

Order-of-Nature Miracles and Specific-Point Miracles

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(The paper below includes a bit more than the actual presentation [15 minutes]. Objections 4-7 were not addressed at all; however, a couple of them came out in the Q&A.)

Order-of-Nature Miracles and Specific-Point Miracles. If you are puzzled by those expressions it is probably due to my having made them up. But what they signify is not hard to comprehend, and, I contend, once you understand them you will have in your possession a key piece for understanding science and biblical faith fit together.

Before explaining the expressions, a short story.

Pierre Laplace (1749-1827), the French mathematician/physicist wrote a 5-volume treatise, *Celestial Mechanics* (*Mecanique Céleste*) on the physics of the solar system. Napoleon—whom Laplace actually tutored—asked him why he made no reference to God in his book. Laplace's response: "I have no need of that hypothesis." In short, physics is able to explain the solar system; don't bring God into the picture.

Laplace's comment captures well a view that is common today: Science has displaced faith in God. The God-hypothesis, it is supposed, was invoked to explain what we didn't understand. The darkness of that ignorance, however, has now been dispelled by the light of science. Science explains not just the solar system, but every kind of natural event from the smallest to largest scale. As for God, "We have no need for that hypothesis."

But what does the success of science actually tell us? It suggests a gapless order of nature from the smallest to the largest scale. A "gap" here would be something within the order of nature that permanently resists explanation in terms of physical laws, and hence may point towards God supernaturally filling the gap. If there are gaps like this and God miraculously fills them, such actions by God would be *order-of-nature miracles*.

Definition: Order-of-nature miracles: *exceptions to the laws of physics that God must perform to sustain the observed order of nature.*

Coming back to the question, "What does the success of science actually tell us?" the answer could be restated as follows: *The success of science suggests that, if God created this universe, he created an exquisitely ordered universe, one where at no point does he need to perform regular or periodic miracles to sustain the order of nature.*

We can now ask, does this conflict with the view of God as portrayed in the Bible? The answer is emphatically "No!"** Three points should make this clear.

Point #1: *None of the miracles in the Bible, with the possible exception of creation itself, is an order-of-nature miracle. They are specific-point miracles.*

Specific-point miracles: *exceptions to the laws¹ of physics that God performs at specific times, not to sustain the observed order of nature, but for other purposes.*

Point #2: *It ought not to be surprising that an all-powerful and all-knowing God would create such a thoroughly ordered universe.*

To see this consider the following example. Isaac Newton thought that God needs periodically to adjust the orbits of the planets to keep them stable. (If he were right, this would be an order-of-nature miracle.) His reason for thinking this was that he recognized that the planets would have a gravitational effect on each other. And this, he thought, could destabilize their orbits. As it turns out, one of Laplace's achievements was to show that Newton was wrong. Using mathematics and physics he showed that although the planets do have an effect on one another, slightly altering each other's paths, these effects over time cancel each other out. For the Earth there is a narrow path within which the Earth's orbit varies, but only within this narrow band.

Now should Laplace's achievement been disturbing to traditional Christian theists? No! The biblical God is all-powerful and all-knowing. Hence he could create any possible world and God knows all the possibilities. Presumably, he could create a world where he would need periodically to adjust planetary orbits, but—knowing all the possibilities—he would be aware that he could create a world where physics dictates their stability. Now, we are not God and supposing that we know what God would do is a precarious supposition, but at least from a human perspective, the latter possibility

seems the more desirable one. If an engineer is designing a machine and has the choice of either making it such that it needs annual adjustment or making it self-adjusting, the latter (cost considerations aside) is the more elegant solution. Although we are not God, from our perspective it makes sense to create a universe that doesn't need miraculous interventions just to keep it functioning. It should not be surprising that God would create a universe where order-of-nature miracles are not needed.

In case the concept of an order-of-nature miracle is not yet clear, consider another example, cellular differentiation. Cellular differentiation is the process by which when a cell divides the resulting pair of cells are different from the parent cell. Thus a stem cell may divide and become two nerve cells; and a nerve cell may divide and become two nerve cells of a different type from the parent cell.

Now, clearly, for a human being to develop properly between conception and birth, an enormous number of cells must differentiate into just the right cells in just the right time and place. Thus a functioning human brain requires more than just there eventually will be a trillion neurons packed into the human skull; the neurons have to be the right kind of neurons in the right place. Nerve cells with long axons need to be situated in the right orientation and location for the brain to work.

I once heard a preacher triumphantly declare that science is unable to account for cellular differentiation. This is no longer completely true, but the point here is that if God were to need miraculously to turn on and off the necessary genes at just the right times in cellular differentiation this would be an order-of-nature miracle.

Again, we are not God, but it seems odd to suppose that God would create a world with gaps in its normal functioning that need to be miraculously filled, when God is quite able to create a world that has no such gaps in its natural order.

Point #3: *An absence of order-of-nature miracles does not provide strong support for supposing there are no specific-point miracles.*

That God would create a gapless order of nature does not tell us that he would never do miracles at specific points for other reasons. Suppose that at some time in the future scientists were to understand every step in the physical development of a human being in the womb and no gaps are found. Would such knowledge preclude the possibility of the virgin birth of Jesus? It would not. The knowledge that normal human development physically takes place in a certain way does not address the possibility of God making an exception to that process at a particular point in time.

Likewise for any other aspect of the observed natural order: A thorough understanding, without gaps, of every aspect of the natural order would not tell us whether exceptions to that order ever occur. That is an historical question, not one answered simply by the success of science.

One way of stating this is as follows:

The success of science provides significant support for the thesis that there are no gaps in the order of nature (no order-of-nature miracles), but it is mute with respect to the possibility of specific-point miracles.

OBJECTIONS:

There are a variety of objections which may be raised to this conclusion. [In the presentation at Stanford—given time constraints—I only raised the first three.]

Objection #1: *Science is concerned with understanding specific events, not just general patterns/processes.*

Response: Yes, natural laws are not just descriptions of what normally happens in nature, they tell us what is naturally possible, i.e. what can and will happen if nature is left to itself. And since the general assumption with regard to specific events is that they are not instances of miracles, the laws of physics guide us in deciding what happened. But natural laws are laws of *nature*, not necessarily absolute laws. They are absolute only if nature is all there is, but science does not tell us this. The question that remains is how much evidence is needed to override the general assumption that events are wholly natural, namely to make it reasonable to believe a miracle has occurred.

Objection #2: *If miracles happen at all, shouldn't one expect that they would happen often enough, and some be obvious enough, that nearly everyone would acknowledge that they sometimes occur?*

Response: Miracles reflect the will of a personal agent, and apart from knowledge of its intentions, we have no way of knowing how often the agent will perform miracles, or will perform obvious miracles (obvious even to skeptics).

Objection #3: *The Bible says quite a bit about the God's character and desires. Given that he desires that people know and worship him, and given that he cares about human suffering and destiny, shouldn't one expect that miracles, including obvious miracles, would be rather common.*

Response: This objection basically invokes *the problem of evil* and *the problem of divine hiddenness*. Four notes:

- (a) These problems do not arise out of science but out of theology and philosophy.
- (b) If we have reason to believe a miracle has occurred, the evidence for it is not negated by not understanding why obvious miracles don't happen more often.
- (c) In the Bible obvious miracles occur at specific times and through specific people. They are not the norm in biblical history.
- (d) That obvious miracles (again to skeptics) are not common does not imply a largely "hands-off" God. He can (and it is Christian experience that he does) work in subtle ways on a frequent basis.

Objection #4: *No actual past report of a miracle is well enough attested (supported by evidence) to warrant belief that a miracle has ever occurred.*

Response: Danger of circular reasoning here.

Many miracle reports have a fair amount of evidence in support of them. On what basis is the bar of evidence set so high that one can confidently dismiss these reports? Circular reasoning is committed if the bar is set that high because of the conviction that miracles cannot (and hence have not) happened.

Objection #5: *Science has a track record of successfully debunking miracle reports.*

Response: This objection should state that *science has successfully debunked a number of miracle reports*, but even this tells us little! The reasons are:

- (a) One should expect many false miracle reports regardless of whether any are genuine. But this makes it unsurprising that a number of these will be found to be false, i.e. quite plausible natural explanations will be discovered.
- (b) When an investigation fails to come up with the verdict, "false," the case is not listed as "possibly a miracle." Rather it falls into the category "unsolved." Hence no miracle, nor even "possibly a miracle" ever shows up.

Miracle	Possibly	Unsolved	Not a miracle
	a Miracle	X	X
		X	X
			X
			X

Note: Even if an event were incontrovertibly confirmed, this would not force calling it a miracle. It is always possible to suppose that natural laws will eventually explain how it could happen.

Objection #6: *"Extraordinary claims require extraordinary evidence."* (Dawkins)

Response: As a general statement, this is simply false! I have lived in the Santa Cruz Mountains for a number of years and I have never see a mountain lion. Two years ago, a grad student who had just arrived and had gotten involved in the Grad Christian Fellowship told us that on his first day on campus he had gone trail jogging and came face to face with a mountain lion. That is an extraordinary event. Did we require extraordinary evidence to believe him? No!

Extraordinary claims require extraordinary evidence only if:

- *One has good reasons to distrust the source of the claim.*
(Actually this does not require extraordinary evidence. Testimony from a credible source is usually all that is needed.)
- *One has good reason to think that what is claimed could not have happened.*
- *Accepting the claim would have major ramifications (theoretical or practical) and hence there is the demand that the evidence beyond serious dispute.* (These ramifications here can relate to accepting a proposition or failing to accept a proposition. "Burden of proof" is affected by ramifications in both directions. Burden on proof does not always lie on the side of the one making the substantive claim.)

Objection #7: There is no natural way of knowing that an observed event is a miracle, and the baseline for what we take to be naturally possible is set by what is actually observed.

Response:

- (a) Identifying an event as a miracle or as a natural event is always an inference, not a direct result of observation. Suppose one is watching a leaf on a tree in autumn, one that has turned a

bright yellow. The leaf begins flapping in a breeze, breaks loose and falls to the ground. Now, given the setting, we will presume that no miracle has taken place here, that the break from the tree is a natural event. But we are actually inferring that the bond between leaf and tree was weak enough for the breeze to break the bond. We don't actually observe this. Whether one takes an event to be natural or a miracle always involves an inferential step; events don't come labeled, as it were.

(b) Now suppose that an event is reported which, if it happened, would so conflict with current physics that for physics to account for it would require radical changes in physics (not just on the edge or frontier of scientific enquiry, but in what we had taken to be well-established physics). Now suppose that the actual occurrence of the event gets incontrovertibly established. One then has two options:

1. Believe that physics will undergo the radical changes that would be required to account for the event.

2. Maintain our adherence to well-established physics and infer that a miracle took place.

Now, it would be odd to insist that the former, and not the latter, is the rational response. Note that it is the former and not the latter flies in the face of existing science. The latter accepts existing science, while the former does not. Arguably, it is the former that is *unscientific*, not the latter; for it, on the basis of a metaphysical commitment, persists in opposition to well-established science.

There are other objections that might be raised but the most common are covered in the above list. Hence it appears that the original conclusion still stands:

The success of science provides significant support for the thesis that there are no gaps in the order of nature (no order-of-nature miracles), but it is mute with respect to the possibility of specific-point miracles.

* I don't address the question of the origin of universe or of life or of how life developed. Nor do I address question about mind, conscious mental states, nor the status of persons.

The origin of the universe at its inception was arguably the establishment of the order of nature rather than an outworking of the order of nature. But if, say, the big bang is ultimately explicable in terms of an existing background physics, then it would fall within that order of nature even if not necessitated by it.

Natural selection is part of the order of nature, as are mutations. However, the actual course that the development of life took is not intrinsic to the order of nature. Specific events—not dictated by the order of nature—are a crucial part of evolutionary theory. Were natural history to be replayed from the same starting points, life might have developed in significantly different ways (if the process is unguided). Now, it remains an open question for science whether the process was unguided (random mutations followed by natural selection) or whether the process is at least a junctures guided by God, "specific-point miracles." It also remains an open question as to whether the emergence of life in its simplest forms was inevitable given the laws of physics, or whether it too depended upon specific events not dictated by the order of nature. Thus, when later I speak of the success of science pointing to a "gapless order of nature," the question of how the universe and then life arose and then how specifically life developed must be bracketed and, for now, left to one side.

The questions relating to the metaphysical status of persons, of conscious states, of the causal role of beliefs, desires, etc., are questions that current physics is unable to address. The problem is not just that we don't understand what exactly is happening in the brain when conscious experiences, desires, thoughts, etc. are present; the problem is that no conceivable discoveries regarding how brain states and mental states correlate would dictate anything more than a correlation. Science has typically presumed that everything can be accounted for in terms of physical states of affairs together with laws of physics, but there is good reason to think that mental states and persons (the inner subjective person) cannot be just physics unless some category of mind gets introduced into physics. Mind does not seem to be reducible down to matter and energy in spacetime. The atheist philosopher of mind Thomas Nagel has argued that "the materialist neo-darwinian conception of nature is almost certainly false." [Nagel: *Mind and Cosmos: why the materialist neo-darwinian conception of nature is almost certainly false* (Oxford: Oxford U. Press, 2012)] If he is right, what contemporary science faces is not a gap in its understanding, but a fundamental error in its understanding of the natural world. The chains of cause and effect may have no explanatory gaps other than what quantum indeterminacy introduces, but, Nagel argues, the course of both natural history and human history cannot be accounted for without granting that mind has a fundamental metaphysical place in the natural world. Since both the materialist and neo-darwinian concepts of nature exclude mind from their fundamental metaphysics, they are almost certainly wrong.