

# MIRACLES AND VIOLATIONS OF LAWS OF NATURE

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**Abstract.** The aim of this article is to spell out the relationship between miracles and violations of laws of nature. I argue that the former do not necessarily entail the latter, even in the case of the type of miraculous event which cannot be brought about by natural operations alone. The idea that they do is based on a deterministic assumption which is too often overlooked. The article also explores the reverse implication, i.e. the question whether violations of laws of nature entail miracles. It turns out that there are conceptual difficulties in defining what sort of events would qualify as such violations in the first place, but that a more general notion of God's action contravening nature is viable. However, there are theological reasons against the assumption that God ever acts in this way.

## INTRODUCTION

David Hume's definition of a miracle as "a violation of the laws of nature", from his *Enquiry concerning Human Understanding*,<sup>1</sup> is often used, and even taken for granted, as a standard definition in much philosophical and theological literature, although this definition has also been questioned by some thinkers.<sup>2</sup> According to it, an event  $x$ 's being a miracle implies that it is also a

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1 Section X, § 12.

2 See e.g. Lowe (1987), Hughes and Adams (1992), Mumford (2001), and Gasser and Quitterer (2015).

violation of a law of nature (henceforth VLN), although the definition leaves open whether there might also be other, non-miraculous VLN, i.e. whether the set of miracles is coextensive with the set of VLN. However, Hume makes his definition more precise later in the *Enquiry*, where he defines a miracle as “a transgression of a law of nature by a particular volition of the Deity, or by the interposition of some invisible agent”.<sup>3</sup> Hence, the set of miracles and the set of VLN are clearly not conceptually coextensive, although they may be so as a matter of fact, in case nothing other than the Deity, or some invisible agent, can or does violate the laws of nature.

In any case, the widespread persuasion that the forward implication — i.e. “ $x$  is a miracle  $\rightarrow x$  is a VLN” — holds has undoubtedly had a great historical impact. For example, Rudolf Bultmann’s scepticism against the possibility of miracles was due precisely to the idea that they “break through” the ordinary, seamless course of nature.<sup>4</sup> According to the *Stanford Encyclopedia of Philosophy* “the Humean in-principle argument has left an indelible impression on modern biblical scholarship ... Commitment to something like Hume’s position lies on one side of a deep conceptual fault line that runs through the discipline of biblical studies.”<sup>5</sup> But Hume’s famous argument referred to in the SEP article is based on, and intimately connected to, his definition of the term “miracle”, since his argument is one from “the very nature of the fact”.<sup>6</sup>

That the forward implication holds has been disputed, rightly in my view, by some philosophers.<sup>7</sup> The principal motive for doing so, as we shall see below, was that miracles are conceivable which bring about what is also in nature’s power. But I will adduce different reasons for questioning the forward implication, and argue that, if a miracle brings about what is naturally impossible, it does not on that account imply a VLN. The result is a different way

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3 Note K, 1.

4 „Jedenfalls glaubt die moderne Wissenschaft nicht, dass der Lauf der Natur von übernatürlichen Kräften durchbrochen oder sozusagen durchlöchert werden kann. Dasselbe gilt für die moderne Geschichtsforschung, die nicht mit einem Eingreifen Gottes oder des Teufels oder von Dämonen in den Lauf der Geschichte rechnet ... Der Mensch von heute baut darauf, dass der Lauf der Natur und Geschichte, wie sein eigenes Innenleben und sein praktisches Leben, nirgends vom Einwirken übernatürlicher Kräfte durchbrochen wird.“ Bultmann (1984), 144-5.

5 McGrew (2015).

6 *Enquiry*, section X, § 12.

7 See note 2.

of spelling out the relationship between miracles and laws of nature than is usually assumed in the literature. Before proceeding, I should however define the term “miracle”:

miracle =<sub>def</sub> an event in nature directly caused by God.

Note that on this definition:

1. There is no natural cause for the miraculous event itself.<sup>8</sup> However, the causal history of the event can, and in general will, contain natural events, as for example when a material object is miraculously transformed. Also, events or states of affairs caused by something in the world which is of miraculous origin are not themselves considered as miracles.<sup>9</sup>
2. A miraculous event is caused by God, rather than by some other supernatural agent, such as an angel.
3. Finally, the event occurs in nature, rather than in the supernatural realm.<sup>10</sup>

I take it to be essential to a true miracle that it be caused supernaturally (point 1). Hence, astonishing events which can be explained by natural causes are not miracles *proprie loquendo*. The exclusion of supernatural agents other than God (point 2) is a somewhat stipulative element of my definition.<sup>11</sup> The same is true of the requirement that a miracle affects nature, rather than the supernatural (point 3). But this definition will do for the purposes of the following discussion, in which I will be concerned primarily with divine and natural causation, and not with the action of other supernatural agents, nor with action within the supernatural realm.

By contrast, it is notoriously difficult to define precisely what a law of nature is. Hence, I will not attempt to do so here. Instead, different concepts of laws of nature, and hence also of spelling out the relationship between miracles and the laws of nature, will be discussed in the following two sections.

8 Cf. Mumford (2001), 200, and Hughes and Adams, 190.

9 Cf. Hughes and Adams, 197.

10 Cf. Mumford (2001), 192.

11 It is shared by Aquinas (ScG. III, 103), but differs from Hume’s definition cited above, which also allows for other invisible agents.

## DO MIRACLES IMPLY LAW-VIOLATIONS?

Hume's definition whereby "a miracle is a violation of the laws of nature" comes somewhat out of the blue. He simply states it, without discussing it before or afterwards. That Hume too took a miracle to be due to the direct action of a supernatural agent, as in the definition which I have proposed above, is clear from his amended definition of the term "miracle" as "a transgression of a law of nature by a particular volition of the Deity, or by the interposition of some invisible agent". Whence, however, his conviction that miracles constitute VLNs?

I propose that this conviction should be understood before the background of an assumption which Hume argues for in detail in section VIII of the *Enquiry*, and which seems to be often overlooked in the context of discussion of this thought on miracles: an all-encompassing determinism. The classification of miracles as VLNs is intimately linked to this assumption.

My contention that Hume was a determinist may strike some readers as outright false. Determinism is certainly not the view usually associated with him. Yet, Hume's writings leave no doubt that he did in fact, like so many educated people of his day, subscribe to this view, as argued in detail by Hume scholar Peter Millican.<sup>12</sup> To quote only a few passages:

It is universally allowed, that matter, in all its operations, is actuated by a necessary force, and that every natural effect is so precisely determined by the energy of its cause, that no other effect, in such particular circumstances, could possibly have resulted from it. The degree and direction of every motion is, by the laws of nature, prescribed with such exactness, that a living creature may as soon arise from the shock of two bodies, as motion, in any other degree or direction than what is actually produced by it.<sup>13</sup>

This is backed by a passage from Hume's earlier *Treatise of Human Nature*:

Tis universally acknowledg'd, that the operations of external bodies are necessary, and that in the communication of their motion, in their attraction, and mutual cohesion, there are not the least traces of indifference or liberty. Every object is determin'd by an absolute fate to a certain degree and direction of its motion, and can no more depart from that precise line, in which

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<sup>12</sup> Millican (2011), which see also for further literature supporting the thesis of Hume's determinism (p. 611, note 4).

<sup>13</sup> *Enquiry*, section VIII, § 4.

it moves, than it can convert itself into an angel, or spirit, or any superior substance. The actions, therefore, of matter are to be regarded as instances of necessary actions.<sup>14</sup>

Determinism moreover applies also to human agency, as Hume argues in detail in the *Enquiry*.<sup>15</sup> Hume's determinism is arguably in line with what would later become known as Laplacian determinism: the future follows uniquely from the past, and the state of the world at a certain time uniquely determines, given the laws of nature, the state of the world for any later time.<sup>16</sup> At any rate, this seems to me the natural interpretation of the above quotes, given their insistence that determinism applies to *every* natural effect, object or motion. In such a deterministic world, the laws of nature can be thought of as a function  $\mathcal{L}$  which takes as its input, first, a complete description of the universe at a given time  $t_0$ , and second, some other time  $t$ . This function spits out a complete, unique description of the world at  $t$ .<sup>17</sup>

There remains the rather tricky exegetical issue of how Hume's determinism relates with his 'Humeanism',<sup>18</sup> i.e. with the doctrine that, to use Christopher Hughes' words, "there are no necessary connections between distinct existences — in particular, no necessary connections of any kind, in any direction, between earlier and later events".<sup>19</sup> Was Hume a 'Humean', and are the two views reconcilable? The most plausible solution to this puzzle — which might be called the puzzle of the two Humes — seems to me that the *epistemic* thesis whereby the idea of causal connection is based on nothing other than constant conjunction, developed in section VII of the *Enquiry*, is supplemented, in section VIII, with the *ontological* premise that the world is in fact deterministic. It seems to me, furthermore, that these two apparently contrary views could be reconcilable by reading Hume's determinism as a "functional" rather than a "dispositional" one; that is, by attributing the ne-

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14 II.3.1.3

15 Esp. in section VIII, §§ 15-25.

16 For a discussion, see Popper (1991), ch. 2.

17 This picture presupposes the notion of the "world at given time", which was generally taken for granted in pre-relativistic times, but which, given the relativity of simultaneity, has proved to be problematic. On this notion, cf. Saudek (2015), ch. 3.

18 I follow E. J. Lowe (1987) in putting the term 'Humeanism', referring to the doctrine described above, in parentheses.

19 Hughes and Adams (1992), 192.

cessity in nature to its laws, interpreted as constituting a function (as outlined above), rather than to invisible powers or dispositions — which Hume was sceptical of — unfolding in a lawlike manner. On this picture, the statement “if the world is in state  $w_0$  at  $t_0$ , then, given the laws of nature, it is in state  $w_1$  at  $t_1$ ” is equivalent to the statement “the world is in state  $w_1$  at  $t_1$  *because* it is in state  $w_0$  at  $t_0$ ”. The advantage of such an interpretation is that it accommodates both Hume’s determinism and his scepticism about the existence of causal links between events, so that there is no longer a conflict between the “two Humes”. Whether the interpretation of Hume which I propose is viable is up to specialists to judge. But whatever the solution to the puzzle of the relationship between these two sides of Hume’s thought may be — a question beyond the scope of this paper — it is clear from the passages cited above that Hume assumed determinism to be a mind-independent, and indeed indisputable, feature of the world.

Before such a deterministic background, it makes perfect sense to view miraculous interventions in the history of the world as violations of, and as contrary to, rather than just outside or above, the laws of nature. For given determinism, laws and initial conditions fix the state of the world in every detail, for all times. In other words, it is essential to the laws of nature that they determine everything, given initial conditions. If then there is any sort of agency in a robust sense (whether human or divine) i.e. causal activity attributable to an agent, which makes a real difference and leads to states of affairs which would not have come about without such activity, then the complete state of the world after the intervention of the agent is not the one determined by the laws of nature. The latter must then be viewed as contravened or suspended. Hence my claim that Hume’s definition of the term “miracle” is linked essentially to his deterministic world view.

Note, however, that the above picture results only if we assume that it is essential for the set of laws of nature to determine everything. Only then does anything other than that determined by the laws of nature violate these laws. This becomes especially clear if we contrast the proposition “the laws of nature determine everything, given initial conditions” with the weaker one “the laws of nature always hold”. If only the latter proposition holds, it is quite conceivable for agency to make a genuine difference, and to change the course of the world, without this constituting a VLN. As an analogy, consider a country

whose laws always hold (i.e. are never broken), but do not determine all activities of its citizens. The citizens of such a country are perfectly law-abiding, but some of their activities are simply outside the purview of the law. These activities should then be viewed as additional, rather than contrary, to those determined by the country's laws.

Of course, analogies between normative and natural laws must be made with caution, since they differ in the important respect that the former can be broken (although in the legal sense they “must” or “ought” not to be broken), whereas the latter cannot. Nevertheless, a world where the proposition “the laws of nature determine everything” is false, whereas the proposition “the laws of nature always hold” is true, is at least conceivable. What is more, we seem to live in just such a world, as can be illustrated by a simple example: Suppose that we throw a stone, a cat, and a human being out of the window. All three bodies behave according to Newton's laws (or, more precisely, to the ultimately true laws of physics, which reduce to Newton's laws in everyday circumstances), so that the centre of mass of each body traces out a parabolic path with respect to an observer at rest relative to Earth's surface. It is not that the cat, or the human being, in virtue of their higher capacities, can contravene these laws in any way. But they can nevertheless influence the situation in important ways: the cat can arrange its body so as to ensure a safe landing, and the human being can, in principle at least, deliberate about what to do during the time before impact.

Furthermore, simple acts such as throwing an object into the air can make a genuine difference to the world, but this in no way implies that the laws of nature would somehow be suspended and cease to operate in the region of spacetime where such acts are performed. The laws of classical mechanics, of electromagnetism, or any other laws we might care to think of, clearly remain in force.

In all these examples, there is simply something in addition, not against, the laws of nature occurring, just like in the case of the perfectly law-abiding, indeterministic country. But if agency can in this way exceed the laws of nature without violating them, and can make a genuine discernible difference to the world, there seems to be no reason why divine agency affecting the world should necessarily imply a VLN.

To conclude this section, the forward implication “ $x$  is a miracle  $\rightarrow x$  is a VLN” does not hold in our world, which according to the best scientific evidence available to us is in all likelihood indeterministic,<sup>20</sup> although it would hold if the world were deterministic. A view whereby the laws of nature always hold, and in addition miracles occur, is viable.

## **DO LAW-VIOLATIONS IMPLY MIRACLES?**

What about the reverse implication? Are VLNs necessarily divine acts, or at least supernatural ones? This question is difficult to answer, since it depends on what sort of events qualify as VLNs in the first place, a problem which, in turn, presents itself in different manners in function of the explication of the term “law of nature”. But this explication is itself a contested and unresolved issue in the philosophy of science.

The term “law of nature” is sometimes interpreted as a type of universal statement, i.e. a statement of the form “ $\forall x: Fx \rightarrow Gx$ ”. As E. J. Lowe specifies, “the most common grammatical form of the sentences used to express statements of natural law is that of the subject-predicate sentence in which the subject is a sortal term and the predicate contains either a dispositional adjective or a verb whose tense conveys dispositionality.”<sup>21</sup> Clearly, however, not all statements which meet these requirements are laws of nature, as illustrated e.g. by the statement “all Beethoven symphonies take less than a day to perform”. Moreover, as is widely acknowledged in the literature, laws expressed by such universal statements are impossible to violate, since the occurrence of an exception to a universal statement renders the statement itself false. The same is true on a “Humean” view whereby natural laws consist merely in constant conjunctions between different types of events, in such a way that a type-A event is always followed by a type-B event. Again, the occurrence of a counterexample to the purported law changes the basis on which the law is supposed to supervene, thereby ruining its lawhood from the outset.<sup>22</sup> For

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20 Cf. the assessment by Briegleb and Müller (2014), 4; as well as Popper (1991).

21 Lowe (1987), 274.

22 See e.g. Hughes and Adams (1992), 184; Gasser and Quitterer (2015), 248-251; Lowe (1987), 269; and Mumford (2001), 193.



fundamentally the same reason, we routinely talk of theories being violated, without this implying a violation of a true law of nature: if a particle were observed to travel faster than light, then the statement “nothing travels faster than light” was not a proper law of nature in the first place.

But a view of the laws of nature as mere regularities does not seem to me to capture well their peculiar character of necessity. It is notoriously hard to define what precisely this necessity consists in, but it seems to be linked in a crucial way to the role of mathematics in physical law. This is illustrated by some simple, deterministic laws of classical mechanics, which in Hume’s day may well have been considered paradigmatic for the very notion of a law of nature in general. Thus, the law of conservation of momentum follows from simple calculus, together with the definition of the centre of mass of a body.<sup>23</sup> Inverse square laws, such as Newton’s law of gravitation and Coulomb’s law, obtain a necessary character from the three-dimensionality of space: if bodies are thought of as sources of gravitational or electromagnetic fields, then the density of whatever causes the field (whether particles or some ethereal substance flowing from a body) will diminish with the square of the distance. By contrast, an inverse cube law would not be just as good, but would cry out for an explanation of why the field-causing stuff disappears. In both conservation of momentum and inverse square laws, there is a clear sense in which “it must be so”, which has to do with the mathematics involved, and which is lacking in simple universal statements such as “all swans are white”. This does not mean that the necessity of physical law must be due to *logical* necessity. For example, space might not have been three-dimensional, in which case the inverse-square law would not hold. Rather, its lawhood seems to arise from the combination of a contingent feature of the world with mathematical necessity.

The existence of such deterministic laws does not, for the reasons given in the previous section, land us in the Laplacian, deterministic *universe*. But it does mean that some subsystems of the universe can and will behave deterministically, as for example is the case with a simple collision experiment in a lab. To explore what it would mean to violate a law of nature, and how miracles are related to VLNs, let’s consider simple systems subject to the de-

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23 See any undergraduate physics textbook, e.g. Young and Freedman (2012), 258-260.

terministic laws described above, rather than the broader gamut of laws of nature known to us today, where in particular laws which only allow of a stochastic formulation, as opposed to a deterministic one, play an important part. Three types of candidates for law-violations will be considered:

First, we could attempt to “violate” the laws of nature of such a simple deterministic system, and to falsify the predictions about its evolution, by interfering with it in some way, e.g. by inserting extra matter, imparting momentum, or adding any sort of energy to it. But while such interference prevents what would have happened with the system, it clearly constitutes no VLN. Conservation principles are not violated, since momentum and energy are conserved only in closed systems, which the above, by assumption, are not. Also, prevention is not violation, but rather is inextricably bound up with the notion of causal interaction in general.

Suppose, however, that God’s creative activity is the source of interference: God creates extra matter, energy, momentum, or charge, inserting it into an already existing system. We would then be faced with a miracle, on the definition given at the beginning of this paper, but would such divine interference amount to a VLN? The new stuff brought into the system by God prevents what the laws of nature would have predicted, and furthermore in general changes the system’s total amount of energy or momentum. But just as above, these facts by themselves do not imply a VLN. Rather, there is then, once again, merely something *in addition* to, not against, the laws of nature going on. It could, however, be objected that on this scenario, God violates energy conservation of the *universe*. The energy contained in the universe ought to remain constant over time, but due to divine intervention there is now more energy than there was before. This objection presents itself in a different light to us today than it would have done in Hume’s day, since it presupposes the notion of “the universe at a given time”, which — as 18<sup>th</sup> century people could not have known — has turned out to be problematic, given the relativity of simultaneity.<sup>24</sup> But absent such a notion, it seems hard to even formulate the principle of energy conservation for the universe as a whole. Moreover, it is to my knowledge an unresolved issue, in contemporary cosmology, whether we ought to think of the universe as a closed system in the

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24 See note 17. Cf. also Dorato (1995) for a detailed discussion of this issue.

first place.<sup>25</sup> In sum, I submit that God's creative activity affecting an already existing system should not be viewed as implying a VLN.

A second candidate for a VLN in a simple deterministic system is God's directly and immediately affecting the motion of matter, that is, without first creating something which interferes with what is already there. To use E. J. Lowe's example of the levitating table,<sup>26</sup> God would then simply hold the table. This clearly amounts to an obstruction or prevention of the course of nature predicted by its laws, but again, this by itself does not imply a VLN. In addition, God's shifting of a body does not violate its natural capacities in the sense of keeping it from unfolding its causal powers. This is because locomotion is not a change which, by itself, affects the nature or dispositions of an object, but only the spatial relations between objects. Hence, it seems that God's moving of matter likewise should not be viewed as a VLN.<sup>27</sup>

The third candidate for a VLN is divine action annihilating, or switching off, a disposition of an object. In the context of the kind of simple deterministic settings considered above, God could for example take the disposition of electrical charge off a charged object, or the disposition to gravitate — the gravitational mass or "gravitational charge" — off a massive object, should this be possible in principle. But divine action could, conceivably, counteract dispositions or powers of all kinds, e.g. by taking the life of living beings or in any other way canceling a disposition which a thing of a given type naturally has. The term "violation" is here much more apt than in the previous two cases, since God's influence here does not add to, but rather takes away from, the causal power of nature. However, even though such events are indeed contrary to, and hence violations of, nature — at any rate, of the nature of the object in question — for a reason pointed out by E. J. Lowe, they cannot be counted as violations of *laws* of nature. If, for example, God causes a table to levitate by taking off its "gravitational charge"  $m_G$ , then Newton's of gravitation,  $F_G = G \frac{Mm_G}{r^2}$ , is not violated, since  $m_G$  is zero as a result of divine

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25 Cf. Ellis (2008).

26 Lowe (1987), 276-7.

27 Cf. Aquinas' view whereby it is not contrary to the nature of created things to be moved by God, in ScG. III, 100.

intervention.<sup>28</sup> We get the same result in the less exotic scenario whereby God annihilates the electric charge of an object, so that the Coulomb force exerted on it by a neighbouring charge is zero. The upshot of these examples is that divine action contravening, suspending or canceling nature is logically possible and conceptually viable, at least on a dispositional view whereby natural objects possess powers. This contrasts with the notion of a VLN on a regularities view of the laws of nature, which, as argued above, turns out to be conceptually incoherent.

Is to act against nature in such a way the prerogative of God alone, so that all acts against nature are miracles? Finite natural agents too can generally annihilate or cancel dispositions which things naturally have, although in some cases this may be beyond technological reach. Of course, such agents can do so only by employing other dispositions, i.e. by making use of nature's own possibilities, so that Francis Bacon's words apply whereby "nature is overcome only by obeying it".<sup>29</sup> Directly canceling the disposition of a thing is therefore something that only God, or perhaps other supernatural agents, could bring about. In this sense, we might say that only such agents can truly act in a way contrary to nature. However, in the case of God at least, there is a *theological* reason against the assumption that he ever acts in such a way: If things owe their causal powers to God's goodness as their ultimate source, it seems reasonable to doubt that God would ever, so to speak, revoke his original gift and deprive an object of one of its natural dispositions, although he clearly could do so.<sup>30</sup> Should this be true, God could also be viewed as the supreme non-violating cause, in the sense that particular things can and will counteract the dispositions of other things, whereas God never does so, but rather adds to or enhances the powers of nature.<sup>31</sup>

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28 In Lowe's words, "no violation of the law that heavy objects fall when unsupported would be involved, since a massless object cannot be heavy." Lowe (1987), 277.

29 "natura non nisi parendo vincitur". Bacon (1620), aphorismus 3.

30 Cf. Book of Wisdom, 11,24: "For you love all things that are and loathe nothing that you have made; for what you hated, you would not have fashioned."

31 Cf. the similar view endorsed by Gasser and Quitterer (2015), 254-6.

## CONCLUSION

The investigations in this article have led to three principal conclusions: First, the notion that miracles are VLNs stems from the assumption of a deterministic universe, whereas in an indeterministic one, this implication does not hold. Second, if we give up all-encompassing, Laplacian determinism, but still grant that some systems are deterministic, the very notion of a violation of a law of nature — as opposed to a violation of a *prediction* based on a true or purported law — is difficult to explicate. At least, no plausible candidate for such an event has emerged from the thought experiments discussed in this article. Third, the notion of God violating or acting against nature is conceptually viable on a dispositionalist view. For this reason, we can meaningfully distinguish between violating vs. non-violating miracles. The claim that God never acts against nature — a claim which, I argued, is plausible on theological grounds — is therefore not a vacuous one, as opposed to, for example, the claim that the laws of nature are regularities which are never violated.

It is illustrative to compare these results with those reached by Christopher Hughes, who likewise concludes that miracles do not entail VLNs. I agree with this. However, there is an important difference: Hughes bases his conclusion on events which nature could have brought about by its own powers, but which in fact God brought about, as examples of miracles which don't violate the laws of nature,<sup>32</sup> a move also endorsed by Stephen Mumford.<sup>33</sup> Hughes cites the example of a prophet who, due to divine intervention, escapes through a solid prison wall. Such an event is in principle naturally possible, even if highly unlikely.<sup>34</sup> On the other hand, Hughes classifies divine intervention causing a naturally impossible event as a VLN.<sup>35</sup> I claim that in an indeterministic universe, it is hard to make out what a VLN is, but that we can still distinguish between violating and non-violating miracles,

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32 Such events constitute the third type of miracles according to Thomas Aquinas' classification of miracles in ScG. III, 101.

33 "Supernatural interventions in the natural world are not necessarily violations of natural laws. Miracles which are consistent with natural laws are events supernaturally caused which would otherwise have been either (i) naturally caused, (ii) not caused by anything, (or (iii) possibly naturally caused." Mumford (2001), 197.

34 Hughes and Adams (1992), 194.

35 Ibid., 195-6.

or in scholastic terminology, between miracles *contra naturam* and those *praeter naturam*. In particular, instances of God's creative interference with the world fall within the latter, also when it brings about what is naturally impossible. For these reasons, it seems to me that we do not need to look for a non-interventionist view of divine action in order to avoid conflict with the scientific view of a law-abiding nature, even though such an account of divine action appears to me both viable and interesting in its own right.<sup>36</sup> Furthermore, a view which distinguishes between miracles *contra* vs. *praeter naturam*, but holds that the former, though conceivable, do not occur, is in line with the thought of classical theistic thinkers such as Thomas Aquinas<sup>37</sup> and Augustine.<sup>38</sup> These thinkers maintained that miracles exceed, rather than contravene, the ordinary course of nature, although they did not make use of the concept of *laws* of nature in the sense in which we do today.

It may seem unusual to claim, for example, that God's creating a new billiard ball on an existing billiard table does not imply a VLN. But this is because we have become accustomed to identify what is impossible through nature's workings with VLNs, an identification which, as I have argued, stems from the context of determinism, where it is viewed as essential to the laws of nature that they determine everything.

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<sup>36</sup> See e.g. Russell (2006) for a discussion of the possibility of non-interventionist divine action at the quantum level.

<sup>37</sup> *Compendium Theologiae*, 1,136.

<sup>38</sup> *Contra Faustum*, XXIX, 2.

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