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DIVINE PROVIDENCE: FINE-GRAINED, COARSE-GRAINED,  
OR SOMETHING IN BETWEEN?

In the 20th century, the revolution of Quantum Mechanics (QM) challenged the Laplacean dogma of deterministic physics, suggesting that, at its most fundamental level, Nature might contain irreducible elements of chance or indeterminism (according to some interpretations) with wide-ranging consequences in various domains of metaphysics. One such domain, in which the consequences of physical indeterminism have been studied, is the metaphysics of Free Will, because indeterminisms in nature might be thought to provide the leeway for a libertarian conception of Free Will (see Popper and Eccles 1977; Kane 1996; Hodgson 2002).

Another domain in which physical indeterminism might have interesting consequences is the metaphysics of God's relation to the created world, as a provident creator and an intervener (author of miracles). The implications of chance on the conception of God's Providence started to be investigated at least in the 1970s (as far as I am aware), for example in Peter Geach's "The Ordainer of the Lottery" (1977, chap. 6) and then (independently) by David Bartholomew (Bartholomew 1984; 2008) and Peter van Inwagen (van Inwagen 1988; 2006).

More recently, Dariusz Łukasiewicz has taken over this important project of investigation, dedicating to it a whole monograph in Polish (Łukasiewicz 2014), then a series of papers in English which (I suppose) give insights about the main arguments and results of the monograph (Łukasiewicz 2015; 2017; 2018). (Unfortunately, I was unable to read it; a translation in English would be a great service to the profession.)

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Łukasiewicz's paper "Divine Providence and Chance in the world" is the most developed and thorough presentation of his views on the topic in English, reusing some elements of the previous (shorter) papers, elaborating on them and setting them in a more general and systematic framework.

The starting point, and the centre, of the paper is the question whether the (scientific) data of chance disprove the existence of a (provident) God—the "Argument from Chance." And Łukasiewicz defends a negative answer: divine Providence is in fact compatible with the data of chance.

But in the course of responding to this specific challenge, Łukasiewicz also deals with many other traditional topics and discussions (the problem of evil, problem of Free Will and Providence, problem of miracles, etc.). In fact, it seems to me that this thorough paper undertakes a more ambitious purpose than just responding to the Argument from Chance: the larger purpose is to draw all lessons that can be drawn (in natural theology) from the data of natural chance and to elaborate a positive and constructive picture of Divine Providence. As I read the paper, the Argument of Chance is just *one* of the dialectical problems to which Łukasiewicz provides a personal contribution.

My reconstruction of Łukasiewicz's discussion will not follow exactly the sections of the paper, but I think it will cover the main theses and arguments.

In short, the scientific data of natural chance might have a positive or a negative impact on natural theology: it might be thought to offer an argument in favour of the existence of God (or a refutation of objections against the existence of God), or it might be thought to offer an argument against the existence of God. Łukasiewicz enters into both possible discussions, and more precisely addresses three arguments:<sup>1</sup>

1. Some philosophers argue that, given the fundamental physical constants of the universe, the existence of life was a matter of (very unlikely) chance, and that this fact constitutes evidence in favour of the existence of God. This is usually called the Fine-Tuning Argument, and it is the first way in which (some kind of) chance might constitute a (positive) case for God's existence.

2. Another way in which (some kind of) chance could play in favour of the traditional picture of God is that (according to some other philosophers) the Indeterminacies of fundamental particles (shown by QM) could be thought to provide a leeway for God's miraculous interventions—QM would prove that miracles are possible *without breaking the laws of Nature* and therefore one argument against the existence of God would be defeated (namely the argument from physical

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<sup>1</sup> Even though these three lines of argument interact in complex ways, I think it is better to distinguish them in order to keep the dialectics clear.

determinism to the impossibility of a miraculous intervener). Let us call this the Argument of Quantum Miracles. This is the second way in which (some kind of) chance might constitute a positive case for God's existence—not, this time, as a direct argument for God's existence, but as a defeater of an argument against God's existence (or the existence of an intervening God).

3. Finally, some philosophers might think that the existence of chance in the world is incompatible with the existence of God, if God is to be conceived as a Provident God, that is, a God who is in control of every single detail of His creation. This is the Argument from Chance properly speaking (in Łukasiewicz's terminology), and it is an argument against the existence of God.

Łukasiewicz provides a negative verdict for all three arguments. According to him: a) chance does not prove the existence of God (the Fine-Tuning Argument is flawed), b) chance is not necessary to prove the possibility of miraculous interventions (there can be miraculous interventions even without physical indeterminacies), and c) chance does not disprove the existence of God either (the Argument from Chance is flawed as well).

If we stopped there, we could have the impression that (according to Łukasiewicz) the data of chance have no impact—neither positive nor negative—on our conception of Divine Providence. But in fact, Łukasiewicz thinks that the data of chance has a huge impact in this domain, and to understand this point we have to develop his response to the third argument a bit more, namely the Argument from Chance (which, once again, is at the centre of Łukasiewicz's paper).

Łukasiewicz argues that the Argument from Chance does not disprove the existence of Providence *in general*; but it does disprove *one picture* of Providence, namely the picture of divine Providence as being “detailed” or “fine-grained,” i.e., encompassing and controlling every single detail of the creation. As I understand Łukasiewicz, he argues that *this* picture of Providence is indeed refuted (or at least rendered highly improbable) by the scientific data of chance. But according to Łukasiewicz, there is another possible model of Providence, namely a “coarse-grained” model, and this other picture is not disproved by chance. Therefore, the lesson of the discussion of the Argument from Chance is not just that the argument does not work (to disprove the existence of God), but also that it works as an argument in favour of the coarse-grained model of Providence (as opposed to the fine-grained model). And as a matter of fact, Łukasiewicz welcomes this conclusion, because the coarse-grained model is the model he favours for independent theological and a priori reasons (sec. 5). Therefore, the scientific data of Chance come as a welcome empirical confirmation of an independently preferred theology.

The picture of Chance and Divine Providence provided by Łukasiewicz is impressive and careful, and there are lots of points I agree with. In the present paper I will focus on some points with which I disagree in order to enrich the debate with Łukasiewicz. (It is very probable that some objections I will make find a response in Łukasiewicz's monograph in Polish, and I apologize in advance for this inconvenience.) In short, below are the points I will raise.

In the first two sections, I will make brief remarks about the two peripheral arguments, namely:

- I. Does the Fine-Tuning Argument succumb to Łukasiewicz's objections?
- II. What should we think of Łukasiewicz's model of miracles (which does not rely on physical indeterminacies)?

Then I will turn to the central discussion of the Argument from Chance, and I will discuss the following points:

- IIIa. Are the data of Evolutionary Biology relevant as scientific data of chance or should we concentrate on just QM data?
- IIIb. Do physical indeterminacies disprove the fine-grained model of Providence?
- IIIc. Do physical indeterminacies prove the coarse-grained model of Providence?
- IIId. Do we have independent (theological, a priori) reasons to embrace the coarse-grained model of Providence?

My main claim will be that it seems to me that Łukasiewicz might be neglecting an intermediate model of Providence, which is neither (absolutely) fine-grained, nor as coarse-grained as Łukasiewicz has it, and that this intermediate model is both compatible with the scientific data of chance and (arguably) more plausible on theological grounds than Łukasiewicz's coarse-grained model.

## I. DOES CHANCE PROVE THE EXISTENCE OF GOD? THE FINE-TUNING ARGUMENT

One question that Łukasiewicz raises in (Łukasiewicz 2015) and in section 3 of "Divine Providence and Chance" is whether some kind of chance could represent an argument *in favour* of God's existence. And he interprets the Fine-Tuning Argument and the Argument from Intelligent Design as being two versions of such a general argument, which he calls the "Argument from Small Probabilities." This is because the Fine-Tuning Argument and the Argument from Intelligent Design seem to take as their first and main premise a certain datum of "chance" in the

sense of “an event whose probability is very small” (sense C5 for Łukasiewicz) and conclude, from this datum of chance, that there is a God.

I have reservations about this presentation of the debate, and I am tempted to take the discussion of the Arguments from Small Probabilities as largely independent of the rest of the paper. The main problem is that these arguments do *not* take a datum of chance as their main premise. These arguments do *not* have the following form:

- (1) event E (the possibility of life in the cosmos, or of the emergence of the bacterial flagellum) had a very small probability of occurrence,
- (2) therefore there is a God.

Rather, they have the following form:

- (1') *If there were no divine intervener*, event E would have had a very small probability of occurrence,
- (1'') if there were a divine intervener, event E would have had a significantly higher probability of occurrence,
- (2) therefore (it is very probable that) there is a divine intervener (and event E was *not* chancy or very improbable).

In other words, the arguments from small probabilities are not arguments *from* chance (to the existence of God), they are arguments *against* chance.

But independently of the precise dialectical situation of these arguments in the general framework, my main worry is with the objection that Łukasiewicz makes against them, and more precisely against the Fine-Tuning Argument. (I have no quarrel with Łukasiewicz's rejection of the Argument from Intelligent Design of the biological realm, which is not, I believe, as important and respected in contemporary philosophical circles as the Fine-Tuning Argument.)

What is Łukasiewicz's objection against the Fine-Tuning Argument? Here, Łukasiewicz follows rather closely Bartholomew's discussion (Bartholomew 2008, 79–85).

Bartholomew and Łukasiewicz say that there are two questionable steps in the Fine-Tuning Argument, or more precisely in the establishment of its first premise, namely the premise that says that the probability of some life-permitting event or state of affairs was fantastically low (on the hypothesis that there is no divine intervener). The question is: How do we determine the probability of these events or states of affairs? The defender of the Fine-Tuning Argument is supposed to respond as follows:

First it is argued that the probability of any one parameter falling within the desired range must be infinitesimally small. Secondly, the probability of them all falling within their respective ranges, obtained by multiplying these very small probabilities together, is fantastically small. (Bartholomew 2008, 84)

And Bartholomew and Łukasiewicz respond that both steps of this reasoning are doubtful. First, “it is not clear enough whether the cosmic constants are independent of each other”; second, “our common intuition that all possible values of cosmological constants are equally probable ... draws on the *principle of insufficient reason*: 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 the cosmic ... evolution is questionable” (Łukasiewicz, this issue).

In order to respond, I would like to start by setting aside the first objection: as Bartholomew himself notices explicitly, whether or not the first step is questionable (the independence of the constants), the defender of the Fine-Tuning Argument does not need to rely on this first step for his argument, because each one of the phenomena of cosmic Fine-Tuning (for instance the Fine-Tuning of the strong nuclear force), even taken *individually*, already has a fantastically small probability.<sup>2</sup> Therefore, I take this first objection to be irrelevant to the discussion.

The only substantial objection that Łukasiewicz makes against the Fine-Tuning Argument is the idea that, in order to get to the relevant probabilistic judgment, we need to rely on the “*principle of insufficient reason*,” which is deemed to be “questionable.”

This objection is somewhat surprising in that it is not one of the prominent objections usually made to refute the Fine-Tuning Argument in the contemporary discussions. For instance, it does not appear in the lists of objections of (Hawthorne and Isaacs 2018) or (Friederich 2018). Nevertheless the objection is discussed in longer treatments of the argument, such as Robin Collins’ long paper “The Teleological Argument: An Exploration of the Fine-Tuning of the Universe” (Collins 2009, sec. 3.3.2).

So what is the problem exactly with the “principle of insufficient reason” (or the “principle of indifference” in Collins’ terminology) and how does Collins respond to this problem? Bartholomew does not tell us much about the nature of the problem. He only states that “the application of this principle is fraught with problems and it does not take much ingenuity to construct examples which show its absurdity” (Bartholomew, *ibid.*), but he does not give any development or

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<sup>2</sup> Here is Bartholomew on this point: “surely something might be salvaged because there is so little freedom in the determination of each parameter treated individually” (*ibid.*).

reference to satisfy our curiosity. Collins, on the other hand, explains what kind of (counter-)examples are at play here:

Consider the case in which we are told that a factory produces cubes between 0 and 10 meters in length, but in which we are given no information about what lengths it produces. Using [the standard Principle of Indifference], we shall now calculate the epistemic probability of the cube being between 9 and 10 meters in length. Such a cube could be characterized either by its length,  $L$ , or its volume,  $V$ . If we characterize it by its length, then since the range  $[9,10]$  is one-tenth of the possible range of lengths of the cube, the probability would be  $1/10$ . If, however, we characterize it by its volume, the ratio of the range of volumes is:  $[1,000 - 9^3]/1,000 = [1,000 - 729]/1,000 = 0.271$ , which yields almost three times the probability as for the case of using length. Thus, the probability we obtain depends on what mathematically equivalent variable we use to characterize the situation. (Collins 2009, 234–35)

Of course, if the “probability” of the cube being between 9 and 10 meters—calculated by the Principle of Indifference—depends on the arbitrary choice of the relevant variable (length or volume), this shows that the Principle of Indifference cannot give any objective response about what this probability is. So the (standard) Principle of Indifference cannot allow us to determine the probability of anything. This objection against the Principle of Indifference is known as the Bertrand Paradox.

What prevents us from determining the probability of the cube being between 9 and 10 meters is the *arbitrariness* of the choice we have to make between one variable (length) or another (volume). But what about cases in which there is a *non-arbitrary* selection of the relevant variable, cases where a *natural* variable can be determined? In such cases (and such cases alone), Collins argues, there is no objection against using the Principle of Indifference. In other words, the objection coming from Bertrand Paradox has no effect against the “restricted Principle of Indifference,” which Collins formulates as follows:

... when we have no reason to prefer any one value of a variable  $p$  over another in some range  $R$ , we should assign equal epistemic probabilities to equal ranges of  $p$  that are in  $R$ , given that  $p$  constitutes a “natural variable”. (Collins 2009, 234)

Not only is there no paradox with the *restricted* Principle of Indifference, but there are extremely strong reasons to accept it, as Collins develops. First, from the general perspective of probability theory, “an astonishing number of extremely complex problems in probability theory have been solved, and usefully so, by calculations based entirely on the assumption of equiprobable alternatives [that is, the Principle

of Indifference]” (Weatherford 1982, 35). Second, and concerning scientific practice more specifically, the use of some variables as *natural* variables is a very common and useful practice for scientists: “for purposes of theory confirmation, scientists often take those variables that occur in the simplest formulation of a theory as the natural variables” (Collins 2009, 235). And nothing more is needed to apply the restricted Principle of Indifference to deliver probabilities for the Fine-Tuning Argument, since the constants at play (the strong nuclear force, gravity, etc.) are precisely “variables that occur in the simplest formulation” of fundamental physics.

There is one point on which Bartholomew and Łukasiewicz are probably right in this discussion: it is the fact that we cannot plausibly apply the Principle of Indifference to calibrate the probability of *biological* scenarios (for example the emergence of the bacterial flagellum) as William Dembski and other defenders of the Argument from Intelligent Design try to do. For these scenarios, we probably have no reason to think that the variables considered by Dembski and others are *natural* variables. But the case of the Fine-Tuning Argument is very different here since the variables that it relies on are precisely those that fundamental physics considers as natural.

Collins states that the problem of Bertrand paradox has been a considered as a pressing issue in the past: “Historically, this has been thought of as the fatal blow to the general applicability of the Principle of Indifference, except in those cases in which a natural variable can be determined” (ibid.). But now that we can make certain that the relevant variables (for the Fine-Tuning Argument) are indeed natural variables, and used as such in scientific investigations themselves, it seems that the whole objection cannot stand anymore.

This is (as far as I can tell) the reason why most contemporary presentations of the Fine-Tuning debate do not even mention the problem of the Principle of Indifference in their lists of significant objections. As Hawthorne and Isaacs very quickly state, “the physically respectable measures [those formulated with the natural variables] are the probabilities that are appropriate for physics in a naturalistic context. So in a naturalistic context, divergence [between the probabilities and] the physically respectable measures can only be a rejection of physics itself” (Hawthorne and Isaacs 2018, 145).

I am not trying to argue here that the Fine-Tuning Argument is definitely successful (there are, after all, other important objections, like the Multiverse objection). Nor am I claiming that it is in principle impossible to revive the objection related to the Principle of Indifference (or the Principle of Insufficient Reason). But in view of recent debates, I would like to know more about why Łukasiewicz is dissatisfied with Collins’ response to this objection.

## II. DOES CHANCE PROVE THE POSSIBILITY OF MIRACLES? OR: WHAT'S WRONG WITH TRADITIONAL INTERVENTIONISM?

Another line of debate that Łukasiewicz studied in his paper (2018) and again in section 4 of the present paper (even though it is not the central point here) is the question of the possibility of miracles. The idea that God acts or intervenes in the course of history seems to be an essential tenet of the classical concept of God. A God who simply created the world and then let it evolve without ever intervening again is what Plantinga calls a “hand-off theology” (Plantinga 2012, 72) and is incompatible with classical theism. As Łukasiewicz notes, “the very existence of miracles is based on the Biblical testimony” (footnote 33). Therefore, any argument against the possibility of miracles and divine interventions in the course of history is tantamount to a proof of the non-existence of God (understood in the traditional way). But there *is* an objection against the possibility of miracles, an objection endorsed by some scientists and even some theologians.<sup>3</sup> Plantinga summarizes the problem as follows:

The problem as these people see it, is this. Science discovers and endorses natural laws; if God did miracles or acted specially in the world, he would have to contravene these laws and miraculously intervene; and that is incompatible with science. (Plantinga 2012, 75)

But in fact this argument presupposes the Laplacean picture of the natural laws as being complete and deterministic. And since the quantum revolution, it seems on the contrary that the laws of nature leave some leeway or “chance” open—or more precisely: the laws of nature seem to be merely probabilistic and not deterministic. Some philosophers have thought that this leeway or chance is precisely what we need to undermine the Argument against Miracles.

This solution to the problem of miracles has been called “epistemic deism,” and it has the great advantage that it allows for the possibility of miracles *without* requiring that God “break the laws of nature.” As Łukasiewicz summarizes:

According to epistemic deists, by operating at the quantum level, God acts in the physical universe without breaking or violating the indeterministic and probabilistic laws of nature. (sec. 4.1)

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<sup>3</sup> For references to these scientists and theologians, see for instance those quoted in (Plantinga 2012, 69–75).

But that is not the only possible reaction to the problem of miracles. A more traditional reaction, appropriately called “traditional interventionism” by Łukasiewicz, sees no problem in God’s intervening in violation of the laws of nature:

Traditional interventionism holds that God has intervened in the world *by breaking or suspending* the laws of nature. (sec. 4.2.1, note 33)

In his paper, Łukasiewicz rejects both epistemic deism and traditional interventionism and defends that there is a third option to respond to the Argument against Miracles and open the possibility of divine interventions. This third option he calls “Strong/open probabilistic theism” and he explains his reasons for endorsing precisely that model.<sup>4</sup>

In order to understand how “strong/open probabilistic theism” solves the Argument against Miracles, it will be helpful to formulate the argument itself as follows:

- (3) The laws of nature are complete and deterministic, i.e., they predict only one possible outcome for a given (complete) description of the past. (premise)
- (4) Therefore, if God were to act or intervene in the world (to influence which course of history happens), He would have to make happen a course of history *contrary* to the (unique) prediction of the laws of Nature. (from 3)
- (5) Actualizing a course of history that is *contrary* to the prediction of the laws of Nature is *breaking the laws*. (premise)
- (6) It is impossible that God should break the laws. (premise)
- (7) Therefore, it is impossible for God to act or intervene in the world (from 4, 5 and 6).

This argument has three main premises: the premise of causal determinism (3), a premise defining what it is to “break a law” (5), and a premise that forbids breaking the laws (6). There are therefore three ways to undermine the argument. Epistemic deism is based on the rejection of premise (3): the laws of nature are *not* deterministic and complete, and therefore it is possible for God to influence the course of history while remaining within the boundaries of what the laws of nature

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<sup>4</sup> In section 4 of the paper, a fourth model of providence is examined: namely “weak/closed probabilistic theism.” I do not mention it in the present context because it is *not* a solution to the problem of miracles. Indeed, the main objection that Łukasiewicz opposes to this model of providence is precisely that it cannot account for miracles with its proper resources. To account for miracles, it would have to “be reduced to epistemic deism or even to traditional interventionism” (sec. 4.2.1). The reason why Łukasiewicz studies this model, I believe, is that Łukasiewicz’s project is not just to respond to the specific Argument against Miracles, but more generally to compare all models of providence and choose the best one. It seems legitimate, therefore, to have it in the list of possible models. But in the specific dialectical situation of the possible *responses* to the Argument against Miracles, “weak/closed probabilistic theism” is a non-starter.

make possible. Traditional interventionism rejects premise (6): it is possible for God to break the laws of nature (because He is Himself the author of these laws).

Łukasiewicz's response to the argument relies on the rejection of premise (5): in his view, it is possible for God to actualize a course of history contrary to what the laws of nature predict *without* thereby breaking the laws of nature. How is this possible? The response hinges on a careful analysis of the nature of the laws of nature which, as Plantinga notes, always contain the condition or proviso that the system they describe is a causally closed system:

If we think of the laws of nature as describing how the universe works when the universe is causally closed (when God is not acting specially in the world), they would be of the following form:

(LN) When the universe is causally closed (when God is not acting specially in the world), P. (Plantinga 2012, 80)

And Łukasiewicz shows that this allows for a new understanding of divine intervention:

... if we assume that the world is a *causally open* system, and a law of nature is a law which "works" or is applied in causally closed (or: isolated) systems only, then we are allowed to claim that God can act at every level of the world in whatever way He chooses to act, for this or that reason, without breaking any laws of nature. (sec. 4.2.2.)

It should be noted that Łukasiewicz *also* rejects that the laws of nature are complete and deterministic (premise 3), because he is fully aware of the indeterminacies of QM. But what is important in our context is that he does not *base his response to the Argument against Miracles* on the rejection of premise 3—a response based on the rejection of premise 3 would have to say that God can act and intervene *only* at the level of QM indeterminacies, and this limitation is precisely what Łukasiewicz rejects. In other words, even if Łukasiewicz accepts QM indeterminacies, his response to the Argument against Miracles is one that *would work just as well in a completely deterministic world*. His solution *makes no use* of the probabilistic nature of QM laws. In other words, Łukasiewicz's reasons to adopt a properly *probabilistic* model of providence have nothing to do with the dialectics of the Argument against Miracles.

Now, if we restrict ourselves to this precise debate, what are Łukasiewicz's reasons to reject both epistemic deism and traditional interventionism, and to endorse the solution based on the causal openness of the world? Łukasiewicz has mainly two objections against epistemic deism and one against traditional interventionism.

The first (general) objection against epistemic deism is that allowing God to intervene *only* where there is an indeterministic leeway would be an unacceptable limitation of God's omnipotence. The second is that *some* biblical miracles (in particular the future realisation of the New Earth and the New Heaven) cannot be performed just by nudging particles at the level of QM indeterminacies.

I am not sure whether I agree or not with the decisiveness of these objections. For one thing, not all limitations of God's action are limitations of his *power*—for example, God cannot lie, not as a limitation of his *power*, but as a limitation of his *will* (which is morally perfect)—and one might argue that God has the *power* to break the laws of nature but could not possibly *want* to break them, because there would be a practical incoherence in willing to promulgate a law and willing to break it at the same time. Since God's will cannot contain practical incoherences, therefore, breaking the laws is ruled out as impossible by the perfection of his will (not by the limitation of his power). This is (a version of) what Plantinga calls “the divine consistency objection” (Plantinga 2012, 104–8). I am not personally sympathetic to this objection, but it seems worthy of discussion.

As for the second objection, I am not sure why a profound manipulation of quantum indeterminacies could not generate such a drastic modification of the face of the universe that it would be legitimate to talk of “a New Earth and a New Heaven.” Łukasiewicz indicates very briefly that this seems impossible because “according to the widely accepted model of cosmology, the universe will be either too big or too small, and therefore, transformation of the nature will not be possible,” and I assume that he develops this point in more details in works that I have not been able to read, but I suppose that I would need to read these developments to really understand the basis of these impossibilities.

Be that as it may, the point I want to press is not Łukasiewicz's rejection of epistemic deism, but rather his rejection of traditional interventionism. As far as I can tell, the only argument in Łukasiewicz's paper that would justify a rejection of traditional interventionism is the following:

The assumption that God should not break the laws of nature which He created for the world is based on the idea of divine perfection: a perfect being does not change the rules that it issued. (sec. 4.1)

Why should we accept that “a perfect being does not change the rules that it issued”? Imagine an excellent professor who wants his pupil to make progress: he first gives her some simple exercises, with simple rules, and when he sees that she has made some progress, he changes the rules slightly to make the exercise

more difficult. Is that not a sign of the professor's intelligence and perfection that he is able to follow the progress of his pupil by changing the rules?

I think the intuitive pull of this objection is better formulated as follows: "a perfect being does not change its *intentions* (it does not intend something and then, later on, repent having intended it and change its intentions)." Applied to God, this has to do with the traditional notion of divine immutability. Let us accept that a perfect God cannot change his intentions,<sup>5</sup> does that necessarily mean that he cannot change (or suspend) the *rules* or the *laws* that he promulgates? After all, the professor in our little scenario did not change his intentions either: from the very beginning, he had the intention to change the rules in accordance with the progress of his pupil. So, when traditional interventionism says that God makes an exception to, or suspends, a law of nature (by performing a miracle), does it imply that God has *changed his mind*, that he has changed his intentions? The answer, it seems to me, is clearly no: when God promulgates the laws of nature, for example a law L of the following form:

L: Every time circumstances c1, c2, etc. occur, event E will occur.

God knows from the start that He might want later on to suspend this law. He has this intention from the very beginning. So when He encounters a situation that justifies a miraculous intervention, His breaking the law L does *not* amount to changing His intention. In other words, in traditional interventionism, a law of the form L is always promulgated by an intention of the following form:

I: The world will follow the law L, except in situations in which I [God] will intervene.

And this intention is not revised or changed when God happens to intervene by a miracle—God's intentions remain immutable. Therefore, traditional interventionism does not raise a problem against divine immutability or the perfection of His intentions.

My first remark, then, is that I am not convinced by the argument against traditional interventionism. If that is so, then Łukasiewicz seems to lack a reason to prefer open interventionism (or open probabilistic theism) over traditional interventionism.

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<sup>5</sup> An issue that *could* be raised here is the famous problem of the Biblical texts that seem to picture God as "repenting" or regretting his previous actions. On this problem, see (Peels 2016). I will not open this discussion here because I am not convinced that these texts *need* to be interpreted as implying a change of intention in God.

But I want to make a further remark: in my view, the problem is not so much that traditional interventionism is *no more problematic* than open interventionism. The problem is that it is *hardly distinguishable* from it. I, at least, cannot see a substantial difference between the two views. Here is why. Łukasiewicz's open interventionism argues that God does not break the laws, because the laws of nature all contain a condition or proviso stating that they apply only in a closed system, i.e., (in our context) when God does not intervene. In other words, the laws of nature have the following form:

L\*: Every time circumstances c1, c2, etc. occur, event E will occur, except in situations in which God will intervene.

And presumably, God promulgates these laws by forming intentions of the following form:

I\*: The world will follow the law L\*.

Given the proviso or condition stated in L\*, when God miraculously intervenes in the world, the law is not suspended or broken—it only becomes *vacuously* true (by the satisfaction of the exceptionality condition).

But now, we have two different ways in which God can promulgate laws, and correspondingly two different kinds of laws:

Traditional interventionism:

I: The world will follow the law L, except in situations in which I [God] will intervene.

L: Every time circumstances c1, c2, etc. occur, event E will occur.

Open interventionism:

I\*: The world will follow the law L\*.

L\*: Every time circumstances c1, c2, etc. occur, event E will occur, except in situations in which God will intervene.

In both cases, there is an exceptionality proviso, a condition under which the predictions of the law will not be satisfied, which allow for the possibility of miracles. The *only* difference is that in open interventionism the proviso appears in the law itself (so that the law is not “broken” or “suspended” in the miraculous exception), while in traditional interventionism it appears in God's promulgating intention but not in the law itself (so that the law is “broken” or “suspended” in the miraculous exception). But I have the greatest difficulties in seeing this difference as being a *substantial* one: as far as I can tell, the couple I/L is just another way

to describe the same divine action as I\*/L\*, so that the debate between traditional interventionism and open interventionism seems to me to be merely verbal.

If it is not verbal, that is, if there really is an ontological difference between promulgating a *law* which contains a proviso and promulgating a law with an *intention* that contains the very same proviso, then at least this ontological difference seems to be totally irrelevant to God's perfection.

My second question to Łukasiewicz, therefore, would be the following: Why does he not simply endorse traditional interventionism as a response to the problem of Miracles? Does the idea of openness of the laws really make any relevant difference?

I understand that, for *other* reasons (which we will discuss in the next part), Łukasiewicz wants to maintain that there are some "free gaps" of chance or indeterminism in the world (as part of God's plan), but that is completely compatible with traditional interventionism: it might well be that God's plan contains *both* traditional law-breaking interventions (situated at any level of the world) *and* (for other purposes) some free gaps of indeterminism. So the existence of chance or indeterminism cannot be a reason to reject traditional interventionism either.

### III. DOES CHANCE DISPROVE THE EXISTENCE OF A PROVIDENT GOD? THE ARGUMENT FROM CHANCE

In the first two sections, we have studied two lines of arguments according to which the existence of Chance in the world could have a *positive* impact on the possibility of a traditional conception of God (understood as the Fine-Tuner of the Universe, and as an Intervener or author of miracles). These lines of arguments are important for the general project of drawing *all the conclusions we can* from the (scientific) data of Chance to the concept of God.

But the line of argument that takes centre stage in Łukasiewicz's reflection is the Argument from Chance, i.e., the possibility of a *negative* impact of the data of Chance, the possibility that Chance might *disprove* the existence of a (provident) God.

As I said in the introduction, Łukasiewicz argues that the Argument from Chance does not disprove the existence of Providence *in general*, but that it does disprove *one picture* of Providence, namely the picture of divine Providence as being "detailed" or "fine-grained," in other words, as encompassing and controlling every single detail of the creation. And somewhat paradoxically, Łukasiewicz welcomes this conclusion, because (according to him), it provides a new argument

for a coarse coarse-grained model of Providence, i.e., the model he favours for independent theological and a priori reasons.

It should be made clear that in this dialectical set up Łukasiewicz has in fact two different purposes and two different interlocutors. On the one hand, he is discussing with the defender of the Argument from Chance, and trying to prove him that this argument does not disprove the existence of a (provident) God. But at the same time, Łukasiewicz is also discussing with the defender of the traditional (fine-grained) conception of Providence, and using the tools of the Argument from Chance to prove her that *her conception* of Providence is untenable.

And in fact, in the present historical context, it seems to me that the most important of these two discussions is the latter, not the former. Why? Because, as Łukasiewicz himself remarks, “the argument from chance has never been very popular or frequently discussed” (Łukasiewicz 2015, 200). When contemporary philosophers (or scientists) consider the fact that QM posits indeterminacies in the fabric of Nature, very few (in fact no one that I am aware of) have the reaction to draw the conclusion: “well, therefore that proves that God does not exist!” In other words, the “defender” of the (atheist) Argument from Chance, in its pure and general form, is more a philosophical fiction (useful for dialectical purposes like other similar fictitious interlocutors) than a flesh-and-bone interlocutor in the contemporary debate.

In contrast, the defender of a traditional (fine-grained) conception of Providence is a very real interlocutor, and the refinement of Łukasiewicz’s discussion against her proves that he is fully aware of the importance of arguing against this interlocutor.

In this section, my main claim will be that Łukasiewicz probably succeeds in refuting an extreme version of the fine-grained conception of Providence, but that he might be neglecting another version, which seems fine-grained enough for the purposes of traditional providentialism (certainly *more* fine-grained than Łukasiewicz’s coarse-grained model). I will suggest that this *fine-grained enough* model is not refuted by Łukasiewicz’s arguments, and that it remains more plausible than the coarse-grained model he defends.

I will proceed in four steps. First, I will set aside the question of biological (or evolutionary) chance, to concentrate just on QM chance (i.e., indeterminism). Second, I will concede that physical indeterminism probably disproves the extreme fine-grained model of Providence. But, third, I will argue that this does not suffice to support Łukasiewicz’s coarse-grained model, because there is another model, fine-grained enough, that is also compatible with the scientific data of QM indeterminism. So we do not have *scientific* reasons to prefer the coarse-grained model over the fine-grained enough model. And finally, I will argue that we also

do not have (convincing) *philosophical* or *theological* reasons to prefer the coarse-grained model. On the contrary, it seems to me that these considerations should favour the fine-grained enough model.

### IIIA. WHAT IS THE SOURCE OF “CHANCE” THAT IS RELEVANT FOR THE ARGUMENT FROM CHANCE? EVOLUTIONARY BIOLOGY AND QM INDETERMINISM

In his paper “Argument from Chance” (2015), Łukasiewicz mentions three data of chance that could play a role in the first premise of the Argument from Chance: “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.” (2015, 205)

Now, even though the discussion of (libertarian) free will is clearly relevant if one is to provide a complete model of divine providence and chance, it can hardly be argued that it is a *scientific datum*. If it is a datum at all, it is rather a datum of consciousness, or introspection, or common sense, or something of the kind. But not a datum of *science*. Indeed, in the paper published in this issue, even though Łukasiewicz (legitimately) maintains a discussion of Free Will, he does not present it as a datum that fuels the first premise of the Argument from Chance.

The two scientific data that are discussed in this new paper are only the data of evolutionary biology and the data of QM indeterminism. There is probably a simple historical reason why Łukasiewicz discusses so much the data of evolutionary biology in connexion with the Argument from Chance. Historically, the main advocates of what looks like a version of the Argument from Chance—first and foremost Jacques Monod in *Le hasard et la nécessité* (Monod 1970)—based their argument entirely on the biological notion of chance (namely the idea of “random mutations” at the core of natural evolution). This *biological* problem of chance is at the core of Bartholomew’s discussion in both his books (1984; 2008), which start with a discussion of Monod’s argument. We said earlier that there is no real life defender of the atheist Argument from Quantum Chance, but there *has been* real life defenders of the atheist Argument from Evolutionary Chance.

This might justify us to concentrate on the latter rather than the former. In fact, I think we should do the opposite, for the following reason: while the Argument from Quantum Chance *does* establish some conclusion (a very modest conclusion—that’s why it is not very much discussed), the Argument from Evolutionary Chance is, I believe, a complete failure: it does not establish *anything*, not even a modest conclusion.

To understand my point here, it is important to distinguish the Argument from Evolutionary Chance from another argument from Evolution which I will call the Evolutionary Objection against Biological Design. This latter argument is not an argument that tries to *prove* the non-existence of God; rather, it is an objection against a proof of God's existence—namely the Biological Design Argument that we can find, prominently, in the works of William Paley (or more recently in the Intelligent Design movement). According to Paley, the biological realm shows evidence of Design that cries out for an explanation, and the best explanation is that there is an intelligent Designer of Nature, a God. In response to this argument, the Evolutionary Objection against Biological Design says that we have a *better* explanation of the data (namely evolution of species via natural selection) and that therefore Paley's argument fails to prove the existence of God. As far as I am concerned, I take this Evolutionary Objection to be perfectly legitimate and successful: it *does* establish that we cannot prove the existence of God via Biological Design ... but it *does not* establish that God does not exist and we might very well have *other* justifications to believe that He exists (perhaps reasons having to do with cosmic Fine-Tuning, for instance).

The Argument from Evolutionary Chance is completely different in purpose. It does not simply undermine one argument for God's existence: it pretends to positively *prove God's non-existence*. And the underlying thought here is not just the process of evolution of species via natural selection, but rather the idea that this process relies on "chance"—because (according to the Darwinian theory) the genetic mutations that drive the process of evolution are "random." Since chance and randomness are incompatible with a providential divine control of the emergence of human beings, the argument concludes that there is no such thing as a (voluntary) creator of human beings.

I follow Alvin Plantinga in thinking that this argument relies entirely on a verbal confusion about the word "random." In the context of the theory of evolution, this word has a precise scientific meaning that has nothing to do with indeterminism or chance. Plantinga quotes two scientific authorities about this point:

If these mutations are random, aren't they just a matter of chance? But randomness, as construed by contemporary biologists, does not have this implication. According to Ernst Mayr, the dean of post-WWII biology, "When it is said that mutation or variation is random, the statement simply means that there is no correlation between the production of new genotypes and the adaptational needs of an organism in a given environment." Elliott Sober, one of the most respected contemporary philosophers of biology, puts the point a bit more carefully: "There is no physical mechanism (either inside organisms or outside of them) that detects which mutations would be beneficial

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and causes those mutations to occur.” But their being random in that sense is clearly compatible with their being caused by God.” (Plantinga 2012, 11–12)

One way for God to cause these mutations would be of course to intervene via a miracle; but an appeal to miracles would be probably inefficacious in the present discussion with a defender of the atheist argument. What is more relevant is that there is another way in which God could control the mutations—a way that is completely compatible with naturalism and with the scientific data of random mutations. Since “randomness” (in the precise biological sense) is completely compatible with *causal determinism*, God might have set up the initial conditions of the universe so that they would eventually lead to precisely these mutations. To take a metaphor, God could be like an extraordinary snooker player who predicts all the future movements of all the balls, and manages to put all the balls in the pockets with just one initial shot. If the snooker player is really extraordinarily competent, we would not say that the last ball falling in the pocket is a matter of chance: we would say that it was “controlled” by the player, even though it was control “at a temporal distance” via calculations and predictions. The reason why it is not chance is because it was done completely on purpose, and as the realisation of a (sophisticated and long-term) plan. The same could be the case for God controlling “random” mutations via a series of complex deterministic calculations.

Therefore, the “randomness” of genetic mutations, when we take it in its precise scientific meaning (and not in some confused meaning) is *obviously* compatible with divine Providence.

I suspect some defenders of the Argument from Biological Chance would want to object here that God could not control genetic mutations in this complex way (i.e., by controlling the initial conditions) because *there are* indeterminacies (due to QM) and that the mutations could depend on these QM indeterminacies. But if she says this, then she is in fact abandoning the Argument from Biological Chance in favour of the Argument from Quantum Chance: for in this new objection, what is supposed to impede God’s providential control is not at all the “randomness” of genetic mutations (even if they were not “random” in the biological sense, they would still be uncontrollable by divine predictions if they depend on QM indeterminacies); rather, the only thing that impedes God’s providential control here is QM indeterminacies themselves. So this is in fact acknowledging that “biological chance” *as such* is a non-starter for an Argument from Chance, and that the only potential problem of Chance relies on indeterminism (as evidenced by QM).

This is why I believe that the whole discussion of the Argument from Chance should set aside completely the irrelevant issue of evolutionary randomness and

concentrate only on the potential upshot of QM indeterminacies on our conception of divine Providence.

### IIIB. DO QM INDETERMINACIES DISPROVE THE FINE-GRAINED MODEL OF PROVIDENCE?

God's Providence in general is the idea that God cares about what happens to his creatures; He cares about the events going on in the world and sees to it that they follow a certain project He has for it.

But this general idea can be applied in different ways: God's care for His creatures can be more or less fine-grained. For example, God might care only about the ultimate salvation of some human beings, and be prepared to let the world follow different routes, as long as they all lead to this ultimate goal. This would be a relatively coarse-grained Providence. At one extreme of this spectrum, there is the view that God cares about every single event, every detail of the history of the world, each movement of each atom or particle. I call this model the "extreme fine-grained model" of Providence. I am not sure what the opposite extreme of the spectrum might be: perhaps a picture of Providence in which God only cares about the mere *existence* of the world, but not about any particular course of history. Between these two extremes, there are various levels of more or less fine-grained models.

What I just called the "extreme fine-grained model of providence" is what Łukasiewicz calls the "traditional model of divine providence." I do not know whether it is really "traditional" in any strong sense, in other words, I'm not sure that so many ancient authors have really thought about the literal and absolute truth of this model—but it is indeed a model that we can find in the works of some important philosophers and theologians, and which these authors usually present as being supported by Scripture and the Tradition.

We find this picture, for instance, in Peter Geach's chapter "The Ordainer of the Lottery" (Geach 1977, chap. 6), which presents divine Providence as ordering all events, however small, even those which seem to be left to chance, like for instance the toss-up that led to the choice between St Matthias and St Justus to replace Judas. Geach explicitly upholds "the doctrine that all events however trivial fall within the ordering of Providence," or again that "no detail of the universe is too petty for the Divine knowledge and will" (Geach 1977, 116). And Geach backs up this view with an appeal to Scripture: he considers that this conception of Providence "is the real meaning of Christ's words about the fall of the sparrow" (ibid.). Here is the text from the Gospel of Matthew:

Are not two sparrows sold for a farthing? and one of them shall not fall on the ground without your Father. But the very hairs of your head are all numbered. Fear ye not therefore, ye are of more value than many sparrows.” (Matt. 10:29–31)

Łukasiewicz also quotes a similar view in the (more recent) works of Hugh McCann, who presents God as “the epitome of the micromanager.” What is interesting is that McCann explicitly states that the traditional Christian conception of God *forces us* to adopt this extreme fine-grained view of Providence: “Only such a position is consistent with Western theism’s image of God as an all-loving father, who knows the fall of every sparrow, and whose concern for the well-being of his creature is complete and pervasive.” (McCann 2012, 29).

In response to Geach and McCann, I want to express, first, my full agreement with Łukasiewicz when he says that a picture of the perfection (or fatherly love) of God which literally “depends on minute and irrelevant details, for instance on the number of protons, neutrinos, or hairs on one’s head, is ... unconvincing” (sec. 5). Imagine a certain proton whose movement, at time  $t$ , is undetermined between two possibilities due to the application of a non-deterministic quantum law; suppose that whether the movement of this proton is  $m_1$  or  $m_2$ , this microscopic difference at time  $t$  will be *completely* cancelled out at the macroscopic level of human beings or even any living being. Why should a providential God care about the movement of this proton? Why should He see to it that it be  $m_1$  rather than  $m_2$ ? Why should it be problematic that this event be left to pure chance? If McCann’s motivation is really that God should care about “the well-being of his creature” (as he says it is), then I do not see why this difference should matter for God: the well-being of all living creatures is not affected (by assumption), and there is no such thing as the “well-being” of a proton or a non-living being, is there? If we consider the scriptural argument proposed by Geach, I think we will arrive at the same result: in the context of Christ’s words about the fall of the sparrow, it is clear that what Christ is trying to convey is that we (human beings) should have complete confidence in God because God takes care, in the smallest details, of *what might affect our well-being or happiness*. Why should it be comforting or a cause of confidence in God to learn that He not only takes care of what affects our well-being *but also of minute details of the world that do not affect anyone’s well-being*? Reading these words of Christ as implying that God controls *literally* every single particle of the universe in its slightest movement is clearly hermeneutically unconvincing. And again I am not so sure that this literal and extreme interpretation is really so traditional in the history of Christian theology.

Second, I also agree with Łukasiewicz that the scientific data of chance in Nature (namely QM indeterminism) strongly speak against the extreme fine-grained

model of Providence. To be more precise and careful, I would not say that QM indeterminacies *deductively prove* that the extreme fine-grained model is false. The reason of my prudence here is that it seems logically and metaphysically possible for God to intervene miraculously in each and every place of the world where there is a QM indeterminacy, so that *nothing at all* would be left to chance. The intervention at play here would be of the kind that we have seen under the label of “epistemic deism” above. Notice that epistemic deism in itself is originally constructed as a solution to the problem of the possibility of miracles: to solve this particular problem, the epistemic deist only takes advantage of *some* indeterminacies in order for God to perform miracles in them, but the epistemic deist (originally) has no reason to postulate that God intervenes in *all* indeterminacies. The view we are now considering—we could call it “radical epistemic deism”—takes this more radical step because it is used as a solution to a different problem, namely the Argument from Chance: radical epistemic deism tries to eliminate any trace of chance in the world, and therefore requires God to perform a (non-law-breaking) miracle every time there is an indeterminacy in the world. So it seems *metaphysically possible* to have both QM indeterminism and extreme fine-grained Providence... but the picture of this metaphysical possibility is clearly unbelievable. It is the picture of a God who performs billions of miracles every second all over the world just in order to make sure that completely irrelevant phenomena are not left to chance. Apart from the fact that this God seems more like a person suffering from OCD than like an epitome of wisdom, it should be emphasized that this scenario is a kind of sceptical scenario of quasi-universal deception. That God may sometimes, occasionally, perform miracles at some QM indeterminacies, that would be a mild deception of our expectancies, justified by whatever exception renders this particular miracle important. But that God should *systematically* suppress all indeterminacies that seem to be there, this would be a sceptical scenario of radical deception, and this raises of course very serious epistemological issues for the rest of our belief system.

For these reasons, I agree with Łukasiewicz that, if we want to take seriously the scientific datum of QM indeterminism (and we *should* take it seriously), we cannot maintain the extreme fine-grained model of Providence. It seems extremely probable that God, the loving and provident God, will leave to pure chance *at least some* inconsequential movements of fundamental particles (unless He suffers from some problematic form of OCD or perfectionism).

### III.C. DO QM INDETERMINACIES PROVE THE COARSE-GRAINED MODEL OF PROVIDENCE?

Where does this leave us exactly? We have seen that there was a whole range of more or less fine-grained models of Providence, from the extreme fine-grained model (or the “traditional model” in Łukasiewicz’s terminology) to the extreme coarse-grained model (perhaps one in which God only cares about the mere existence of his creation, but not at all about what happens to it). And I have expressed my agreement with Łukasiewicz that the extreme fine-grained model is disproved by the scientific data of chance (at least in the sense that it is rendered epistemically wildly improbable, if not in the sense of being *deductively* disproved). This leaves us then with all the rest of the range of possibilities.

Among these other possibilities, I would like to single out two intermediate positions, which I will call the “fine-grained enough model” or “FAPP-fine-grained model” (FAPP standing for “for all practical purposes”) on the one hand, and the “Łukasiewicz coarse-grained model.”

The FAPP-fine-grained model is motivated by our previous discussion of God’s fatherly love for His creatures, and His caring for their well-being. We said earlier that such a God, even if He cared about the most minute details of *His creatures’ well-being* would not have any reason to care for all quantum states of all particles, because some of them do not have *any* effect on any creature’s well-being. This naturally suggests the picture of a God who would control or care about *absolutely all details of the world that have any effect on some creature’s well-being*. If some QM indeterminacy has no effect whatsoever at the macro-level of creaturely well-being, then this God will leave it to chance; on the other hand, if it has an effect (even the *slightest* effect) on some creature’s (*any* creature’s) well-being, then God will look carefully about the possibility to intervene or not (and if He does not intervene, it will have to be because He has some specific reason not to intervene there). This model of Providence is not the extreme fine-grained model of Providence. It takes into account that God will leave some events to pure chance. But it seems to be fine-grained *enough* to satisfy McCann’s motivation of the perfect and “all-loving father,” and also fine-grained *enough* to justify a complete confidence in God (because literally *everything* we could possibly care about, He also cared about it before us). It is fine-grained “for all practical purposes” (for all purposes having to do with any creature’s well-being). I am tempted to think that this model could legitimately be called “traditional”—or perhaps more carefully, I am tempted to think that the tradition does not clearly distinguish between the

extreme and the FAPP fine-grained models, so that the FAPP fine-grained is at least *consistent* with the traditional picture of Providence.

It is important to emphasize that Łukasiewicz's model of Providence is *not* the FAPP-fine-grained model. Łukasiewicz's model is decidedly more coarse-grained than that. The most striking point of disagreement is the following: according to Łukasiewicz, the proper idea of God's perfection (the idea on which we should base our conception of Providence) "does not require an explanation of possible divine reasons for allowing the instances of horrendous evil to happen" (sect. 5). As a consequence, in Łukasiewicz's model of Providence, it is possible for God to leave to pure chance some events *that may result in some evil for some creature—even some horrendous evil*. (As we will see later, Peter van Inwagen [2006] also defends this view.) That does not mean of course that God leaves everything to chance: for instance, Łukasiewicz makes it clear that, in his picture, God will ensure the realisation of some coarse-grained projects, like the promise of the New Earth and the New Heaven. He will not leave *that* to pure chance. But at least some (horrendous) evils for some creatures He can leave to pure chance. This is clearly and importantly more coarse-grained than the FAPP-fine-grained model.

If I do not misinterpret Łukasiewicz's paper, I believe his intention is to say something like this: "The scientific datum of chance (QM indeterminism) disproves the traditional, fine-grained model of Providence, but it does not disprove my coarse-grained model, therefore, you should adopt my coarse-grained model." The problem with this reasoning is that it relies on a false dichotomy: the extreme fine-grained model and the Łukasiewicz coarse-grained model are not the only two possible models of Providence—there is a whole range of intermediate models, and in particular the FAPP-fine-grained model. Of course, if these other models were disproved by the scientific data (just like the extreme fine-grained model is disproved), this might eventually lead us to endorse the Łukasiewicz coarse-grained model (or perhaps: any model at least as coarse-grained as his). So we will have to examine the question whether the FAPP-fine-grained model is disproved by the scientific data. As I will briefly show below, it is not. Therefore the mere fact that QM indeterminacies disprove the extreme fine-grained model does *not* prove the Łukasiewicz coarse-grained model, nor does it provide us any reason to *prefer* the coarse-grained model over the FAPP-fine-grained model.

I have the impression that the same false dichotomy is present in his discussion of Thomas Flint's argument for strong providential control. Łukasiewicz says the following:

Thomas Flint argues that a God without strong providential control may seem a rather comical figure (1998, 13). However, I would respond to this that the idea of God whose “providential success” depends on minute and irrelevant details, for instance on the number of protons, neutrinos, or hairs on one’s head, is far more unconvincing. God cannot be viewed as the true Lord of absolutely everything in the universe if His “strong” providence is hostage to such irrelevant, minute details. (sec. 5)

To put things in a somewhat strident formulation, it seems that Łukasiewicz is arguing as follows: “If you do not want the OCD God who needs to frantically control every single neutrino, you have to accept my picture of a God who leaves horrendous evils to pure chance.” But (fortunately) this is clearly a false dichotomy: there is some room for intermediate models, and I, for one, would favour the FAPP-fine-grained model.

Of course, in order to say that the scientific data of chance do not commit us directly to the coarse-grained model, we need to show to that these data are also consistent with the intermediate model (the FAPP-fine-grained model). But that is easy.

What QM physics tells us is that there are microscopic QM indeterminacies. But most of these QM indeterminacies are cancelled out at the macro-level (the level of living beings) by the laws of statistical physics. Therefore, if we follow the FAPP-fine-grained model, all these indeterminacies that cancel out at the macro-level will be left to pure chance by God (because He only cares about what affects the well-being of His creatures). In other words, in the vast majority of cases, where there seems to be pure chance, there *is indeed* pure chance and God is not systematically deceiving us about the fundamental functioning of QM indeterminacies. It is true that *some* QM indeterminacies can be amplified into indeterminacies at the macro-level—such a thing happens for example with Geiger counters: what an observer reads on a Geiger counter may depend on some QM indeterminacies. Notice though that in most cases, what the observer reads on a Geiger counter will have no effect whatsoever on his (or anyone’s) *well-being* (though it will have a detectable effect on his sensation and thought). Therefore, even in most of these cases, God will have no reason to intervene here and will leave it to pure chance. What if the academic life of a scientist, or an important publication, depends on his reading this or that on his Geiger counter? Well, in that very specific case God may intervene because it will affect the well-being of some creature. So the chancy nature of *this* event will be merely apparent and deceptive—in fact, the event will be controlled by a miracle. But as long as these cases are exceptional (and the contrived example I have had to imagine suggests that they *will* be exceptional), they raise no more problem (epistemological or

metaphysical) than all other miraculous interventions, and Łukasiewicz's model *also* contains miraculous interventions (at least to realise the promise of the New Earth and the New Heaven).

Therefore, from the point of view of the scientific data of chance (QM indeterminism), there is absolutely no difference between the FAPP-fine-grained model and the Łukasiewicz coarse-grained model. The data of science lead us to reject the extreme fine-grained model, but they do not suffice to establish the truth of the Łukasiewicz coarse-grained model—they do not provide any reason to prefer it over the FAPP-fine-grained model.

There *might* be reasons to prefer the former over the latter, but these reasons (if they exist) are not scientific. They will have to be philosophical or theological.

### IIID. DO WE HAVE THEOLOGICAL OR PHILOSOPHICAL REASONS TO EMBRACE THE COARSE-GRAINED MODEL OF PROVIDENCE?

Do we have any theological or philosophical reason to prefer the Łukasiewicz coarse-grained model over the FAPP-fine-grained model?

Let us start with the theological or scriptural considerations. Łukasiewicz quotes the Book of Revelation, where it is promised that there will be a New Earth and a New Heaven and that God “will wipe every tear from their eyes, and there shall be no more death or mourning, wailing or pain.” This certainly shows (positively) that God cares about some coarse-grained features of history (the eschatological features) but it does *not* suggest (negatively) that God does not care about the present “death, mourning, wailing or pain” or that He leaves them to chance. For all we know, maybe He controls each one of these sufferings and permits each one of them only when it is strictly necessary to reach the big eschatological goals. That would be the contrary of leaving them to chance.

What scriptural argument can we make, then, for or against the idea that God leaves (some of) our present sufferings to chance?

Christ's words about the fall of the sparrow, which we have discussed above, seem to go clearly against that view. We said above that they could not plausibly be interpreted in the extreme sense that God cares about every single atom of the universe (even those that affect no one's well-being); but clearly, Christ's words, if they are to provide comfort and confidence in God's fatherly care, should entail that He cares about our sorrows and in particular about the horrendous evils that we face. How unconvincing it would be if Christ said something like this: “Fear ye not therefore: God does not care about the horrendous evils that you may encounter and leaves them to pure chance!”

Can we find other biblical evidence that might counterbalance the text of the fall of the sparrow? Peter van Inwagen (1988, 64–65) quotes the book of Ecclesiastes in support of the coarse-grained model:

I returned, and saw under the sun, that the race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favour to men of skill; but time and chance happeneth to them all. For man also knoweth not his time: as the fishes that are taken in an evil net, and as the birds that are caught in the snare; so are the sons of men snared in an evil time, when it falleth suddenly upon them. (Eccl. 9:11–12)

The Hebrew word that is translated as “chance” in the King James Version is *נֶזֶךְ* and comes from the root that means “to happen,” “to occur.” It literally means “a happening” or “an occurrence.” In Greek, it was translated as *απαντημα*, which also comes from the verb “to happen” or “to occur,” and does not necessarily convey the idea of “chance” (*τυχη*). What the Ecclesiastes observes here is that, in our present condition, things happy or unhappy happen indifferently to the just or the unjust: in other words, what happens to the just and the unjust is not calculated according to a logic of immediate retribution. But that does not mean that it is not calculated *at all*, and that it does not come at all from God’s decision and control. Indeed, in the Gospel, Christ makes the same remark about the absence of a logic of immediate retribution *but underlies at the same time that these events come from God*:

But I say unto you, Love your enemies, bless them that curse you, do good to them that hate you, and pray for them which despitefully use you, and persecute you; that ye may be the children of your Father which is in heaven: *for He maketh his sun to rise on the evil and on the good, and sendeth rain on the just and on the unjust.* (Mt 5:44–45; emphasis mine)

God does not send good things to the just and bad things to the unjust; that is not His way of proceeding in our present condition. But that does not mean He is not in control: it is *He who maketh His sun to rise on the evil and on the good*. In light of this text, I do not think we can interpret the excerpt from the Ecclesiastes as raising doubts about or qualifying the fine-grained model that Christ seems to clearly express in his words about the fall of the sparrow.

Overall, it seems to me that Biblical evidence strongly favours the FAPP-fine-grained model over Łukasiewicz’s (or van Inwagen’s) coarse-grained model.

Let us see whether philosophical arguments can tilt the balance in the opposite direction. In section 5 of the paper published in this issue, Łukasiewicz

proposes three arguments in favour of the coarse-grained model. I believe his paper (Łukasiewicz 2017) offers a fourth one.

First, there is the argument of anthropomorphism. Here is Łukasiewicz's formulation:

The belief that lack of God's total control over every detail and every single particle in the world may limit His sovereignty and freedom is an expression of anthropomorphism of God's omnipotence, and it is simply mistaken.

This argument may be right, but it is irrelevant to the present discussion, because it is only an argument against the *extreme* fine-grained model, which requires a *total* control over *every* single particle. The FAPP-fine-grained model does *not* have this requirement, and the motivation for this model is *not* some form of anthropomorphism (the human idea of a "micromanager") but rather the need to account for God's fatherly love and care for His creatures' well-being.<sup>6</sup> If the *extreme* fine-grained model were the *only* alternative to the coarse-grained model, then this argument would indeed speak in favour of the latter; but as we have seen above, this is a false dichotomy.

Second, there is the argument from diversity. Łukasiewicz writes:

... lack of chance events in the world would diminish the degree of diversity in the world. God's generosity consists, among others, in the fact that God created the world, and it is a world with a multitude of types and tokens of various creatures, where diverse oppositions obtain, for example, chance vs. necessity, beauty vs. ugliness, or belief vs. disbelief in God.

I am not quite sure about how we should evaluate this second argument. For one thing, it seems obvious that most kinds of "diversity" can be realized in a completely deterministic universe: there is clearly no problem for God to create both "beauty and ugliness," both "belief and disbelief in God," and all other kinds of biological, cosmological, psychological diversities in a completely deterministic universe—a world in which God does not leave *anything* to chance. Of course, there is *one* kind of diversity you would not have in such a universe, namely the diversity "chance vs. necessity". Fair enough. It is not clear to me why we should think that God cares about this very specific kind of diversity in itself

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<sup>6</sup> Some philosophers may want to object that the idea of fatherly love (applied to God) is also a form anthropomorphism. But that is not an objection that Łukasiewicz himself would make, since (as we will see in the third point) he explicitly uses this very same idea of fatherly love to make an argument in favour of his own coarse-grained model.

(i.e. independently of whether it renders possible *other* forms of diversity). But let's suppose He does. Still, it is important to notice that even *this very specific kind of diversity* (chance vs. necessity) is present in the FAPP-fine-grained model, because in this model there *are* purely indeterministic and purely chancy events at the quantum level. So it seems to me that this second argument, like the first one (anthropomorphism) is in fact directed against the *extreme* fine-grained model, but not against the FAPP-fine-grained. So far, we still do not have any philosophical reason to prefer the coarse-grained model *over the FAPP-fine-grained model*.

The third and fourth argument are much more important and difficult, and it will not be possible for me to give them a response as developed as they would require. But let me present them rapidly and make some general remarks.

The third argument is the argument of Free Will. Łukasiewicz writes:

the idea of God whose goodness is manifested in the total control over every being is unconvincing and incompatible with our intuition of goodness; loving parents allow their children to make independent and authentic choices, especially if the choices concern important issues.

This is a very powerful argument against the FAPP-fine-grained model. At first sight, one might think that it is again targeted specifically against the *extreme* fine-grained model, because Łukasiewicz talks about “total control over every being” and the FAPP-fine-grained model does not defend a total control over every being. But in fact the argument of Free Will also threatens the FAPP-fine-grained model for the following reason: in this model, God does not control *all* events of the world, but He does control all events *that have an effect on someone's well-being*. This entails that He also has to control *all human actions* that have an effect on someone's well-being. And (arguably) if He controls them, then they are not free actions. How then could God leave room for free actions if He controls all actions that have an effect on someone's well-being. Well, maybe He could let free *some* actions, namely those that have no effect on anyone's well-being—for instance, maybe He will let me free (libertarianly free) to choose strawberry or lemon ice-cream because He knows that no one's well-being (not even mine) will be affected by that choice. But this kind of freedom is what philosophers call “insignificant” or “trivial” freedom, and all philosophers who defend the importance that God preserve human freedom agree in saying that the *kind* of freedom that is important and worth saving is *significant* freedom, not *trivial* freedom. If God allows me to be really free about some significant action – some action that *will* have an effect on someone's well-being (perhaps my own)—then it seems that God allows for

the possibility that I will use this significant freedom in the bad way, and God is *not* controlling the evil (for others or for myself) that would come out of my choice. Therefore, it seems that if God wants to preserve significant (libertarian) freedom for his creatures, then He *cannot* exert a fine-grained Providence, not even FAPP-fine-grained.

The other reason why this argument is important and dialectically strong is that it is motivated by the very same divine attribute as the FAPP-fine-grained model. The latter, we said, is motivated by the idea of God's fatherly love (and care for the well-being of His creature). But as we can see in Łukasiewicz's quote above, the view that God should preserve our (significant libertarian) freedom is *also* motivated by the idea of God's fatherly love for us: a loving father would not control every single (significant) action of His children.

I will make two brief remarks about this argument.

First, if *this* problem of Free Will is our (only) reason to limit God's providential control and allow some "chance" events in the world, then it seems that it cannot generalize to the acceptance of *non-free* chancy events. Compare two indeterministic situations in the world. S1 is an indeterministic situation in Sophie's brain, which will result either in Sophie's telling a lie to her friend (causing him some suffering) or in Sophie's telling the truth to her friend (which will enhance his well-being). S2 is an other indeterministic quantum situation that will have macroscopic effects on the Geiger counter of Bob, a scientist preparing an important paper in quantum physics: this situation will result either in Bob's making an observation that confirms his hypotheses (which will enhance his professional well-being) or in Bob's making an observation that disconfirms his hypotheses (causing him some distress). If our only motivation to limit God's providential control is the free will of human agents, then God should leave situation S1 to "chance" (or better said: "to Sophie's free choice"), but He *should control* situation S2 (because in doing so He can prevent some distress without thereby diminishing anyone's Free Will). This would suggest a new intermediate model of Providence: one in which God suppresses all chance from the world, with only two exceptions: (i) microphysical indeterminacies that have no effect whatsoever on anyone's well-being, and (ii) indeterminacies that correspond to some agent's (significant) free choice. Apart from these two exceptions, the new model (let us call it the "Freedom-exception model" of Providence) gives God *maximal* control over the world, and in particular total control over purely physical indeterminacies that have effects on the creatures' well-being. That is not van Inwagen's model, and I believe that is not Łukasiewicz's model either. Van Inwagen and Łukasiewicz seem to say that some evils that we suffer are due to pure chance *and not just the kind of chance that*

*comes from the free choice of some human agent.* So, once again, I think this argument is not enough to motivate the full degree of coarse-grainedness that van Inwagen and Łukasiewicz want. (To motivate this full degree, the fourth and last argument—the argument from the problem of evil—is the one that is really important, as we will see.)

Second remark: there is a risk that the freedom-exception model, even if it is not *as coarse-grained* as the Łukasiewicz coarse-grained model, is still *too coarse-grained* to provide a satisfactory notion of Providence. This problem is of course (one version of) the traditional problem of compatibility between Free Will and Providence. To this traditional problem, there are four families of response. (i) One solution is to say that God's love does not require that He preserve our Free Will at all—therefore God's Providence is total and maximally fine-grained, and our will is *not* free. This is (one interpretation of) the Calvinist view, defended for example by the Calvinist philosopher Derk Pereboom. (ii) The opposite solution is to say that God's love does not require that He control every single event that affects our well-being—therefore, God simply abandons any control over these evils that result from the free choice of human beings. This is a family of views corresponding to contemporary Open Theism. (iii) A third view tries to find reconciliation between Free Will and maximal control: the idea is that Free Will is in fact compatible with complete determinism. This could be called the “compatibilist solution,” and historically it seems to have been defended by some Thomists, in particular by Bañez.<sup>7</sup> This solution seems to require a revision of our notion of Free Will, if at least the common sense notion of Free Will is understood as being a libertarian notion. (iv) Finally, another intermediate solution tries to reconcile maximal control with the *libertarian* notion of Free Will itself—this might seem like an impossible task *by definition*, but the task has been undertaken by the Molinist tradition, represented today in particular by Thomas Flint. If we accept this characterization of the debate, I think that van Inwagen's and Łukasiewicz's picture of Providence falls in the family of views related to Open Theism. And the main worry with these views is that there is a risk that they become *so* coarse-grained that it would not make sense anymore to use the word “Providence”. Here is why: it seems that (in Christian theology at least) there is one general eschatological purpose that God *must* ensure (even if He leaves all other details to pure chance), and that is the purpose of leading *at least some* human beings to salvation. But if salvation depends (at least in part) on the free acceptance of human beings, then God *cannot* ensure it in the freedom-exception model (or in

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<sup>7</sup> Note that these Thomists do not say that Free Will is compatible with determinism *by natural causes*, only that it is compatible with determinism *by God's grace*.

the Open Theist solution): there is always the (metaphysical) possibility that all human beings will always freely reject Him. Therefore, it seems that the resulting picture of God's Providence is *extremely* coarse-grained: it leaves to pure unpredictable chance not only the goings-on and sufferings in this life, but it also has to leave to pure unpredictable chance the most important eschatological purpose (the ultimate salvation of at least some human beings). If God's Providence is so coarse-grained that it cannot ensure even this general and fundamental purpose, then it seems that (from a theological point of view) it is definitely incompatible with the Christian hope and that (from a philosophical point of view) it hardly makes sense to call it a "Providence" at all.

For all these reasons, I am more inclined to accept one of the two intermediate solutions, that try to reconcile *fine-grained* Providence with Free Will (either the libertarian Molinist solution or the compatibilist Bañezian solution). But this is of course one of the hardest problems of philosophical theology in history, and much more would need to be said for and against the different views. My only question to Łukasiewicz would be: How does he think that God can ensure even the most general of His eschatological aims (like the salvation of some human beings) if He leaves to pure unpredictable chance the free actions of human beings?

Let us come finally to Łukasiewicz's fourth argument, the only one (in my understanding) that can really motivate his (and van Inwagen's) coarse-grained model according to which God leaves open some instances of *non-free* chance (besides the inconsequential quantum indeterminacies). Łukasiewicz's main argument is that allowing some evil to come from pure chance *allows us to offer a better solution to the problem of evil*.

It is interesting to compare here with the dialectical situation of van Inwagen's defense of the coarse-grained model. Even if van Inwagen defends roughly the same model, and even though he also thinks that this model has (positive) consequences on the treatment of the problem of evil, yet he does not use these positive consequences as his *reason* to endorse the model. Rather, his reason to think that some evils are left to chance (not just chance coming from human Free Will but pure physical chance) is disappointingly short (and, in my opinion, unconvincing). He says the following:

If much of the world is due to chance, and if much of the world is infected with evil, then it would be reasonable to suppose, on purely statistical grounds, that at least some evil is due to chance. (van Inwagen 1988, 60)

The argument is unconvincing for the following reason: all that van Inwagen can prove on “purely statistical grounds” is that (given the fact that many events depend on some indeterminacies) it is probable that at least some evil depends on some indeterminacies, and therefore would be due to chance *if God did not intervene to control these indeterminacies*. But van Inwagen does not give us any reason to think that God *would not* intervene in these indeterminacies that result in evil. And from the Biblical argument we have seen above, it seems on the contrary very probable that God *would* intervene (or need a specific reason for not intervening) in such situations.

For this reason, I think that Łukasiewicz’s dialectical strategy—which *grounds* the endorsement of the coarse-grained model on its capacity to solve the problem of evil—is much more promising than van Inwagen’s strategy. Or at least, this is how I interpret Łukasiewicz’s dialectical strategy when he says that one strong *reason to reject* McCann’s fine-grained model of Providence is that “it strengthens the atheistic argument from evil” (sec. 5 of the present paper) and when he develops this point asking the following question: “How could it be that an omnipotent, omniscient and morally perfect being created, according to his *eternal and detailed plan*, all sentient beings having allowed them to suffer?” (Łukasiewicz 2017, 10).<sup>8</sup>

Why could we say that the coarse-grained model *helps us* in responding to the problem of evil? And is it convincing? A first element of response is provided by Łukasiewicz when he has God tell us the following (to comfort us against horrendous evils):

Do not worry and trust me; I can really do everything. I can create everything out of nothing and I did it and I can purify, remove and transform even the worst evils. True, *I did not decree* them to happen but they happened because I gave all creatures such a great freedom and independence that they could perform even the worst evils and *they did it*. But I am the Lord of everything and I will show you that I can redeem even the worst evils. All will be well in the end. (Łukasiewicz 2017, 12)

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<sup>8</sup> The emphasis is in the original. In its context, this challenge against the model of detailed Providence (i.e., the fine-grained model) is set in contrast and in response to the challenge against the coarse-grained model: “How could it be that an omnipotent and morally perfect being allows sentient beings to exist in the world of chance? Only a God who has everything under his divine control is morally justified in creating and sustaining the world containing seemingly pointless and horrendous evils” (ibid.). Łukasiewicz does not say explicitly that the challenge against the fine-grained model is *stronger* than the one against the coarse-grained model, and he might be interpreted as saying that the coarse-grained model (which we have independent reasons to endorse) is *no worse off* (but *no better off* either) when confronted with the problem of evil. But it is also possible to interpret him as saying that the challenge against the fine-grained model is more serious, and this interpretation gives an additional positive reason to endorse the Łukasiewicz coarse-grained model (indeed, in my opinion it would be the *best* argument in favour of this view).

The central element of the theodicy here presented is that horrendous evils are not decreed by God—God is not the source of these evils; rather, *creatures* are, in their “great freedom and independence.” Now, of course, if we concentrate on the *freedom* of creatures, what we have here is a traditional Free Will theodicy, that is, a theodicy in which the central role is played by the unpredictable *free actions* of creatures. We do not have, as yet, a theodicy of *chance* properly speaking (i.e., a theodicy which allows some evils to be produced by *natural* chance rather than *freedom* chance). But it is interesting to examine two characteristics of the (traditional) free will theodicy (characteristics by which Free Will makes it *easier* to solve the problem of evil), because these characteristics will also be present in a theodicy of (natural) chance.

The first important and helpful characteristic is that if a certain (horrendous) evil is the result of some creature’s free action, then God is clearly not the *source* of this evil. Maybe there remains a problem of God’s *permitting* this action, but at least the problem of God being the *source* is suppressed. Similarly, if a certain (horrendous) evil is the result of some natural chance (for instance the unpredictable large-scale effect of some QM indeterminacy), then God is not the *source* of this evil: *pure chance* is. Here again, there may remain a problem of God’s *permitting* the risk of this chancy process to result in a horrendous evil, but at least the problem of the *source* of evil is suppressed.

The second important and helpful characteristic is that God’s reason for preserving Free Will in His creatures is a *general* reason: it was better to have a world with free creatures rather than a world without free creatures. God need not have a *token-specific reason*, for each action that He lets free, to let it free. Therefore, when Elisabeth suffers some horrendous evil as the result of Robert’s action, there is no specific reason to answer the question: “Why did God allow Robert to be free *in this specific action*? Why did not God intervene *there and then*?” According to (one version of) the Free Will defence, there is *no response* to this specific question. *This* suffering, as a specific token, is without any explanation or justification. This might seem like a perplexing thought for Elisabeth, but in fact some contemporary philosophers have the feeling that it would be even more perplexing – in fact shocking – to suggest that this specific horrendous evil was a means for some divine purpose. For these philosophers, it is *more comforting* and, as (Łukasiewicz 2017, 15) says, more “adequate [to] our moral sensitivity” to view this “suffering as *undeserved* and pointless.” God had a reason to create Free Will in general and to allow the resultant evils, but He did not have a reason to let *this* action free and to permit *this* evil.

A theodicy of natural chance can also use this difference between general and token-specific reasons, as van Inwagen clearly says:

Do not attempt any solution to this problem that entails that every particular evil has a purpose, or that, with respect to every individual misfortune, or every devastating earthquake, or every disease, God has some special reason for allowing it. Concentrate rather on the problem of what sort of reasons a loving and providential God might have for allowing His creatures to live in a world in which many of the evils that happen to them happen to them for no reason at all. (van Inwagen 1988, 65)

There is generally no explanation of why *this* evil happened to *that* person. What there is, is an explanation of why evils happen to people without any reason. (van Inwagen 2006, 89)

If God's reasons to allow natural chance in the world are general reasons, then we do not need to look for token-specific reasons why God permitted *this or that* evil to happen as a result of pure chance (He did *not* have any such reason). And this might be comforting or "adequate to our moral sensitivity" because it avoids portraying God as using our sufferings as means in His plan.

This strategy could be very interesting in elaborating a full response to the problem of evil because it applies some general characteristics that seem to work in a Free Will theodicy but it extends these characteristics to situations in which the relevant evils do not seem to be a result of anyone's free action. In other words, a theodicy of natural chance might provide a response to the traditional "earthquakes" objection to the Free Will theodicy: "You say that God permits evil in the world only to preserve the Free Will of His creatures, but what about earthquakes and hurricanes: they are sources of evil but no free creature caused them" (van Inwagen 2006, 73). A theodicy of natural chance would have a response to this "earthquakes" objection which has dialectical advantages structurally parallel to those of the free will theodicy.

So far so good. A theodicy of natural chance has some interesting promises... but they all rely on one fundamental premise, which is that God had a general reason not only to preserve the Free Will of His rational creatures, but *also to create a world in which there is pure natural chance* (which sometimes results in horrendous evils). The problem is that we can see easily (or fairly easily) what God's general reason might be to preserve Free Will: Free Will seems to be a good in itself, or at least the necessary condition of a certain fullness of life for His creatures. But why would it be good to create a world *in which there is pure natural chance* (sometimes leading to horrendous evils)? Is "natural chance"

a good in itself? For whom? For protons? Just for the aesthetic property of having a contrast class with determinism?

In the papers by Łukasiewicz that I have been able to read, I have not found a satisfactory answer to this question. But van Inwagen *does* propose an answer, and I would be curious to know whether Łukasiewicz could accept this proposal or would prefer an alternative answer.

Let us recall the question: “What would be a (general) reason for God to allow the existence of pure natural chance in the world that (sometimes) results in (horrendous) evils?” Van Inwagen’s response (or proposal) consists in a story of the Fall of Human Beings and of God’s “rescue operation.” This story is rather long (van Inwagen 2006, 85–89), so I will summarize the central point that responds specifically to our question. According to van Inwagen’s story, before the Fall, Human Beings were *not* threatened by evils (horrendous or otherwise) produced by pure chance (they had preternatural powers to protect themselves against any such threats as earthquakes and hurricanes). Their being threatened by evils happening by pure chance was an effect of the Fall (in which they lost their preternatural powers). That being said, even after the Fall, God *could* prevent the chancy events to result in evils for Human Beings—He could do it by performing as many miracles as are required to protect them. So why does He not do this? Why does God *let* these evils happen by pure chance? Van Inwagen’s scenario responds as follows:

As is the case with many rescue operations, the rescuer and those whom he is rescuing must cooperate. For human beings to cooperate with God in this rescue operation, they must know that they need to be rescued. They must know what it means to be separated from him. And what it means to be separated from God is to live in a world of horrors. If God simply “canceled” all the horrors of this world by an endless series of miracles, he would thereby frustrate his own plan of reconciliation. (van Inwagen 2006, 86)

To summarize, why then is it good for God to let us live in a world where pure natural chance sometimes causes (horrendous) evils? Van Inwagen’s response is that it would not have been a good thing *unconditionally*; but *given the fact that human beings have separated themselves from God*, it is a necessary means (for the purpose of reconciliation with God) that we experience fully the situation of being separated from God, and being a victim of purely random and meaningless evil is a constitutive part of “being separated from God.” Being the victim of purely random natural evils (in general) is *not* a good; it is an evil; but in God’s rescue plan after the Fall, it is an evil that can be a necessary (general) means to reach reconciliation with God. (Which, again, is not to say that any *specific* evil

is used as a means to anything: they are not; individual evils remain individually pointless.)

*That* seems to me to constitute a complete (and promising) theodicy of natural chance. And if this theodicy is our best solution to respond to the problem of evil, then a coarse-grained model of Providence (one in which some evils, including horrendous evils, are left by God to pure natural chance) might have a very strong dialectical advantage.

I, personally, find this theodicy interesting and promising, and I will not try to raise objections against it. My main question to professor Łukasiewicz is whether he would accept van Inwagen's way to complete the theodicy of natural chance (i.e., van Inwagen's response as to *why* God wants to preserve natural chance rather than intervene).

At the end of the day, I only feel perplexed by the fact that this theodicy, or rather this "defence" (since van Inwagen does not commit himself to the *actual truth* of the scenario), does not square easily with the Biblical picture of divine Providence, as I said above. For this reason, I would be inclined to continue looking for a more Biblical response to the problem of evil.

## CONCLUSION

Łukasiewicz's paper is an extremely rich contribution to the philosophy and theology of divine providence. It is packed with responses to many different issues, united by the project of drawing all the lessons there is to draw from the scientific data of chance in the natural world.

If I do not misinterpret him, Łukasiewicz's conclusion in very general terms is that the data of chance do not *prove* the existence of God (the Fine-Tuning Argument does not work) but that they give us some amount of information about the nature of His providence (which cannot be conceived in a fine-grained way anymore, but has to be conceived in more coarse-grained terms).

In the first section I expressed some reservations about Łukasiewicz's objection to the Fine-Tuning Argument. But I think this dialectical line is secondary in his project: the centre of his project (I believe) is the coarse-grained (or chance-permitting) model of Providence.

Concerning this chance-permitting model of Providence, I have also expressed some (biblical) reservations, but at the end of the day, I think there is at least one strong argument in favour of it, namely its capacity to offer a promising theodicy (or defence). And I think it would be really fruitful to investigate in more depth

the connexions (and perhaps the differences) between Łukasiewicz's theodicy of natural chance and van Inwagen's theodicy of natural chance.

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DIVINE PROVIDENCE: FINE-GRAINED, COARSE-GRAINED,  
OR SOMETHING IN BETWEEN?

## Summary

Dariusz Łukasiewicz has investigated in depth the “Argument from Chance” which argues that the data revealing chance in the world are incompatible with Divine Providence. Łukasiewicz agrees that these data undermine the *traditional* model of Providence—a fine-grained model in which every single detail is controlled by God—but maintains that they are not incompatible with a *coarse-grained* model—in which God leaves to chance many aspects of history (including some horrendous evils). Furthermore, Łukasiewicz provides independent reasons to prefer this coarse-grained model. Even though I agree that a maximally fine-grained model is undermined by the scientific data, I argue that this is no sufficient reason to adopt a model *as* coarse-grained as Łukasiewicz’s. I propose a model of intermediate level of fine-grainedness which could avoid the drawbacks of both extremes, and seems to me to provide a more traditional approach to the problem of evil.

**Keywords:** Divine Providence; problem of chance; probabilistic theism; theodicy of chance; gratuitous evil.

## BOŻA OPATRZNOŚĆ: SZCZEGÓŁOWA, OGÓLNA CZY POŚREDNIA?

## Streszczenie

W swoim eseju Dariusz Łukasiewicz analizuje szczegółowo „argument z przypadku”, zgodnie z którym dane wskazujące na istnienie w świecie przypadku są nie do pogodzenia z Opatrznością Bożą. Łukasiewicz akceptuje pogląd, że owe dane podważają *tradycyjny* model Opatrzności – model szczegółowy, w którym każdy najmniejszy szczegół jest kontrolowany przez Boga, twierdzi jednak, że nie są one niezgodne z modelem ogólnym, w którym Bóg pozostawia działaniu przypadku wiele aspektów dziejów świata (w tym również przypadki okropnego zła). Łukasiewicz podaje również niezależne racje za przyjęciem tego modelu ogólnego. Chociaż zgadzam się, że dane pochodzące z nauk szczegółowych podważają model maksymalnie szczegółowy, argumentuję, że nie wystarczy to, aby przyjąć model aż tak ogólny, jak Łukasiewiczowy. Proponuję model pośredni, który pozwala uniknąć wad obu modeli skrajnych, a zarazem lepiej współgra z tradycyjnym podejściem do problemu zła.

**Słowa kluczowe:** Opatrzność; problem przypadku; teizm probabilistyczny; teodycea przypadku; daremne zło.