**How Does God Act in the World?**

***Modern Science and the Problem of Divine Causation***

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*Abstract***: The belief that God actively acts in the world has been fundamental to orthodox 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 God cannot act in the world without violating the allegedly all-encompassing laws of nature, and, consequently, because the laws of nature cannot presumably ever be broken, it is considered totally impossible for God to influence the physical world in any way. Secondly, it is 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.**

**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.**

***Keywords- God; causality; divine action; divine intervention;***

***divine causation***

I. INTRODUCTION

The belief that God actively acts in the world, “sustaining all things by his powerful word” (Heb. 1:3), has been fundamental to orthodox 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.

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.” [1] 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.” [2]

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 Richard Dawkins has fittingly described. [3] But how exactly does God act in the world? What is the mechanism through which God influences the events occurring in the universe?

II. DIvINe aCTION

*A. Divine Action and the Laws of Nature*

In the discussion between science and theology, it has been long customary to assume that in order for God to affect what happens in the world and to make “miracles” (or any non-natural events) happen, he needs to be able to interfere with the processes of nature. Already in the eighteenth century, David Hume declared that “a miracle is a violation of the laws of nature” [4], and this still appears to be the consensus view. If God wishes to act in the world, he needs to intervene, to override the existing natural laws in some supernatural way. This understanding is largely based on the widely held perception of modern 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. This supernatural agent is, of course, usually identified as God.

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 impossible. Consequently, they 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”. [5]

Of course, if we take for granted the claim that “breaking” or overriding the 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 later. Before that, I will briefly examine another modern strategy of reconciling God’s actions with the laws of nature.

*B. Non-interventionist Theories of Divine Action*

Not all scholars (especially those who are trained in both physics and theology) are willing to accept the idea that God has 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. In my opinion, two of the most credible contemporary approaches are concerned with chaos theory and quantum physics. Both of these theories deal with random events and suggest that the laws of nature might not be completely deterministic after all. It is claimed that, at the fundamental level, nature is indeterministic, thus offering God “gaps” in which he can act without violating the laws of 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. 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. This line of thinking has been promoted most famously by John Polkingthorne. [6]

Robert Russell [7] and Nancey Murphy [8], among others, 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. God, however, might be able to steer the course of history through deciding in a hidden way

*C. Plausibility of the Non-interventionist Theories of*

*Divine Action*

Nicholas Saunders (who, just like Polkingthorne 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 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.” [9] 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.” [10]

I find Saunders’ arguments extremely 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 really 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?

III. DIvINe CaUsaTION

*A. Material and Immaterial Entities and the Problem of*

*Causation*

One of the most convincing (and, historically, 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 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.” [11]

One of the most prominent figures in twentieth century dialogue between science and religion, Arthur Peacocke, formulates the problem as follows: “It is indeed difficult to

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.” [12]

*B. Mechanism of Causation*

To be sure, it is quite difficult to imagine the exact mechanism through which immaterial entities could affect material entities. However, when one comes to really 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. I think that this issue has not received nearly as much attention in the literature as it deserves.

Naturally, we can – and do, with good reason – talk all the time about the causality present in the world at many 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.

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.” [13]

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.

IV. DIvINe INTeRveNTION

Based on what I have discussed above, it is 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

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 C. S. Lewis as far more appealing. Lewis states the matter rather eloquently as follows: “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.” [14]

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.

V. CONClUsION

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 plausible as the view that cannot act at all – at least in the context of Christian theology. I think that this kind of perspective might offer a fruitful ground to more balanced theories of divine action in the future.

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