

# DOES DIVINE ACTION REQUIRE DIVINE INTERVENTION? GOD'S ACTIONS IN THE WORLD AND THE PROBLEM OF SUPERNATURAL CAUSATION

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## ABSTRACT:

*THE BELIEF THAT GOD ACTIVELY ACTS IN THE WORLD HAS BEEN FUNDAMENTAL TO CLASSICAL CHRISTIAN THEOLOGY THROUGHOUT THE HISTORY OF CHRISTIANITY. SINCE THE RISE OF MODERN SCIENCE, HOWEVER, THIS TRADITIONAL UNDERSTANDING OF GOD'S ACTIONS HAS ATTRACTED MORE AND MORE CRITIQUE. FIRSTLY, IT HAS BEEN ARGUED THAT GOD CANNOT ACT IN THE WORLD WITHOUT VIOLATING THE ALLEGEDLY ALL-ENCOMPASSING LAWS OF NATURE, AND, CONSEQUENTLY, BECAUSE THE LAWS OF NATURE CANNOT PRESUMABLY BE BROKEN UNDER ANY CIRCUMSTANCES, IT IS CONSIDERED ABSOLUTELY IMPOSSIBLE FOR GOD TO INFLUENCE THE PHYSICAL WORLD IN ANY WAY. SECONDLY, IT HAS BEEN CLAIMED THAT EVEN IF BREAKING THE LAWS OF NATURE WAS NOT, IN THEORY, IMPOSSIBLE, IT WOULD STILL BE, IN PRACTICE, IMPOSSIBLE FOR AN IMMATERIAL ENTITY SUCH AS GOD TO INFLUENCE THE MATERIAL WORLD BECAUSE NO MECHANISM OF SUPERNATURAL CAUSATION EXISTS. IN THIS ARTICLE, I ARGUE THAT THE FIRST OBJECTION, I.E., THAT GOD CANNOT ACT IN THE WORLD, HOLDS PARTLY TRUE. I MAINTAIN THAT GOD CANNOT ACT WITHOUT INTERFERING WITH THE PROCESSES OF NATURE (ALTHOUGH SOME RECENT ATTEMPTS OF BUILDING NON-INTERVENTIONIST THEORIES OF GOD' ACTIONS HAVE BEEN MADE). NEVERTHELESS, I DO NOT SEE HOW GOD'S INTERVENTION WOULD CONSTITUTE A PROBLEM FOR MODERN PHYSICS, AS HAS OFTEN BEEN PROPOSED. MOREOVER, THE SECOND CLAIM, I.E., THAT IMMATERIAL ENTITIES CANNOT AFFECT MATERIAL ENTITIES, IS NOT BASED ON EVIDENCE BUT ON AN UNFOUNDED ASSUMPTION THAT BECAUSE WE DO NOT KNOW THE MECHANISM OF CAUSATION BETWEEN IMMATERIAL AND MATERIAL ENTITIES, THIS CAUSATION IS NOT POSSIBLE.*

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**KEYWORDS:** GOD'S ACTIONS; CAUSALITY; DIVINE ACTION; DIVINE INTERVENTION; DIVINE CAUSATION, DIVINE PROVIDENCE, MIRACLES, LAWS OF NATURE.

## INTRODUCTION

### DOES GOD ACT IN THE WORLD?

Does God interact with the world? Does he influence all or some of the events occurring in the universe today? Or, did he just create the cosmos billions of years ago and leave it to evolve on its own?

The answer traditionally given by Christian churches is quite straightforward. The belief that God actively acts in the world, "sustaining all things by his powerful word"<sup>2</sup>, has

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<sup>2</sup> *The Holy Bible: New International Version*, Hebrews 1:3.

been fundamental to classical Christian theology throughout the entire 2000-year history of Christianity. Christians of all denominations have regarded their God as a loving and caring being who engages in personal relationships with his creatures, a being who answers petitionary prayers and brings about miracles in order to steer our lives to the direction he decides to, and who – on a wider scale – steers the entire course of history.

Also today, Christian churches all over the world declare that God is present, moment by moment, in all of our lives. The Catechism of the Catholic Church, for example, teaches as follows: “God does not abandon his creatures to themselves. He not only gives them being and existence, but also, and at every moment, upholds and sustains them in being, enables them to act and brings them to their final end.”<sup>3</sup> The catechism of the Evangelical Lutheran Church of Finland, in turn, puts it like this: “God is not merely some remote initial cause or non-personal force, but he works in creation and history, encountering us personally.”<sup>4</sup>

The same understanding is expressed even more clearly and elaborately in the Heidelberg Catechism of the Reformed churches (as an answer to the question “What do you understand by the providence of God?”): “God's providence is his almighty and ever present power, whereby, as with his hand, he still upholds heaven and earth and all creatures, and so governs them that leaf and blade, rain and drought, fruitful and barren years, food and drink, health and sickness, riches and poverty, indeed, all things, come to us not by chance but by his fatherly hand.”<sup>5</sup>

### HOW DOES GOD ACT IN THE WORLD?

Traditionally, it has been customary to differentiate between two different ways of God's acting in the universe: general divine action and special divine action (or, *providentia ordinaria* and *providentia extraordinaria*). The term “general divine action” refers to God's acting generally through the regular structures of the universe, which God has created in the beginning of time and continues to sustain. The term “special divine action”, in turn, is used to describe the particular actions (for example, in the miraculous acts depicted in the Bible) that God performs in order to achieve specific purposes and to make a “sudden impact.”<sup>6</sup> In this article, the focus is on special divine action, although, generally speaking, the discussion about the distinction between general divine action and special divine action is beyond the scope of the paper (according to some philosophers of religion, the distinction is not even justifiable<sup>7</sup>).

Regardless of how one chooses to classify God's actions (whether it is general versus special divine action, or miracles versus non-miracles, or something else altogether), the

<sup>3</sup> *Catechism of the Catholic Church* [*Catechismus Catholicae Ecclesiae*]. Citta del Vaticano: Libreria Editrice Vaticana, 1993. English Translation available at [http://www.vatican.va/archive/ENG0015/\\_INDEX.HTM](http://www.vatican.va/archive/ENG0015/_INDEX.HTM), accessed October 15<sup>th</sup>, 2014.

<sup>4</sup> *Catechism: Christian Doctrine of the Evangelical Lutheran Church of Finland* [*Katekismus: Suomen evankelis-luterilaisen kirkon kristinoppi. Hyväksytty kirkolliskokouksessa vuonna 1999*]. Helsinki: Evangelical Lutheran Church of Finland, Church Council, 2000. English Translation available at <http://www.evl.fi/english/catechism.pdf>, accessed October 15<sup>th</sup>, 2014.

<sup>5</sup> *Catechism, or Christian Instruction, according to the Usages of the Churches and Schools of the Electoral Palatinate* [*Catechismus, oder christlicher Vnderricht, wie der in Kirchen vnd Schulen der Churfürstlichen Pfaltz getrieben wirdt*], 1563. English Translation available at <http://www.heidelberg-catechism.com/pdf/lords-days/Heidelberg-Catechism.pdf>, accessed October 15<sup>th</sup>, 2014.

<sup>6</sup> P. Dwyne, *Special Divine Action: Key Issues in the Contemporary Debate (1965–1995)*. *Tesi Gregoriana, Serie Teologia 12*. (Rome: Gregorian University Press, 1996).

<sup>7</sup> N. H. Gregersen, “Special Divine Action and the Quilt of Laws: Why the Distinction between Special and General Divine Action Cannot be Maintained”. In: R. J. Russell, N. Murphy & W. R. Stoeger, S. J. (eds.), *Scientific Perspectives on Divine Action. Twenty Years of Challenge and Progress*. Vatican City & Berkeley: Vatican Observatory & The Center for Theology and the Natural Sciences, 2008, 179–199.

starting point for my analysis is that there exists a God who acts – and it is therefore reasonable to talk about God’s actions in the world. Indeed, worshipping some deistic God who would choose not to – or, in the worst case, was not even able to – interact with the creation and with humans would certainly be a distortion of real Christianity. It would merely be “watered-down theism”, as biologist and popular scientist Richard Dawkins has fittingly described.<sup>8</sup>

So in order for God to be the God that Christianity claims him to be, he must be able to influence the world, to really make a profound difference to what goes on in the world. But how exactly does God do the trick? How does he act in the world? Most Christians, including Christian scientists, are very puzzled by this question. What could possibly be the mechanism through which God influences the events occurring in the universe?

### **DIVINE ACTION THE DETERMINACY OF NATURE AND MIRACLES AS VIOLATIONS OF THE LAWS OF NATURE**

In the discussion between natural sciences and theology, it has traditionally been customary to assume that in order for God to affect what happens in the world and to make “miracles” (or any “non-natural” events, whatever one wishes to call them) happen, he needs to be able to interfere with the processes of nature. Already in the eighteenth century, philosopher David Hume declared famously that “a miracle is a violation of the laws of nature.”<sup>9</sup> Likewise, according to Hume’s contemporary, philosopher Voltaire, “a miracle is the violation of mathematical, divine, immutable, eternal laws.”<sup>10</sup>

The view of Hume and Voltaire still appears to be the consensus view today – at least in public discussion. If God wishes to act in the world, he needs to intervene, to override the existing natural laws in some miraculous, supernatural way. This understanding is based on the widely held perception of 19<sup>th</sup> and 20<sup>th</sup> century physicists and philosophers of science that the laws of physics provide all-encompassing deterministic rules for what goes on in the universe. The course of nature is seen to be completely regular and exceptions to the natural order are regarded as impossible without an intervention of a supernatural agent.

(At this point, as a clarifying remark, it must be noted that although, in the context of Christian theology – and in this paper – the supernatural agent is usually identified as God, theories of divine action can also be developed in other philosophical and theological frameworks, even without explicit reference to any particular deity.)

Of course, since the latter part of the 20<sup>th</sup> century, physics has introduced randomness as a constitutive feature of the universe; the Newtonian picture of the universe as a deterministic cosmic clockwork machine now only serves as an approximation on a limited scale. (I will discuss randomness more thoroughly later in the paper.) Nevertheless, in the minds of average Western citizens – both Christian and non-Christian – the deterministic pattern of thought still dominates.

### **THE DETERMINACY OF NATURE AND THE ALLEGED IMPOSSIBILITY OF DIVINE ACTION**

In fact, many philosophers, and even many modern theologians, have come to an even stronger conclusion – the conclusion that exceptions to the natural order are not only impossible in an absence of a supernatural interventionist being, but that they are altogether

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<sup>8</sup> R. Dawkins, *God Delusion*. (London: Bantam Press, 2006).

<sup>9</sup> D. Hume, *An Enquiry Concerning Human Understanding*, ed. T. L. Beauchamp. Oxford: Oxford University Press, 2000 [1748]

<sup>10</sup> Voltaire, *Philosophical Dictionary* [*Dictionnaire philosophique*]. Paris: Garnier, 1947 [1764].

impossible. One of the pioneers of the 20<sup>th</sup> century discussion between science and theology, physicist (and Manhattan Project participant) William G. Pollard, sees the interventionist understanding of God's actions unbiblical because it "inevitably places God and nature in opposition to each other in the sense that they represent two alternative causative agents" and unscientific because "anyone who has had the privilege of having the whole marvelous structure of mathematical physics unfolded before his imagination and experienced the thrill of it cannot fail but find the thought of such intervention shocking."<sup>11</sup>

Consequently, many academics (and many laymen alike) maintain that it is simply not possible that God would be able to act in the world. Some go even further, deducing that since God cannot act in the world, there is no reason to entertain the idea that God even exists. Instead, all that we should be concerned with is the physical universe. Many agree with astronomer Carl Sagan's opinion that "the Cosmos is all that is or ever was or ever will be."<sup>12</sup> World-renowned physicist Stephen Hawking puts it as follows: "Before we understand science, it is natural to believe that God created the universe. But now science offers a more convincing explanation. (...) Religion believes in miracles, but these aren't compatible with science."<sup>13</sup>

Of course, if we take for granted the claim that "breaking" or overriding the allegedly all-encompassing laws of nature is completely impossible, it is a natural conclusion that it is impossible also for God. But are there really good reasons for accepting such a claim – from the point of view of Christian theology, at least? If we base our worldview on the Christian understanding of the world, why should we think that God, who – allegedly – is omnipotent and the creator of the whole cosmos, could not intervene with his creation and the natural order in any way he wishes to? I argue that that the belief that God actively acts in the universe does not need to contradict the current theories of physics. I will return to this question in later chapters. Before that, I will briefly examine another modern strategy of reconciling God's actions with the laws of nature.

### **THE INDETERMINACY OF NATURE AND NON-INTERVENTIONIST THEORIES OF DIVINE ACTION**

Not all scholars (especially those who are trained in both natural sciences and theology) are willing to accept the idea that God would have no room to act in the world. Instead, they have made some serious attempts of accommodating God's actions with the theories of science in a non-interventionist way. It is claimed that, at least as far as human observers are concerned, nature is indeterministic, thus offering God "gaps" in which he can act without violating the laws of physics. In other words, even though many physical phenomena appear totally random, it is thought that God still controls them in some hidden way.

According to this view, the apparent randomness of the world is just "God's way of staying anonymous," as Albert Einstein allegedly said (although the quote is very likely wrongly attributed to him<sup>14</sup>). According to theologian Vern S. Poythress, the most fundamental mistake that anyone can make – and that, according to him, many modern

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<sup>11</sup> W. G. Pollard. *Chance and Providence: Gods Action in a World Governed by Scientific Law*. New York: Charles Scribner's Sons, 1958. Available at <https://archive.org/details/chanceandprovide028224mbp>, accessed October 15<sup>th</sup>, 2014.

<sup>12</sup> C. Sagan, *Cosmos*. New York: Random House, 1980.

<sup>13</sup> C. Matyszczyk, "Stephen Hawking makes it clear: There is no God". In: *CNET* September 26<sup>th</sup>, 2014. Available at <http://www.cnet.com/news/stephen-hawking-makes-it-clear-there-is-no-god/>, accessed October 15<sup>th</sup>, 2014.

<sup>14</sup> *Wikiquotes*, *Talk: Albert Einstein*. Available at [http://en.wikiquote.org/wiki/Talk:Albert\\_Einstein](http://en.wikiquote.org/wiki/Talk:Albert_Einstein), accessed October 15<sup>th</sup>, 2014.

scientist have indeed made – is to think that chance is some sovereign creative force which can independently bring about events in the world. Poythress argues that “the word chance is properly used to describe the limitations of human knowledge, not the limitations of God’s power.”<sup>15</sup>

In my opinion, two of the most credible contemporary non-interventionist approaches to divine action are concerned with chaos theory and quantum physics. In chaos theory, certain physical systems (non-linear dynamical systems) are described by functions that are extremely sensitive to initial conditions, which usually makes the behaviour of these systems impossible to predict. Almost infinitely small differences in the initial conditions of the systems can lead to extreme effects on a larger scale. To be sure, chaotic systems are usually considered to be fully deterministic, but nevertheless unpredictable and this way “seemingly random.”<sup>16</sup>

It has been proposed, however, that although it is impossible for human observes to perceive any predictability in chaotic systems, God still holds all strings in his hands, adjusting the initial conditions appropriately to yield significant effects on a wider scale. Furthermore, since many of our mathematical models depicting chaotic systems are necessarily only approximations of real world phenomena, it has been suggested that this prevents us from obtaining the full complexity and subtlety – perhaps even some “hidden” indeterminacy – of these systems. This line of thinking has been promoted most famously by physicist and theologian John Polkinghorne.<sup>17 18 19</sup>

Physicist and theologian Robert Russell<sup>20 21</sup> and philosopher of religion Nancey Murphy<sup>22</sup>, among others<sup>23 24 25</sup>, have advocated the so-called quantum divine action theory, according to which God controls a multitude of seemingly insignificant and indeterministic quantum events and this way brings about desired large-scale effects. This theory is based on the Copenhagen interpretation of quantum mechanics, which asserts that the state of a physical system cannot be predicted in advance by humans; there exists numerous possible physical states of which only one, an arbitrary one, actualizes. So it is suggested that the laws of nature might not be completely deterministic after all. According to the proponents of the quantum divine action theory, God, however, might be able to steer the course of history through deciding in a hidden way which one of the possible states gets actualized.

<sup>15</sup> V. S. Poythress, *Chance and the Sovereignty of God: A God-Centered Approach to Probability and Random Events*. Wheaton: Crossway.

<sup>16</sup> K. T. Alligood, T. D. Sauer & J. A. Yorke, *Chaos: An Introduction to Dynamical Systems (Textbooks in Mathematical Sciences)*. New York: Springer, 1997.

<sup>17</sup> J. Polkinghorne, “Note on Chaotic Dynamics”. In: *Science and Christian Belief* 1 (2), 1989, pp. 123–127.

<sup>18</sup> J. Polkinghorne, *Reason and Reality: The Relationship Between Science and Theology*. Philadelphia: Trinity Press International, 1991.

<sup>19</sup> J. Polkinghorne, *Quarks, Chaos and Christianity: Questions to Science and Religion*. London: Triangle, 1994.

<sup>20</sup> R. J. Russell, “Divine Action and Quantum Mechanics: A Fresh Assessment”. In: R. J. Russell, P. Clayton, K. Wegter-McNelly & J. Polkinghorne (eds.), *Quantum Mechanics: Scientific Perspectives on Divine Action*. (Vatican City & Berkeley: Vatican Observatory & The Center for Theology and the Natural Sciences, 2001), 293–328.

<sup>21</sup> R. J. Russell, *Cosmology from Alpha to Omega: The Creative Mutual Interaction of Theology and Science (Theology and the Sciences Series)*. (Minneapolis: Fortress, 2008).

<sup>22</sup> N. C. Murphy, “Divine Action in the Natural Order: Buridan’s Ass and Schrödinger’s Cat”. In: F. L. Shults & N. C. Murphy & R. J. Russell (eds.), *Philosophy, Science and Divine Action*, (Leiden: Brill, 2009), 325–357.

<sup>23</sup> K. Ward, *Divine Action*. (London: Collins, 1990).

<sup>24</sup> K. Ward, “Divine Action in the World of Physics. Response to Nicholas Saunders”. In: *Zygon* 35 (4), 2000, 901–906.

<sup>25</sup> T. F. Tracy, “Particular Providence and the God of the Gaps.” In: R. J. Russell, N. Murphy & A. Peacocke (eds.), *Chaos and Complexity: Scientific Perspectives on Divine Action*. (Vatican City & Berkeley: Vatican Observatory & The Center for Theology and the Natural Sciences, 1995), 289–324.

## **DIVINE ACTION WITH A TWIST: THE THEORY OF INTELLIGENT DESIGN**

One peculiar (and certainly highly controversial) recent attempt of detecting divine action is the theory of intelligent design. The logical foundations of the theory have been laid by mathematician and philosopher William A. Dembski, who (like Russell and Murphy) finds appealing the thought that the world of quantum physics would somehow accommodate the hidden actions of God. Dembski, however, goes much further, asserting that it is actually possible to empirically detect exactly where God has acted and which objects he has decided to bring about through sudden input of information.

Dembski holds that God controls events occurring in the universe by entering information at convenient times and places (in this regard, Dembski's views of God as an information inputter are similar to those offered by Polkinghorne). By using the so-called criterion of specified complexity, Dembski claims to be able to differentiate between objects – or events – that are designed and objects that are caused by natural causes. In Dembski's theory, when God acts, he always inputs information, and this information usually takes a special form. Dembski calls information created by God “complex specified information” and objects manifesting such information “designed”. In order to qualify as designed, an event needs to be, firstly, highly improbable (complex) and, secondly, definable as a separate pattern without reference to the actual event (specified).<sup>26 27 28</sup>

Although the idea of being able to reliably determine where God has acted – and, consequently, being able to prove the existence of God! (of some kind) – sounds very intriguing and revolutionary, in reality, it has been revealed that the theory of intelligent design is not a well-founded theory. Several critics have pointed out, for example, that neither of Dembski's central concepts, “specification” and “complex information”, is particularly well defined.<sup>29 30 31 32</sup> Therefore, it seems rather obvious that Dembski's theory based on the notion of specified complex information is not sufficient to establish itself as a credible scientific theory and does not constitute a reliable method for detecting divine design – or any other kind of design, for that matter.

## **THE PLAUSIBILITY OF THE NON-INTERVENTIONIST THEORIES OF DIVINE ACTION AND THE NEED FOR AN INTERVENTIONIST THEORY OF DIVINE ACTION**

Nicholas Saunders (who, just like Polkinghorne and Russell, is a physicist and a theologian), has questioned both chaotic systems and quantum events of their ability to actually produce the alleged large-scale effects. According to Saunders, in the real world, phenomena are not as chaotic as they are thought to be in mathematical models. Chaos is

<sup>26</sup> W. A. Dembski, *Being as Communion: Metaphysics of Information*. Farnham: Ashgate, 2014

<sup>27</sup> W. A. Dembski, *The Design Inference: Eliminating Chance through Small Possibilities. Cambridge Studies in Probability, Induction, and Decision Theory*. Cambridge: Cambridge University Press, 1998.

<sup>28</sup> W. A. Dembski, *No Free Lunch: Why Specified Complexity Cannot Be Purchased without Intelligence*. (Plymouth: Rowman & Littlefield, 2002).

<sup>29</sup> W. Elsberry & J. Shallit, “Information Theory, Evolutionary Computation, and Dembski's Complex Specified Information”. In: *Synthese*, 178 (2), 237–270.

<sup>30</sup> M. J. Murray, “Natural Providence (Or Design Trouble)”. In: L. P. Pojman & M. C. Rea (eds.), *Philosophy of Religion: An Anthology. 6th Edition*. (Belmont: Wadsworth, 2012), 596–612.

<sup>31</sup> B. Fitelson, C. Stephens & E. Sober, “How Not to Detect Design – Critical Notice: William A. Dembski, *The Design Inference*”. In: *Philosophy of Science*, 66 (3), 1999, 472–488.

<sup>32</sup> R. D. Pennock (ed.), *Intelligent Design Creationism and Its Critics: Philosophical, Theological and Scientific Perspectives*. Cambridge: Massachusetts Institute of Technology Press.

merely “a minor background phenomenon and in no way implies whole-scale disorder.” In the case of quantum theory, the situation is even more problematic. Saunders notes that “on the terms of our current understanding of quantum theory, incompatibilist non-interventionist quantum SDA [special divine action] is not theoretically possible.”<sup>33 34</sup>

Saunders is also extremely sceptical of the possibility that quantum chaos<sup>35</sup>, where quantum events get “amplified” by chaotic phenomena, could add anything new to theories of divine action (this is, to start with, due to the fact that no detailed theory of quantum theory exists), although many contemporary theologians and philosophers regard it as the most promising way of connecting divine action with the theories of physics. So, in practice – to cite philosopher Jeffrey Koperski – it appears that “God can alter the arrangement of bubbles in the crest of a tsunami but not redirect its course.”<sup>36</sup> Saunders even goes as far as to assert that contemporary theology is “in crisis” since it cannot in any credible manner account for how God could act in the world. Saunders reminds that, at the moment, “such a wide range of doctrine is dependent on a coherent account of God’s action in the world,” but “we simply do not have anything other than bold assertions and a belief that SDA [special divine action] takes place.”<sup>37</sup>

I find Saunders’ arguments extremely well-founded and convincing – or, in any case, much more credible than the opposing views. The randomness and indeterminacy present in chaos theory and quantum physics just seem not to be enough to accommodate the actions of God. In addition to the two approaches mentioned above, no other credible non-interventionist theories of combining divine action with the theories of modern science have been presented. (Of course, if the progress of science in the future offered new theories that could be reconciled better with non-interventionist actions of God, such theories should be considered carefully.) Therefore, it must be deduced that in order to make room for God’s actions in the world – actions that can actually make a difference and change the course of history – we need to accept the view that God is able to intervene with the processes of nature. In other words, divine action necessarily requires divine intervention.

But how could this happen in practice? If God is the cause and some particular event occurring in the world is the effect, what is actual the mechanism of causation?

## **DIVINE CAUSATION**

### **MATERIAL AND IMMATERIAL ENTITIES AND THE PROBLEM OF DIVINE CAUSATION**

One of the most convincing (and, historically speaking, certainly one of the most enduring) arguments against divine intervention is based on the deep-rooted perception that the material world and the immaterial world are completely different and completely separate and cannot affect each other in any way. This, of course, can be seen as one of the various versions of the classical problem of substance dualism (or, mind-body dualism). As philosopher David Corner writes, “if the realm of supernatural becomes radically different from that of nature, the supernaturalist encounters a problem similar to that encountered by substance dualism; it becomes difficult to say how there can be any causal interaction between nature and the supernatural.”<sup>38</sup>

<sup>33</sup> N. Saunders, “Does God Cheat at Dice? Divine Action and Quantum Possibilities”. In: *Zygon* 35 (3), 2000, 517–544.

<sup>34</sup> N. Saunders, *Divine Action and Modern Science*. (Cambridge: Cambridge University Press, 2002).

<sup>35</sup> H.-J. Stöckmann, *Quantum Chaos: An Introduction*. (Cambridge: Cambridge University Press, 2007).

<sup>36</sup> J. Koperski, “God, Chaos and the Quantum Dice”. In: *Zygon* 35 (3), 2000, 545–559.

<sup>37</sup> D. Corner, *Acts of God: An Essay on Miracles*. Dissertation, University of California, Santa Barbara. 2006.

<sup>38</sup> A. Peacocke, *Theology for a Scientific Age: Being and Becoming – Natural, Divine and Human*. (London: SCM Press, 1990).

One of the most prominent figures in twentieth century dialogue between science and religion, biochemist and theologian Arthur Peacocke, formulates the problem as follows: “It is indeed difficult to imagine *how* God might be an agent in a world conceived of as ruled by deterministic laws at all levels when the only analogy for such agency has itself been formulated in dualistic terms that involve a gap dividing action in the ‘body’, and so in the natural world, from intentions and other acts of the ‘mind’. This is an *ontological* gap between two kinds of entities across which it is difficult to see how in principle a bridge could be constructed.” (Peacocke’s italics)<sup>39</sup>

### **THE MECHANISM OF CAUSATION: NATURAL VS. SUPERNATURAL CAUSATION**

To be sure, it is quite difficult to imagine the exact mechanism through which immaterial entities could affect material entities. However, when one really comes to think about it, is it not just as difficult to imagine the mechanism through which a material entity could affect another material entity (or, how an immaterial entity could affect another immaterial entity; this seems even more difficult to grasp)? Logically speaking, if we deny the possibility of divine causation because we cannot see the mechanism behind this causation, we should also deny the possibility of “natural” (material) causation because we cannot see the underlying mechanism there, either. Surely, not many of us are willing to go that far and abandon the entire concept of causation.

Naturally, we can – and do, with good reason – talk all the time about the causality present in the world at many different levels. We do know, for instance, that the strong nuclear force causes quarks to hold together so that hadrons are formed. Still, at the most fundamental level, we do not really know what constitutes this or any other form of causality. There is always something that is so elementary that it cannot be characterized by its being a part of a causal structure. Of course, regarding the previous example, it has been established that the strong nuclear force is “carried” by gluons, but it is unclear what actually initiates or terminates this process of “carrying”. The deepest core of causation always remains out of our reach.

Philosopher Brian Ellis notes, rightly, that “sooner or later, in the process of ontological reduction, we must come to events and processes that are not themselves structures of constituent causal processes.” Ellis goes on explaining that “the identities of the basic causal interactions that initiate and terminate elementary causal processes, and the energy transmission processes that connect them, cannot depend in turn on their causal structures. For, by hypothesis, they have no causal structures.”<sup>40</sup>

To sum up, the mechanism of causation is no more a problem for divine causation than it is for “natural” causation. In both cases, the fundamental mechanism of causation is unknown, and we are willing to accept that causal relations exist, we simply have to accept this without knowing all the details.

### **DIVINE INTERVENTION**

#### **THE COMPATIBILITY OF DIVINE INTERVENTION AND THE LAWS OF NATURE**

Based on what I have discussed above, it is now rather obvious that I am heading towards an interventionist view of God’s actions. This view, however, has been rejected by the majority of contemporary scientists and philosophers, mainly because God’s interventionist acts would allegedly distort the course of nature. It is argued that the laws of

<sup>39</sup> B. Ellis, *Scientific Essentialism*. (Cambridge: Cambridge University Press, 2001).

<sup>40</sup> C. S. Lewis, *Miracles: A Preliminary Study*. (London: Geoffrey Bles, 1947).

nature need to be all-encompassing and unbreakable, or else we would lose all predictability in science, and in everyday life, too. No “divine” or other kinds of interventions can be allowed. But why, I ask again, should we accept such a picture of nature? In my opinion, there is no compelling logical reason why we could not adopt the opposing view.

Indeed, I am inclined to regard the theory of God’s miraculous actions proposed by world-renowned novelist C. S. Lewis as far more appealing. Lewis states the matter rather eloquently as follows: “If I knock out my pipe I alter the position of a great many atoms: in the long run, and to an infinitesimal degree, of all the atoms there are. Nature digests or assimilates this event with perfect ease and harmonises it in a twinkling with all other events. It is one more bit of raw material for the laws to apply to, and they apply. (...) If God annihilates or creates or deflects a unit of matter, He has created a new situation at that point. Immediately all Nature domiciles this new situation, makes it at home with in her realm, adapts all other events to it. It finds itself conforming to all the laws. (...) If events ever come from beyond Nature altogether, she will be no more incommoded by them. Be sure she will rush to the point where she is invaded, as the defensive forces rush to a cut in our finger, and there hasten to accommodate the newcomer. The moment it enters her realm it obeys all her laws.”<sup>41</sup>

### **THE NECESSITY OF DIVINE INTERVENTION AND “INTERVENTION MIRACLES”**

To put the same thing more straightforwardly: miracles can happen. Moreover, miracles are necessary for divine action. In yet other words, divine action does require divine intervention. Today, however, the majority of philosophers of science are extremely skeptical towards this view. There are some exceptions, though, like philosopher and theologian Keith Ward, who believes that “God sometimes acts in ways that transcend all the natural powers and dispositions of objects – miracles do occur.”<sup>42</sup>

Of course, the term “miracle” is here defined in the sense of Hume and Voltaire and used to refer specifically to an “intervention miracle”. Philosopher James Kellenberger divides miracles into three classes: “contingency miracles”, “natural miracles” and “intervention miracles”/“violation miracles”.<sup>43</sup> In my opinion, however, an intervention miracle is the only type of miracle that actually deserves to be called a miracle, since neither contingency miracles nor natural miracles (as they are defined by Kellenberger) are instances of God direct action but merely vastly rare natural coincidences that are interpreted to have spiritual significance within some particular religious context.

Regardless whether we choose the option that God cannot act in the world because the laws of nature cannot be broken, or the option that he can “create new events” in the universe which are then immediately accommodated by the laws of nature, we cannot prove our view to be correct (or the opposing view to be incorrect) by scientific means. It is always a metaphysical stance that we have to take. As far as Christian theology is concerned, I hold that the view of God’s actions proposed by Lewis is much more credible than the (naturalistic) alternative.

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<sup>41</sup> J. Kellenberger. “Miracles”. In: *International Journal for the Philosophy of Religion* 10 (3), 1979, 145–162.

<sup>42</sup> R. J. Russell, *Cosmology from Alpha to Omega...*

<sup>43</sup> R. J. Russell, *Cosmology from Alpha to Omega...*

## CONCLUSION TOWARDS A CREDIBLE INTERVENTIONIST VIEW OF (SPECIAL) DIVINE ACTION

In this article, I have examined how it is possible for God to act in the world. I have argued, firstly, that if we take the theories of modern science seriously, we necessarily come to the conclusion that God cannot act to any significant extent in the world without interfering with the processes of nature. The most promising non-interventionist theories of divine actions, based on quantum physics and chaos theory, are, in their current form, not quite convincing enough. They can only lead to a conception of a God who “can alter the arrangement of bubbles in the crest of a tsunami but not redirect its course.”

Secondly, I have argued that it is quite possible to develop a credible theory of divine action based on divine intervention. This is possible because the idea of divine causation is no more problematic than the idea of “ordinary” causation, and because the view that God can act in the world by “creating new situations” which are then instantly accommodated by the processes of nature is at least as plausible as the view that God cannot act at all – at least in the context of classical Christian theology. I think that this kind of perspective might offer a fruitful ground to more balanced theories of divine action in the future.

Obviously, the purpose of this paper has not been to develop a fully-fledged theory of interventionist divine action, but rather to point out that

- the current “mainstream” non-interventionist theories (based on chaos theory and quantum physics) are not sufficiently convincing options,
- and that divine intervention is not as dead an option as it has often deemed to be.

Indeed, I argue that divine intervention is a phenomenon well worth taking seriously and deserves more attention than it has attracted in the contemporary literature.

## DIVINE ACTION AND SCIENCE: FUTURE DEVELOPMENTS AND UNCERTAINTIES

With the progress of science, some gaps in our understanding of the world will probably close and new ones are likely to emerge. Consequently, new theories of reconciling divine action with the findings of the natural sciences will be developed. Regardless of what the scientific theories of the future will be, I am somewhat sceptical of us ever being able to decipher exactly how God acts in the world. Just as a God who would not interact with the world would not be much of a God, I believe – and I think most Christians would agree – that a God who would not conceal his actions from humans would not be much of a God.

If indeed, as the Bible tells us, “God’s ways are higher than our ways”<sup>44</sup>, I we should probably maintain a certain humility in asserting what God does or does not do. Perhaps we can never fully “fathom the mysteries of God”.<sup>45</sup> This, of course, does not mean that we should stop searching. Although I am of the opinion that the future theories of divine action will show that divine action necessarily requires divine intervention, I must admit that, in the end, the truth might be something completely different, something beyond our imagination. At the same time, I believe that there is no reason to doubt that in whichever way God decides to act, he knows exactly what he is doing. I think English poet William Cowper puts it quite fittingly in his poem “Light Shining Out of Darkness”:

*God moves in a mysterious way,  
His wonders to perform;  
He plants His footsteps in the sea,*

<sup>44</sup> *The Holy Bible: New International Version*, Isaiah 55:9.

<sup>45</sup> *The Holy Bible: New International Version*, Job 11:7

November 2014

*And rides upon the storm.*

*(...)*

*Judge not the LORD by feeble sense,*

*But trust him for his grace;*

*Behind a frowning providence,*

*He hides a smiling face.<sup>46</sup>*

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<sup>46</sup> W. Cowper, *Olney Hymns and Other Sacred Works*. Minneapolis: Curiosmith, (2010 [1779]).