed with an infinite mathematical aptitude, everything that would happen »

42. On this question, see Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 234.

43. See Descartes, AT VIII 59-60 ; Etienne Gilson (1913), *La liberté chez Descartes et la théologie*, p. 116-117.

44. Descartes, AT VIII 59: « *atque ita reliquis omnibus in locis motus celeritas angustiam loci compenset. Hoc enim pacto, in quovis determinato tempore, tantundem materiae per unam istius circuli partem, quam per alteram transibit* ».

45. Jean Wahl (1994), *Du rôle de l'idée de l'instant dans la philosophie de Descartes*, p. 79.

46. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 236: « If one accepts the law of conservation of motion in full force, the result, it seems, would be that everything in the universe is calculable ». See also Descartes, AT VIII 78-79.

47. Henri Bergson (2007), *L'évolution créatrice*, p. 22: « The systems science works with are, in fact, in an instantaneous present that is always being renewed [...] When the mathematician calculates the future state of a system at the end of a time *t*, there is nothing to prevent him from supposing that the universe vanishes from this moment till that, and suddenly reappears [...] In short, *the world the mathematician deals with is a world that dies and is reborn at every instant—the world which Descartes was thinking of when he spoke of continued creation* ».

48. Descartes, AT VII 60: « *cum enim voluntas in unâ tantùm re, & tanquam in indivisibili consistat, non videtur ferre ejus natura ut quicquam ab illâ demi possit* ».

49. In Bergson's (2017) words, human will constitutes « le point de contact [point of contact] » with God: *L'évolution du problème de la liberté*, p. 222.

50. Descartes, AT VII 57: « *Sola est voluntas, sive arbitrii libertas, quam tantam in me experior, ut nullius majoris ideam apprehendam; adeo ut illa praecipue sit, ratione cujus imaginem quandam & similitudinem Dei me referre intelligo* ».

51. Descartes, AT VIII 65: « *ex eo quòd differentia fit inter motum in se spectatum & ipsius determinationem versus certam partem, quâ fit ut ista determinatio possit mutari, motu integro remanente* ».

52. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 236: « Descartes believes that the quantity of motion in the universe is constant. But from this it does not follow that the direction of every motion is necessarily determined; given that the quantity of motion subsists, it is not necessary for the direction to be considered as determined ».

53. Descartes, AT VIII 64: « *an enim, & qualem, mentes humanae vel Angelicae vim habeant corpora movendi, non jam inquirimus* ».

54. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 237: « It is possible that in Descartes' thinking human freedom is compatible with the mechanism of nature, since [...] it is conceivable that certain motions are indeterminate, and it is of this indeterminacy that human liberty avails itself ».

55. Bergson (2017) himself expresses his hesitation regarding this interpretation of Descartes' *Principia* II, 41: *L'évolution du problème de la liberté*, p. 237.

56. Descartes, AT VII 24: « *Suppono igitur omnia quae video falsa esse: credo nihil unquam existisse eorum quae mendax memoria repraesentat; nullos plane habeo sensus; corpus, figura, extensio, motus, locusque sunt chimerae. Quid igitur erit verum? Fortassis hoc unum, nihil esse certi* ».

57. Descartes, AT VII 21: « *Deu [...] qui potest omnia* ».

58. Descartes, AT VII 22: « *genium aliquem malignum, eundemque summe potentem* ». On the relationship between Descartes' omnipotent God and malicious demon, see Jean-Luc Marion (1991), *Sur la théologie blanche de Descartes*, p. 340-342. See also Harry Frankfurt (1999), « Descartes on the Creation of Eternal Truths », in *Necessity, Volition, Love*, Cambridge, CUP, p. 30.
59. Descartes, AT VII 21.
60. Descartes, AT I 145: « Que les verités mathématiques, lesquelles vous nommés éternelles, ont esté établies de Dieu & en dependent entierement, aussy bien que tout le reste des creatures. C'est en effait parler de Dieu comme d'un Iupitter ou Saturne, & l'assuiettir aus Stix & aus destinees, que de dire que ces verités sont independantes de luy ».
61. Descartes, AT I 152: « il a esté aussi libre de faire qu'il ne fust pas vray que toutes les lignes tirées du centre à la circonference fussent égales, comme de ne pas creer le monde ».
62. Descartes, AT I 146: « ce seroit temerité de penser que nostre imagination a autant d'estendue que sa puissance ».
63. See Descartes, AT VII 21, 35-36, and 77, and AT VIII 6.
64. Descartes, AT I 150: « la premiere & la plus éternelles de toutes les veritez qui peuvent estre, & la seule d'où procedent toutes les autres ». On this point, see Jean-Luc Marion (1991), *Sur la théologie blanche de Descartes*, p. 301.
65. Descartes, AT VII 25: « *Sed mihi persuasi nihil plane esse in mundo, nullum coelum, nullum terram, nullas mentes, nulla corpora; nonne igitur etiam me non esse? Imo certe ego eram, si quid mihi persuasi. Sed est deceptor nescio quis, summe potens, summe callidus, qui de industriâ me semper fallit; & fallat quantum potest, nunquam tamen efficiet, ut nihil sim quamdiu me aliquid esse cogitabo. Adeo ut, omnibus satis superque pensatis, denique statuendum fit hoc pronuntiatum, Ego sum, ego existo, quoties a me profertur, vel mente concipitur, necessario esse verum* ».
66. See Descartes, AT VIII 7.
67. Henri Bergson (2017), *L'évolution du problème de la liberté*, p. 201: « the human being finds before himself nature and truth that have already been created ».
68. See Descartes, AT VII 68.
69. See Descartes, AT VII 22, 24.
70. Descartes, AT VII 27: « *Hic invenio: cogitation est; haec sola a me divelli nequit. Ego sum, ego existo; certum est. Quamdiu autem? Nempe quamdiu cogito; nam forte etiam fieri posset, si cessarem ab omni cogitatione* ».
71. Wahl (1994) goes as far as to say that « it is by an instantaneous act of thinking that the mind can deliver itself from doubt. But doubt is but an instantaneous act [*un acte instantané*] »: *Du rôle de l'idée de l'instant dans la philosophie de Descartes*, p. 49. For a critique of such reading, see Jean-Marie Beyssade (1979), *La philosophie première de Descartes*, p. VI-VII, 18, and 135. See also Harry Frankfurt (1999), « Continuous Creation, Ontological Inertia, and the Discontinuity of Time », p. 60-62.
72. Descartes, AT VII 49.
73. Descartes, AT VIII 13.
74. Descartes, AT V 193: « *atqui prespicue intelligimus fieri posse ut existam hoc momento, quo unum quid cogito, & tamen ut non existam momento proxime sequenti* ».
75. Jean Wahl (1994), *Du rôle de l'idée de l'instant dans la philosophie de Descartes*, p. 52.
76. Frédéric Worms (1994), « De l'instant à l'autre: Descartes, Bergson, Jean Wahl et nous », p. 42. This and all other quotations are my translations. Therefore, I agree with Worms' (1994) conclusion regarding Wahl's reading of Descartes: « The key to the idea of an instant is found in our condition [...] Thus, it is through forgetting and death, possible at every instant or, as an event, capable of arriving from one moment to another, that Descartes first came across "the idea of the independence of moments of time," which leads him into doubt in search of an instant in which truth and certitude would be combined »: « De l'instant à l'autre: Descartes, Bergson, Jean Wahl et nous », p. 42.

77. Descartes, AT VII 45-46: « *nam contra manifeste intelligo plus realitatis esse in substantiâ infinitâ quam in finitâ, ac proinde priorem quadammodo in me esse perceptionem infiniti quam finiti, hoc est Dei quam mei ipsius. Quâ enim ratione intelligerem me dubitare, me cupere, hoc est, aliquid mihi deesse, & me non esse omnino perfectum, si nulla idea entis perfectioris in me esset, ex cujus comparatione defectus meos agnoscerem ?* ».
78. Descartes, AT VII 47: « *gradatim augeri, certissimum est imperfectionis argumentum* ».
79. Descartes, AT VII 46: « *Nec obstat quod non comprehendam infinitum [...] est enim de de ratione infiniti, ut a me, qui sum finitus, non comprehendatur* ».
80. Descartes, AT VII 52: « *Ex quibus fatis satis patet illum fallacem esse non posse; omnem enim fraudem & deceptionem a defectu aliquo pendere, lumine naturali manifestum est* ».
81. Descartes, AT VII 89: « *quae praesentia cum praecedentibus connectit* ».
82. Descartes, AT VII 90: « *earumque perceptionem absque ullâ interruptione cum totâ reliquâ vitâ connecto* ».
83. Descartes, AT VII 89: « *in eo quod nunquam insomnia cum reliquis omnibus actionibus vitae a memoriâ jungantur, ut ea quae vigilantia occurrunt* ».
84. Descartes, AT VII 89-90: « *nam sane, si quis, dum vigilo, mihi derepente appareret, statimque postea dispareret, [...] ita scilicet ut nec unde venisset, nec quo abiret* ».
85. Descartes, AT VII 90: « *unde, ubi, & quando mihi adveniant* ».
86. On this point, see Camille Riquier (2009), *Archéologie de Bergson*, p. 265.
87. Descartes, AT VII 55: « *non enim absque temeritate me puto posse investigare fines Dei* ». On the role of Descartes' elimination of the distinction between God's understanding and God's will in his critique of finalism, see Étienne Gilson (1913), *La liberté chez Descartes et la théologie*, p. 76-96.
88. Hans Blumenberg (1966), *The Legitimacy of Modern Age*, translated by Robert M. Wallace, 1983, Cambridge, MIT, p. 206.
89. Descartes, AT VIII 20: « *Sed quia jam Deum agnoscentes, tam immensam in eo potestatem esse percipimus, ut nescias esse putemus existimare, aliquid unquam à nobis fieri posse, quod non antè ab ipso fuerit praeordinatum: facillè possumus nos ipsos magnis difficultatibus intricare, si hanc Dei praeordinationem cum arbitrii nostri libertate conciliare, atque utramque simul comprehendere conemur* ».
90. Descartes, AT VIII 20: « *Illis verò nos expediemus, si recordemur mentem nostram esse finitam; Dei autem potentiam, per quam non tantùm omnia, quae sunt aut esse possunt, ab aeterno praescivit, sed etiam voluit ac praeordinavit, esse infinitam; [...] libertatus autem & indifferentiae, quae in nobis est, nos ita conscios esse, ut nihil fit quod evidentius & perfectius comprehendamus. Absurdum enim esset, propterea quod non comprehendimus unam rem, quam scimus ex naturâ suâ nobis esse debere incomprehensibilem, de aliâ dubitare, quam intimè comprehendimus, atque apud nosmet ipsos experimur* ».
91. At this point, we can roughly distinguish between three domains of analysis in Descartes: first, the domain of *res extensa* which is subject to mechanism; second, the domain of *res cogitans* to which free will is ascribed; third, the domain of divine preordination in which the previous two domains are somehow albeit in a way that is incomprehensible to us.
92. Frédéric Worms (1994), « *De l'instant à l'autre: Descartes, Bergson, Jean Wahl et nous* », p. 42.

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## ABSTRACTS

René Descartes with his theory of continued creation occupies an exceptional place in the philosophy of Henri Bergson: Descartes is subjected to Bergson's repeated criticism like no other philosopher. Yet, in *L'évolution créatrice* Bergson appears to oscillate in his criticism of Descartes. Bergson discovers in the theory of continued creation a thought of freedom, of an indeterminate future, which is not far from his own thought of duration. Bergson thus advances a thesis in accordance with which Descartes' theory of continued creation has two irreconcilable aspects: continued creation and continuous creation. The difference between these two aspects, however, is not just about the choice between a participle and an adjective. The aim of this article is to show how Descartes' theory of continued creation lends itself to such a double interpretation. While the former aspect originates in Descartes' project of mechanistic physics, the latter aspect is accessible but from the standpoint of human freedom, as well as Descartes' critique of finalism. The article thus shows that Descartes' theory of continued creation constitutes a point of convergence between the questions of mechanism and human freedom, where the latter is an exception to the former. However, the exceptional status of human freedom in Descartes' philosophy renders Bergson's thesis about Descartes' oscillation between two aspects somewhat problematic.

Nul philosophe ne fait, de la part de Bergson, l'objet d'une critique aussi constante que Descartes ; cette critique porte notamment sur la théorie cartésienne de la création continuée. *L'Évolution créatrice* semble pourtant marquer une hésitation : Bergson perçoit chez Descartes une pensée de la liberté, de l'avenir indéterminé, qui ne serait pas très éloignée de l'idée de durée. Selon Bergson la théorie de la création continuée est marquée par deux aspects divergents que l'on peut ainsi résumer : création continuée, ou création continue. La différence est plus profonde qu'une simple variation d'adjectifs. Il s'agit, dans cet article, de montrer que la théorie cartésienne de la création continuée rend possible la double lecture qu'en fait Bergson. Tandis que la notion de « création continuée » provient des exigences théoriques du mécanisme physique tel que l'entend Descartes, celle de « création continue » vient de la prise en compte de la liberté humaine et de la critique du finalisme. La théorie cartésienne de la création continuée constitue ainsi un point de croisement entre la question du mécanisme et celle de la liberté, exception au mécanisme. Mais le statut exceptionnel de la liberté humaine dans la philosophie de Descartes rend cependant problématique la thèse bergsonienne selon laquelle la pensée de Descartes oscillerait entre deux sens divergents de la création continuée.

## INDEX

**Mots-clés:** Descartes, Bergson, temps, liberté, création continuée, création continue

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