

# ARGUMENT FROM CHANCE

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**Abstract.** In the article, first I present the atheistic argument from pointless evil and the argument from chance. The essence of the argument from chance consists in the incompatibility of the existence of purposeless events and the existence of a God who planned the universe to the last detail. Second, I would like to show that there is a relation between the evidential argument from evil and the argument from chance. An analysis of the theistic argument from small probabilities is a helpful starting point for the presentation of how the two arguments are related.

## I. ON THE ARGUMENT FROM CHANCE FOR THE NON-EXISTENCE OF GOD

In what follows I will first present the atheistic argument from pointless evil and the argument from chance. The essence of the argument from chance consists in the incompatibility of the existence of purposeless events and the existence of a God who planned the universe to the last detail. Second, I would like to show that there is a relation between the evidential argument from evil and the argument from chance.

One of the strongest atheistic arguments for the non-existence of God is the argument from evil, in particular, the evidential argument from evil. The argument in its basic form – as constructed by William Rowe – can be presented as follows:

- (1) There exists pointless evil in the world.
- (2) An omniscient, omnipotent and morally perfect being would not permit the occurrence of any case of pointless evil in the world.

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Hence:

(3) God does not exist.

In an analogous way, it is possible to build an argument for the non-existence of God from chance. It goes on as follows:

(4) There exist chance events in the world.

(5) An omniscient, omnipotent and morally perfect being would not permit the occurrence of any case of chance in the world.

Hence:

(3) God does not exist.

Perhaps it is worth noting that the argument from chance has never been very popular or frequently discussed, unlike the argument from evil. The reason might be that the concept of chance is very ambiguous, and, at the same time, in many cases it seems to be theologically harmless. Secondly, many theists believe that one can easily reject premise (4) in the argument from chance by saying simply that there are no chance events in the world.

The crucial issue is how to understand 'chance' in the context of the argument from chance. It might seem that the atheistic argument from chance could be sound and valid if chance is understood in an ontological way and not as an epistemic concept, that is as our lack of knowledge and ignorance, which is logically harmless for theism. 'Ontological chance' could mean several things, for example:

- (a) an event which does not have any cause or any causal explanation;
- (b) a purposeless event (an event without purpose or an event that hasn't been planned or intended by anyone);
- (c) an unpredictable event (unpredictable even for an omniscient being);<sup>2</sup>
- (d) an event whose happening is extremely improbable.

However, I will try to show that the existence of ontological chance (random events) is not necessarily incompatible with theism. In other words, even if such events happen, they do not make the atheistic argument from chance sound. The justification of the last claim requires an explanation of the principles of the theology of chance in more detail.<sup>3</sup>

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<sup>2</sup> This meaning of chance is at play if an omniscient being exists in time and the world has an indeterministic nature, as current quantum physics suggests.

<sup>3</sup> The scientific reasons of 'theology of chance' have been discussed by David J. Bartholomew in his two books closely related to the topic: (1984) (2008).

Before we do that, we will consider the argument from chance in which chance is understood as a very improbable and purposeless event, and, therefore, we will call this argument 'the argument from small probabilities'. The argument from small probabilities deserves our attention because it can be used both by a theist and by an atheist.

The theist can argue as follows: if an event had a very small probability, like, for example, the emergence of life on Earth, but it happened in reality nonetheless, then the cause of its happening was the action of God, and hence, of course, God exists.<sup>4</sup> The atheist can argue for atheism as follows: if an event was very improbable, then it happened by chance (without any purpose or plan) and not by the action of God. If the universe has such a nature that the probability of the emergence of life and sentient beings on Earth or on any other planet was very small indeed, then the probability that God would have created the universe is very small too. Why so? Because an omnipotent being would not have created the world in which the probability of the existence of human beings as the pinnacle of creation – which is, perhaps, one of the most important Christian doctrines – was extremely small.

The atheist may also argue that God does not exist if he succeeds in the refutation of the theistic argument from very small probabilities. He can argue as follows: if an event, like the emergence of life and the appearance of human beings, whose probability was rather high and not extremely small (we will explain this high probability below), happened in reality, then there is a natural explanation of these events and the hypothesis of the existence of God is explanatorily useless. Moreover, the atheist can refer to the chance events as purposeless events, which, according to the Law of Large Numbers and in long-term outcomes, may lead to the emergence of life and the appearance of human beings as a result of cosmic and biological evolution. Some people even speak about 'an order emerging out of chaos' (Kaufmann 1995: 25). Thus, if the atheist were able to explain the happening of events which are usually attributed to God himself as their cause, then atheism would gain an argumentative advantage over theism, as, for example, Richard Dawkins believes.

An evaluation of this atheistic argument will be a bit easier if we pay attention to the theistic argument from very small probabilities mentioned above. The key point of this argument is exemplified by

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<sup>4</sup> In fact this type of reasoning is used by the defenders of Intelligent Design (William Dembski, Michael Behe and their followers).

the reasoning sometimes called 'the significance test argument'. The reasoning of this type was made for the first time by John Arbuthnot – a physician to Queen Anne – who was trying to explain the distribution of female and male births in London in the seventeenth century (1710). Arbuthnot's reasoning may be reconstructed in the following way:<sup>5</sup>

- (6) The probability of a male birth is equal to the probability of a female birth and it is  $\frac{1}{2}$  in every individual case.
- (7) Every case of a male birth and a female birth is independent of other births as every result of tossing a coin is independent of other results of tossing the same coin.
- (8) It is possible that during one year some fluctuations will happen regarding the proportion of male and female births, for example, there will be more male births than female ones, or, conversely, but in the long run the proportion will equal 50% males to 50% females.
- (9) The empirical data gathered by Arbuthnot for London (the records from London's parishes) extending over 82 years from 1629 to 1710 confirmed that every year there were more male births than female births and this fact was inconsistent with the *a priori* assumption that the number of births will be equal in both cases.
- (10) The probability that 82 times in succession more boys than girls will be born is  $(1/2)^{82}$  that means  $0,2 \times 10^{-24}$  and this is a very small probability indeed.

John Arbuthnot inferred from this fact that the event which was so improbable could not happen by chance. He concluded, therefore, that it was God and his Providence who is responsible for what happened. He even suggested a possible reason which God could have for allowing or causing that distribution of sex, namely to keep a demographic equilibrium in the world because the number of boys should be larger than the number of girls since men die sooner than women.

Contemporary theists use, in principle, the same argumentative scheme in the arguments from small probabilities, but to much more complicated processes. If we assume, for example, that the appearance of life is a process consisting in the emergence of 2000 enzymes from

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<sup>5</sup> Bartholomew (1984: 38-39).

20 amino acids, then, as Fred Hoyle and Chandra Wickramasinghe calculated, the probability of this event is  $1/10^{40000}$ . According to William Dembski's calculations, the probability of the emergence of the bacterial flagellum (*Escherichia coli*) is 1 in  $(10^{263})$ .<sup>6</sup> It is worthy of note that, given such a calculation of the probability of the appearance of life as counted above, and given that the *a priori* probability of the existence of the Creator is minimal but larger than 0, for example  $1/50\ 000$ , it is possible, by resorting to the Bayes theorem, to count the probability of God's existence and this probability is almost one (0,98).<sup>7</sup> Hence, theism is epistemically more viable and rational than atheism (Bartholomew 1984: 57).

Another typical example of the application of the argument from very small probabilities is the fine-tuning hypothesis. According to this hypothesis, as some people claim, firstly, the probability of every cosmological constant, such as the speed of light, the constant of gravitational attraction, Planck's constant, and so on, which is suitable to cosmic and biological evolution, is very small. Secondly, the probability of all of the fundamental constants of physics which are suitable to the emergence and the existence of life calculated by multiplying together all of these small probabilities is extremely small. If this is so, then the chance hypothesis should be rejected and one should assume that the values of the basic cosmological constants were chosen and determined by a super intelligent mind.

The criticism of this argument relies on the demonstration that it is not clear enough whether the cosmic constants are independent of one another; it is possible, for example, that the value of some constants is determined by the value of others. In that case the probability of all of them would be significantly larger. It seems that what plays a very important role here, though not only here, is our common intuition that all possible values of cosmological constants are equally probable.<sup>8</sup> The *principle of*

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<sup>6</sup> Bartholomew (2008: 110).

<sup>7</sup> A= God exists, B= God does not exist, S = the existence of 2000 enzymes constructed from 20 amino acids.

$P(A) = 1/50\ 000$  and  $P(B) = 49\ 000/50\ 000$  and  $P(S/B) = 1/10^{40\ 000}$ .

$P(S \text{ given } A)$  or  $P(S/A) = 1$  because S can be taken as certain if God exists on the ground that he can bring about whatever he desires.

$P(A \text{ given } S) = [P(A) \times P(S/A)] / [P(A) \times P(S/A) + P(B) \times P(S/B)]$

$P(A/S) = [1/50\ 000 \times 1] / [1/50\ 000 \times 1 + 49\ 000/50\ 000 \times 1/10^{40\ 000}] = 0.98$ .

<sup>8</sup> Bartholomew (2008: 84).

*insufficient reason* says that if there is no reason to prefer one quantity to others, then all of them should be treated as equally probable. However, the application of this principle to cosmic and biological evolution is highly questionable and the theistic argument from small probabilities is perhaps based on a false assumption that all possibilities have the same probability. It is not necessarily true that each of these possibilities is equally probable. It has been discovered that, given the same number and kind of chemical substances, each time they were mixed in the same conditions, the same organic structures appeared. This result undermines the assumption of equal probabilities of all possibilities and it undermines the assumption of the independence of random events. If we reject, however, both these assumptions, the probabilities in question will be completely different. There is a fundamental metaphysical mistake which has been made in the theistic argument from small probabilities and this mistake depends on the way cosmic and organic entities are conceived of, i.e. they are regarded as *combinatorial* and purely *mechanical* objects.

Let us take as an exemplification of this mistake a very simple mathematical case. If I asked a randomly chosen person to give an example of an odd number, then the probability that I would guess what that number is seems to be extremely small because the set of odd numbers is infinite. However, this is simply not true because the probability of my knowing the number chosen is in fact much greater. This is because one can presume that a randomly asked person will choose one of the prototypical odd numbers from the set {3, 5, 7, 9, 11, 13, 15}. We are dealing here with the effect of a prototype (in its psychological version). An analogical phenomenon happens in nature and it is called 'the attractor', which makes one or some possibilities more probable than the rest of all possible ways how things could be. Simon Conway Morris has recently argued for the existence of convergence in the process of a biological evolution.<sup>9</sup> The existence of convergence makes the number of empirical possibilities on the subsequent levels of evolution much smaller than it would be were it to follow from purely mathematical calculations.

Therefore, we are allowed to reject the theistic argument from small probabilities. However, we are not allowed to infer that the world is deterministic or that there are no purposeless events. The conclusion from our considerations is weaker; there are chance events in the world

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<sup>9</sup> Conway Morris (2003: 328).

as modern science tells us. On the quantum level, there is a radioactive decay of atoms, on the molecular level genetic mutations happen, and on the level of human history there are human free choices and free actions. However, according to the Law of Large Numbers in nature, we observe the emergence of complex, functionally well-organized structures from many purposeless events which are not designed by any mind. These structures – emerging from ‘chaos’ – can be described by mathematical equations. The explanation of why this order in nature exists does not require the existence of God, who was to design and perhaps also to cause everything that happened and happens in the universe. There is no need of such a God and atheism seems to be a rational and well-grounded view. This conclusion seems to make the atheistic argument from chance stronger, which, let us repeat, goes as follows:

- (4) There exist chance events in the world.
- (5) An omniscient, omnipotent and morally perfect being would not permit the occurrence of any case of chance in the world.

Hence:

- (6) God does not exist.

The evidence for the truth of premise (4) is provided by modern science. The rationale for premise (5) is the following one: God as the Creator of the universe and the supreme mind – by definition – had to design the world to the last detail leaving no room for chance and purposeless events in the world created.<sup>10</sup> Therefore, since such events happen in the world, God does not exist.

However, perhaps a bit paradoxically, the criticism of the theistic argument from small probabilities provides reasons for theism. A theist can accept premise (4) of the atheistic argument but reject premise (5) of this argument. He can argue in the following way: if order can emerge in the world from a large number of random events (purposeless events), and such events really happen in the world, and, finally, order exists in the universe, then the existence of chance was in God’s plan. The existence of chance is not only consistent with the divine will and with God’s existence but it is part of God’s plan. The last statement is the essence of ‘the theology of chance’ which has been mentioned above: the existence of chance is not only consistent with God’s will and with

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<sup>10</sup> van Woudenberg (2013: 33).

God's existence but it is part of the divine plan and Providence and it is an expression of divine perfection:

The picture of a world in which the details take care of themselves, leaving the big issues to the Creator, is more appealing and more worthy of directing our worship. This, perhaps, is a case where we are too prone to see God in the image of man as someone who thinks control depends on overseeing every detail.<sup>11</sup>

If this were so, then the critique of the theistic argument from small probabilities would be a very useful tool for theists and their refutation of the atheistic argument from evil; let us remember this argument again:

- (1) There exists pointless evil in the world.
- (2) An omniscient, omnipotent and morally perfect being would not permit the occurrence of any case of pointless evil in the world.

Hence:

- (3) God does not exist.

Now, there exists pointless evil in the world (undeserved suffering in various forms) and at least some of those events are due to chance and are not designed by God. Such an order of the universe is not only logically and metaphysically possible, but it is morally just and theologically adequate.<sup>12</sup> Or, in brief: if there are purposeless events in the world, some of them can be evil.

And, finally, if there is no reason and no purpose for some events in the world, then, we may say, God is hidden in the mass of pointless events. But His hiddenness is only a hint how He acts in the universe of which He is the Maker and the only Lord.

Nicolai Hartmann had a truly deep insight into the nature of our world when he said that:

It is absolutely plausible that to a finite mind something can appear to be contradictory which is fully possible in reality. A finite mind cannot

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<sup>11</sup> Bartholomew (2008: 153).

<sup>12</sup> Bartholomew states 'The bizarre picture of God seated in front of a celestial control panel watching microscopic happenings throughout the universe and reacting to them almost instantaneously may be logically possible but it hardly fits with the notion of the loving Father of orthodox Christian belief, neither does it accord with our idea of how high level control should take place' (2008: 153). Divine control in the world without chance is especially important if we try to explain the possibility of human freedom.

grasp the possibilities of the coexistence of things because it is not able to apprehend the whole of the universe.<sup>13</sup> [my translation DŁ]

Thus, the coexistence of purposeless events and God's plan is possible and it is possible as well that there exists a perfect and loving God.<sup>14</sup> The atheistic argument from chance is not sound and the evidential argument from evil is not sound either. It seems to me, however, that the criticism of the argument from chance is useful for a theist and for his refutation of the atheistic argument from evil in its evidential form. The two arguments are logically related which I was trying to show in my paper.

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<sup>13</sup> Hartmann (1949: 471).

<sup>14</sup> Peter van Inwagen seems to suggest a different concept of chance. In his view, a chance event is one that is not part of anyone's plan; it is an event that hasn't been planned or intended by anyone (1995: 42-66). However, the view regarding chance events presented in this article is not incompatible with van Inwagen's position because we can see a chance event as a type concept and any particular, individual event as a token chance event (a kind of an exemplification of a universal concept of chance). Then, we could say that a type chance event was in God's plan because of some reasons and a particular chance event was not intended or planned by anyone.