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TASC

TASC's mission is to rebuild and strengthen the foundation of the Christian faith by increasing awareness of the scientific evidence supporting the literal biblical account of creation and refuting evolution.

September 2021

Review of Return of the God Hypothesis by Stephen C. Meyer: Part 1

By Dan Reynolds, PhD

Return of the God Hypothesis: Three Scientific Discoveries That Reveal the Mind Behind the Universe (Fig. 1, HarperOne, 2021) is Stephen C. Meyer's most recent book advancing scientific arguments for intelligent design in nature. In his previous books, *Signature in the Cell* and *Darwin's Doubt*, Meyer focused on the origin of the information in biology. In *Return*, Meyer expands the discussion to include physics and cosmology. Meyer examines the origin of the universe, the fine tuning of physics, the origin of life, the information in biomolecules, the Cambrian Explosion, and macroevolution. And, in contrast to his former works, in *Return* Meyer explains why Christian theism is the best explanation for what we see in nature. Meyer shows that the data, and even modern secular cosmological theories, require a beginning to the universe.

Meyer is an old-earth creationist. TASC holds that the young-earth view is the true biblical message. Although Meyer's views conflict with a straightforward reading of Genesis, his arguments are nevertheless valuable in that he shows that even if you accept secular cosmological theories, the required fine-tuning of the laws of physics, the fine-tuning of the initial conditions of the universe, and initial singularity all point to design. In other words, secular science, taken to its logical conclusion, ironically undercuts naturalism and supports design. Hence Meyer presents a useful argument for persuading materialists that their science undercuts their own philosophical position. This type of argumentation, *reductio ad absurdum*, is a classic way to expose logical fallacies.

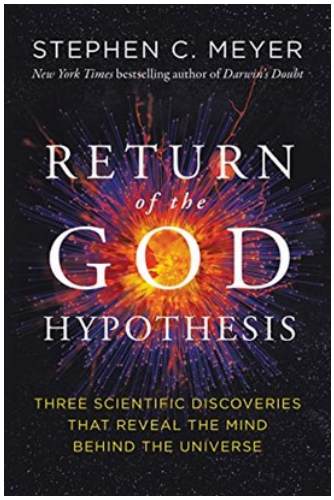

Figure 1

Meyer holds a doctorate in the philosophy of science from the University of Cambridge and is director of the Seattle-based Discovery Institute, flagship organization for the intelligent design movement.

This review will be written in three parts and will cover the highlights from the book chapter by chapter.


Stephen C. Meyer, PhD

Prologue

Meyer starts off by briefly recounting a debate he had with atheist physicist Lawrence Krauss in 2016.[1] Meyer had a migraine headache in the middle of his opening segment. Krauss was rude, insulting, and unkind to Meyer for much of the debate. Nevertheless, Meyer was able to articulate his arguments. In a way, that debate became Meyer's inspiration for writing *Return*.

Lawrence Krauss is a physicist at Arizona State University and author of *A Universe from Nothing*.[2]

Krauss embraces materialism, the belief that everything that exists can be explained by physics and chemistry. In this view, the universe exists because of the laws of quantum physics allow everything to emerge from nothing, life exists because of fortuitous chemistry, and all living things including humans evolved through random mutations and natural selection from a common ancestor. Presumably, God as creator is unnecessary because

[1] The entire debate can be seen on YouTube: <https://www.youtube.com/watch?v=mMuy58DaqOk>

[2] For a review of Krauss's book see <https://tasc-creationscience.org/article/review-lawrence-krauss%E2%80%99s-book-universe-nothing>

science has been able to explain everything without Him. Or has it?

For the last 15 years, the New Atheists have written numerous books about how science, they say, has made God unnecessary. The New Atheists include Richard Dawkins, Victor Stegner, Sam Harris, the late Christopher Hitchens, Daniel Dennett, the late Stephen Hawking, Lawrence Krauss, and others. The writings of these men have had an unfortunate impact on our college students. According to Meyer, chemical evolution (theory of abiogenesis) and biological evolution have turned many students away from theism.

But Meyer says that science teaches us that: (1) the universe had a beginning, (2) physics is fine-tuned for life as we know it, and (3) there is information in biology in the form of codes. These three facts are more likely to be observed within the theism framework than within the materialism framework. Hence, although science may seem to have eliminated God as creator, our best current science has actually facilitated the *Return of the God Hypothesis*.

Meyer will discuss the multiverse as an explanation for fine tuning. Meyer will discuss the identity of the designer.

Part I: The Rise and Fall of Theistic Science

Chapter 1: The Judeo-Christian Origins of Modern Science

Meyer points out that the New Atheists insist that science and religion are at war in that they see reality differently and come to know things in different ways. According to the New Atheists, religion is a hinderance to science. However, Meyer shows that science and religion are not at odds by tracing the origin of modern science. Meyer says that numerous historians, philosophers, and sociologists of the 20th and 21st centuries attribute the rise of modern science in the 16th and 17th centuries to belief in God and Christianity.

Christianity uniquely holds the presuppositions about the world needed for science to thrive. The biblical doctrine of creation and its implications formed the needed philosophical framework. The presuppositions that the world is good, can be understood by the human intellect, and is consistent in its behavior with respect to cause-and-effect relationships all made science possible. Christian theism meant that the human mind could comprehend the world and the world was comprehensible. But the properties of nature and the world could not be known by logical deduction alone, as the Greeks had supposed, but would require reason *and observation*—the main ingredients of the experimental method. God made nature freely according to His will and not under some set of "logical" restrictions. (God did not have to give planets circular orbits as had been assumed by the Greeks.) Since God made the world in a way He chose, humans must observe the world to find out how God made it. As Robert Boyle, father of modern chemistry, explained, the job of the natural philosopher was not to ask what God must have done, but what God actually did.[3]

Since the same God that gave to us reason had also created nature, it followed that nature must be intelligible to humans.

Some of the great physicists such as Newton, Galileo, Kepler, and Copernicus all believed they were called to find evidence for God in nature.

The biblical doctrine of creation also provided another key assumption: the fallibility of human reason due to the Fall. Hence one could not be certain that reason alone could discern the truth about nature; observations were needed to confirm or refute one's ideas about the world. In other words, experiments were required to understand nature with certainty. So human reason, according to the doctrine of creation, is both *capable and fallible*. Nature is knowable, but only by combining reason and observations. This view of science was echoed by Francis Bacon and more recently by Karl Popper, two key figures in the history of science.

Another Christian, William of Ockham, devised his famous "razor" for understanding nature from the biblical doctrine of creation. Since God made the world in a way He freely chose, the use of reason and observations may lead to competing hypotheses about a phenomenon. The best explanation is usually the one with the fewest unproved assumptions and most observational confirmation, and this is usually the simplest explanation. Hence "Ockham's razor" or the *principle of parsimony* has become the *modus operandi* in choosing between competing hypotheses in scientific investigations.

Chapter 2: Three Metaphors and the Making of the Scientific World Picture

Meyer wanted to be sure that the recent historians of science, who pointed to Christian theism as the inspiration and framework for the development of modern science, were not merely revisionists of history. He wanted to confirm that science and religion had at one time been at peace and working together. So, Meyer started to read the original writings of the founders of modern science. He

[3] Meyer citing Boyle R, Royal Society, Miscellaneous MS 185, fol. 29.

found they often referred to the creation as being like a book, a clock, or a law-governed realm.

Those that thought nature was like a book saw nature as another revelation of God. Studying that revelation would bring one closer to the creator. Those who held God and nature sacred never considered the study of one could undercut or contradict the other since they came from the same source. For example, Robert Boyle, father of modern chemistry, considered the study of nature an act of piety.

The clock metaphor suggested nature had mechanical law-like mechanisms governing its behavior, yet the mechanisms spoke of the creative activity of intelligence. Hence one could seek out the physical workings of a thing while still admiring its designer. God had set up nature to work somewhat autonomously after He created it.

The law-governed realm analogy referred to the assumption that the cause-and-effect nature of the world would remain constant over time. God operates by certain spiritual and moral principles and does not change in this regard. He is consistent. Logically, such a Creator would make a world that also behaved in a consistent manner according to physical laws given by the divine Law Giver. The consistency in nature was also expected since God not only created the world but upholds and superintends it. And since the universe was thought to operate by consistent physical mechanisms, early scientists began to describe physical behavior with mathematics.

Since the founders of modern science thought that God had freely chosen how the world would operate, physical law could not be discovered by deductive reason alone but required observations to be understood.

Many of science's founders thought that nature exhibited evidence for intelligent design. Kepler saw design in the mathematical precision of the behavior of the planets, Boyle saw design in the behavior of gasses and in chemistry, and Linnaeus saw design in the biological world in the groupings of organisms by traits. Newton thought that the correspondence of the properties of light and the structure of the mammalian eye suggested foresight and intent.

Chapter 3: The Rise of Scientific Materialism and the Eclipse of Theistic Science

Meyer says that the departure of science from its theological roots began to take hold during the Enlightenment. Enlightenment thinkers made three key assumptions: (1) human reason was superior to religious belief, (2) arguments made for God's existence were suspect, and (3) matter and energy could explain the origin and behavior of everything in nature without recourse to a creator.

Philosopher David Hume argued that physical law precluded miracles and divine interference in nature. Hume advanced what came to be known as radical empiricism: we can only know what we can experience with our five senses.[4] Since, according to Hume, physical laws cannot be violated (miracles are impossible) and God cannot be directly detected with our senses, belief in God has no evidentiary basis.

Comte said that our understanding of nature came in three phases: theological (superstition), philosophical (abstractions), and a "positive" or scientific phase (reason and observations). The positive, scientific phase understood the world as the result of physical laws and material mechanisms.

Two classical arguments for the existence of God, the cosmological argument and the design argument, began to erode. The cosmological argument is based on the idea that the universe began to exist and must have therefore had a cause. A personal entity was a logical deduction for that cause since only a self-directed powerful being could have started creation before anything existed. The design argument looks at complex objects in nature such as the camera eye of humans or the arrangement of the planets and infers design to explain the order.

Kant believed the universe was eternal and self-existent and therefore had no cause. Newton had assumed that the universe was infinite in extent with matter distributed uniformly in order to explain why the stars had not all collapsed into a single mass by the force of gravity. Kant believed the universe was also infinite in time (had no beginning).

Nevertheless, the design argument still had some force despite materialistic philosophers until scientists like Darwin emerged. Darwin, in his *On the Origin of Species*, argued that the design seen in the biological world, contrary to William Paley, was only *apparent* and could be explained by natural selection acting upon random variations without reference to a creator.

LePlace put forth the nebular hypothesis for the origin of the solar system to explain the arrangement and orbits of the planets, contradicting Newton's inference to God for setting up the initial conditions.

Lyell explained the geological features of the earth by the action of slow and gradual natural processes operating over deep time instead of Flood geology.

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[4] Contrary to Hume, radical empiricism leads to an impoverished epistemology and actually undercuts itself. See <https://tasc-creationscience.org/article/review-finding-truth-nancy-r-pearcey>

Freud said that human behavior was controlled by forces in the human psyche. Marx said what controlled human motivation and behavior were material needs and economic forces. Both men were atheists.

So, arguments for theism based on design in nature (natural theology) were slowly replaced by naturalistic theories so that by the beginning of the twentieth century, the materialistic world view was firmly in place. Material explanations that appeared to replace the theistic understanding of origins and natural phenomena coupled with the disagreements among theists on how to explain God's interaction with the world resulted in a shift in thinking among scientists. Eventually, scientists insisted that only material explanations should be considered to explain the world (methodological naturalism). Eventually, science and religion were seen as in conflict.

Chapter 4: Light from Distant Galaxies

At the beginning of the 20th century, the universe was thought to be infinite in space and time. However, astronomers were undecided if the universe was just one collection of stars or many collections of stars. Faint fuzzy "nebulae" were known, but no one was exactly sure what they were. Were they clouds of gas or collections of distant stars? Were they within the Milky Way or beyond it? Eventually, astronomers were able to identify "standard candles" which could be used to estimate distances to objects in the sky. One such standard candle was the Cepheid variable star. As the name implies, Cepheid variable stars vary in brightness over time in a consistent and predictable way. Their brightness cycles from dim to bright to dim to bright constantly and consistently over time. The maximum brightness of a Cepheid variable star quantitatively correlates with the time period of the variability of brightness—the longer the period, the brighter the star. The distances of some nearby Cepheid variables were determined precisely. Then, once the quantitative understanding of how brightness, the oscillation period, and distance was in place, the Cepheid variable stars could be used to measure distance. Soon, Edwin Hubble found that the distances to Cepheid variables in some of the "nebulae" were much larger than the size of the Milky Way. It followed that there were indeed other collections of stars beyond the Milky Way; there were other *galaxies*—many of them.

Vesto Slipher, a contemporary of Hubble, had been studying the light from stars. He came to understand that starlight consisted of photons with many wavelengths. The various wavelengths of light resulted from photon emissions from the atoms that made up the stars. The study of the light coming from stars is called *spectroscopy*. Atoms have various orbitals where electrons can reside. Each orbital has a characteristic energy. The energies of the orbitals of each element are unique to that element. When an electron in a high energy orbital transitions to a low energy orbital, it loses energy by emitting a photon of light with a wavelength associated with the energy difference between the high and low orbitals. Since the orbital energies of an element are unique, so are the transition energies and wavelengths associated with the transitions. Hence, the wavelengths of light observed coming from a star can be used to identify the elements the star is made from. The pattern of wavelengths is unique for each element. Slipher began to study the light of faint "nebulae." He saw that the patterns of wavelengths were the same as for nearby stars except all the wavelengths had lengthened by the same amount. Since the wavelengths were longer, they are said to be *redshifted*. Hubble, using Slipher's data, soon realized that the redshifting of starlight correlated with the distance to and the radial velocity of the star or galaxy. Hubble realized that most galaxies are moving away from the Milky Way, and the farther away the galaxy, the faster it is moving away from us. In other words, the universe appeared to be expanding in all directions. This expansion, when run in reverse, results in all the matter of the universe eventually coming together. In other words, the expansion had a beginning, suggesting the universe had a beginning.

Chapter 5: The Big Bang Theory

In this chapter, Meyer describes the history of the development of the Big Bank theory.[5] Without describing the

[5] Meyer accepts the Big Bang theory much like Hugh Ross. As young earth creationists, we do not think the Big Bang theory is biblical nor the best cosmological theory. Nevertheless, the data upon which the Big Bang theory rests is sure enough: the cosmological background radiation (CMB), the redshift of galactic light, and the abundances of hydrogen and helium in the universe. In addition, the Big Bang model is consistent with some of the solutions to the field equations of general relativity. However, the assumptions of homogeneity and isotropy are problematic. The polarization of the CMB predicted by inflation theory was not found. There are the horizon and flatness problems. There is evidence for periodic redshifts, structures too large to fit into the Big Bang model, galaxies at high redshifts with large abundances of metals, and other problems. Nevertheless, Meyer takes the available data and common assumptions made by most cosmologists and shows that they logically require a beginning of the universe and time itself. And it is this beginning that demands a cause that naturalism cannot deliver. There are several cosmologies that are biblical, address the starlight-time problem, and attempt to explain the data, including gravity-time dilation theories, ASC theories, CDK, and others.

history in detail, I'll summarize the important points made in the chapter. The Big Bang theory puts forth the following scenario. A fraction of a second after the universe began, the mass of the universe was confined to a volume smaller that the period at the end of this sentence. This was in keeping with relativity's view of gravity. Relativity did not see gravity as a force between objects as Newton's theory had done, but instead proposed that mass caused the fabric of space *to curve*. With all the mass in the universe collocated, the resulting curvature of space would be so high as to result in space with an almost infinitesimal volume. The temperature would have been so high that there would be no atoms; only charged particles in a hot plasma. During the first three minutes the universe expanded and cooled, quarks combined to form protons and neutrons, and helium and lithium nuclei were formed from the collisions of protons with themselves and the transient neutrons. After 380,000 years of expansion of the universe, the plasma was cool enough to allow electrons to settle into the orbitals about the hydrogen, helium, and lithium nuclei. As atoms began to form, the numerous photons began to be reflected into space without interference from the plasma. That reflected light would become what is known as the *cosmic background radiation* (CMB). As the universe continued to expand and cool, the wavelengths of the CMB increased. The giant gas clouds would eventually coalesce into stars, stars into galaxies, galaxies into galactic clusters, galactic clusters into filaments, and so on. And the expansion of the universe was not seen as the movement of matter through a pre-existing volume of space, but as the expansion of space itself taking the matter in it along for the ride.

Assuming the universe had expanded and had a beginning, as Hubble's redshift data and relativity suggested, theorists predicted that there should be left over radiation in the sky from when the first atoms were formed as described above. The CMB was finally detected in the 1960s. It was coming from all directions. There have now been three major space-based microwave detectors sent into space to study the CMB: COBE, WMAP, and PLANK. Each probe had a greater resolution than its predecessor. The distribution of matter and the temperature of the radiation that the probes detected was, for the most part, in keeping with what was expected according to the assumptions of homogeneity and the expansion. The CMB has been hailed as the best evidence for the Big Bang scenario. Later, the study of starlight and experiments on earth established that elements heavier than lithium could be produced in stars through nuclear fusion processes. Most cosmologists now affirm that the data support the universe had a beginning.

Part 2 will be published in the October newsletter.

COMING EVENTS

TASC Zoom Meeting: Thursday, September 9, Providence Baptist Church, Room 221, 7:00 PM.

The TASC monthly meeting can be attended online via Zoom using the **following new link**:

https://us02web.zoom.us/j/4490299372

Meeting ID: 449 029 9372

Find your local number:
https://us02web.zoom.us/u/kH4mqoXap

Dan Reynolds, PhD will discuss the book *Miracle of the Cell* by Michael Denton published in 2020. Denton discusses the fine-tuning of the chemical elements that make up the molecules of biochemistry. This will be a continuation of the May meeting.

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