

## INTERVIEW WITH DAVID BLOCK

David Block is both a committed Jewish believer in Jesus Christ and a top-notch astronomer, whose research has twice been featured on the cover of the planet's foremost scientific journal "Nature." Block finds no conflict between his professional career and his daily walk with the Creator of the universe. Indeed, if you ask him, he will not hesitate to confirm that the two parts reinforce each other. Block, a professor in the School of Computer Science and Applied Mathematics at the University of the Witwatersrand in Johannesburg, South Africa, is the co-author (with Kenneth Freeman) of *God and Galileo: What a 400-Year-Old Letter Teaches Us about Faith and Science*.

During the COVID-19 quarantine, Louis Markos, Professor in English and Scholar in Residence at Houston Baptist University and the author of *Apologetics for the 21<sup>st</sup> Century* and *Atheism on Trial*, sat down with David (virtually) to discuss what the universe really tells us about its Creator.

***David, you shared with me recently a sad story of a college student from a Christian home who, after reading The God Delusion by Richard Dawkins, fell into a state of depression and took his own life. What is it about Dawkins's book that could provoke such a reaction in a person?***

A universe, and a world-view, devoid of purpose.

Let us remember that at the time of Galileo, the Book of Scripture was the source of all truth, including scientific truths. The Church and its Cardinals ruled supreme, with little regard for experimental science, and this was clearly out of balance.

The situation today is equally out of balance, to the other extreme. The scientific Book of Nature is paramount today, and many high-profile scientists (such as Richard Dawkins) would have us abandon the Scriptures entirely as a source of truth and perspective on our world.

The philosophical viewpoint of these self-appointed Cardinals of Science is driven as much by the mood of the age and the personalities and beliefs of individuals as it is by scientific data and rigorous theory.

Today atheist fundamentalism rules, with its basic philosophical agenda to avoid any need for a Creator.

My heart bleeds for the young man who took his own life. Cardinal Richard Dawkins does, in my opinion, mislead readers completely. Precisely how? Dawkins sees God as a virus, much like the COVID-19 virus, infecting healthy bodies and healthy minds. Viruses are to be avoided, at all costs.

Dawkins sees no difference between the truth of nature (science) and the nature of truth. For me, the nature of truth fully encompasses not only the scientific realm, but also the

spiritual realm - the grace of God as depicted in the Gospels. The God of all comfort, purpose and of hope is seen walking the streets of Capernaum and Jerusalem. Let us look up, for our redemption draws nigh.

***Why, when you look at the vastness of the cosmos around you, does it not provoke in you a feeling of existential despair?***

The feeling the universe always invokes in me is a feeling of wonder. Looking up in wonder!

In my study of astronomy, I was immersed in the city of God ever since receiving my first telescope in high school in 1971, aged 17. Psalm 19 affirms that the heavens declare the glory of God. As a young man, looking at Saturn was a moment of deep revelation to me. God had ignited my spiritual candle and the spiritual seeds implanted took a few years to grow to fruition, from 1971 to 1976.

In his essay titled Nature, Ralph Waldo Emerson penned these words:

“If the stars should appear one night in a thousand years, how would men believe and adore; and preserve for many generations the remembrance of the city of God which had been shown! But every night come out these preachers of beauty, and light the universe with their admonishing smile.”

***David, if you would, please map out for us how incredibly vast the cosmos is, and then tell us how Christians should interpret that vastness.***

In the book of nature, astronomers find themselves living in a universe that is calculated to be about 92 billion (i.e., thousand million) light years across, filled with billions of stars and galaxies, in which mankind seems insignificant to many. In contrast, in the book of Scripture, we see mankind sustained by God’s grace (his love and undeserved favor toward us). God exists outside space and time; his love is timeless. On the one hand, the book of Scripture does not address all that we can know about space, but on the other hand, it is completely beyond the domain of science to infer that mankind has no central focus in the universe.

God’s focus is on his people. The incarnation, God becoming man, is a wondrous sign of spiritual man’s focal place in our vast universe. The book of nature is ever changing. As Nigel Brush explains, “From the inside, science does not provide a great deal of confidence in the accuracy and completeness of scientific truth at any one point in time. Far from providing a finished product—the truth and nothing but the truth—science is a work in progress.”

In contrast, the world of God’s Spirit is not subject to any equations. The book of Scripture is a book with its own context. How can science prove or disprove the revealed grace and love of God?

***David, you've explained to me before that the universe has to be as huge and spread out as it is for our planet, and human life on our planet, to be possible. Please review for us the data behind this important apologetical claim.***

Cosmologists of our time have extrapolated the Copernican view, that the Earth is not the center of our solar system, to a vastly broader scenario (spanning 92 billion light years) - that our location within the Universe of a hundred billion galaxies is in no way special. Our sun is one of a hundred billion stars located in the outer parts of an apparently random spiral galaxy. Does our location really matter? Does it mean that mankind is a mere accident in an accident of accidents?

But there is something special about our Universe. A delicate interplay of its age and size and its fundamental laws has made carbon-based life possible. The law of gravity, and the weak and strong nuclear forces, are finely tuned for the emergence of life. If the force of gravity were stronger, nuclear reactions in the cores of stars would have proceeded so rapidly that their lifetimes would have been very short – too short for the appearance of carbon-based life. Conversely, if the force of gravity were weaker, stars would not have become hot enough for nuclear reactions to start, and we would have no suns. The universe has to be as big as it is – enough time must pass for the expansion of our universe to cool it off sufficiently after the hot Big Bang in order for galaxies and stars to form. The universe must therefore be relatively old and large, because the boundary of the observable universe expands at the speed of light.

No reader of this interview should be surprised that the universe is so large, because we could not exist in one that is any smaller. The fine tuning makes us scientifically rather special: without this fine tuning, we would not be here.

We should not be dismayed about living in a vast universe, as did Bernard de Fontenelle (1686) when he wrote:

“Behold a universe so immense that I am lost in it. I no longer know where I am. I am just nothing at all. Our world is terrifying in its insignificance.”

This is not the mood in the Gospels; they are full of astonishment, wonder and awe. The Incarnation resounds with a central message of purpose.

***The two scientific pillars of Galileo were observability and testability. Have some modern scientists been moving away from those pillars? If so, why?***

Such fine tunings as delineated above contain strong notions of design—of a Creator—which to some is utterly repugnant. There has been a fascinating response to this notion, which goes completely against the ground (of observability and testability) so firmly held by Galileo. This bold hypothesis has appeared on the “scientific” scene: that while our universe is indeed finely tuned, it is just one of a large ensemble or set of universes called multiverses. Proponents of the multiverse theory argue that while our universe may have

the appearance of being privileged, there are myriad other universes; much like the analogy of “blowing bubbles”—each bubble representing a universe. We just happen to live in the “right bubble,” they would argue. It is important for us to stress that these other universes are not observable, and we do not know whether they exist. The concept of multiverses is a hypothesis.

Cosmologist George Ellis elaborates:

“Let me state it more strongly: it is dangerous to weaken the grounds of scientific proof in order to include multiverses under the mantle of ‘tested science.’ It is a retrograde step towards the claim that we can establish the nature of the universe by pure thought without having to confirm our theories by observational or experimental tests. This abandons the key principle that has led to the extraordinary success of science. The claim that multiverses exist is a belief rather than an established scientific fact.”

How would Galileo respond if he were alive today? He may well assert that his cherished pillar of observational proof has sunk deep into the oceans, that the integrity of science may be at stake with the claim of the existence of multiverses. We are not trying to downplay the value of hypotheses here. They are the route by which science progresses, but they must be recognized as such and not regarded as part of our collected base of secure and tested knowledge.

***David, your book on God and Galileo is a wonderful read. If you would, please give us a thumbnail sketch of what preceded the famous (or infamous) Galileo trial before the Inquisition in Rome.***

The dispute between the church and Galileo sowed the seed for the apparent divorce between science and faith. The dispute was about the theory of the universe, presented by Nicolaus Copernicus (1473–1543) in 1543, that the sun was at the center of the universe. This theory was in opposition to the Aristotelian view promoted by the church, that the sun and other planets were in orbit around the earth.

Galileo favored the Copernican model because of what he observed through his own telescopes, particularly that the moons of Jupiter were in orbit around the planet Jupiter. These were landmark telescopic observations—not all bodies in the universe were orbiting the earth!

Copernicus’s theory was regarded as heretical because it clashed with the church’s interpretation of the biblical creation account, in which “God set the earth on its foundations” (Ps. 104:5 ESV).

Harvard historian Owen Gingerich carefully elaborates:

“As far as the theologians were concerned, the Copernican system was not really the issue. I can hardly emphasize this point enough. The battleground was the method itself,

the route to sure knowledge of the world, the question of whether the Book of Nature could in any way rival the inerrant Book of Scripture as an avenue to truth.”

Who controls the access to the wells of truth?

Pope Urban VIII allowed Galileo to continue his investigations of the heavens, provided his findings were presented as theory, not as fact. But in the end, Galileo could not restrain himself from fully embracing the heliocentric system.

Galileo was summoned from Florence to Rome for trial by the Inquisition in 1633. He saw no conflict between the domains of scientific research and faith in God. He believed that study of the universe would promote greater understanding of the correct interpretation of the Scriptures. But the label of Galileo as a suspected heretic prevailed in the trial, and he was forced to recant and sentenced to house arrest: he died in Arcetri, and, on January 9, 1642, was buried in an unmarked grave.

***Please tell us a little bit about Galileo’s 400 year old letter, what that letter can teach us today about faith and science, and the general aim of your book.***

At this juncture, allow me to hand over my pen to author David Teems, who endorsed our book. His gifting with words is rather unique regarding a synopsis of our entire book and specifically, Galileo’s 400 year old letter. Teems writes:

“In a long letter to a noblewoman, a Grand Duchess (Tuscany), Galileo discloses his thoughts, convinced as he was that there is no real divide, no true argument between nature and the Word, that indeed they work in agreement one with the other, and by divine order. Any argument that does exist is founded on ignorance, superstition, fear, and a misinterpretation or convoluting of the scriptures. At that time in history, science and theology were becoming more and more estranged one from the other. Galileo’s intention? ‘The Grand Duchess had to be shown,’ writes Block and Freeman, ‘that the two books were still in harmony.’ The trick, Galileo said, was interpretation, perspective. Block and Freeman are masters at interpretation, of demonstrating those harmonies and in a language that is accessible to the general reader.

“According to the scriptures, creation was set to order by a single voice, at the expense of one clear sentence, the brief prelude to all existence: *Dixitque Deus fiat lux et facta est lux*. ‘God said, let there be light, and there was light’ (Genesis 1:3). In a very real sense, light is the argument Galileo presses. It is what he represents for us today. Clarity. Lucidity. Light. Reading and interpreting the unknowns that exist, not by the light of fable or superstition, but with the well-informed mind, free of its fetters.

“Galileo is a lucid soul debating an institution that is slow to be anything but obtuse. We can read Galileo’s words and the commentary Block and Freeman offer with astonishment, with confidence, with awe, with empathy, and, at times, a touch of humor. Perhaps most of all, we can read ‘God and Galileo’ in the hope of our own clarity (our

best defense in a contrary world) and our continuing emancipation, with the powerful suggestion that He, indeed, has the whole world in his hands—and parts yet known.”

***Please share with us how you, as a Christian and a scientist, balance the messages you receive from the book of God (the Bible) and the book of nature.***

The book of nature (science) is a book of process. In contrast, the book of Scripture is a book of purpose. Pascal had his “Night of Fire.” There are no words to describe my personal encounter with the Logos, Jesus of Nazareth, in the year 1976. I see absolutely no contradiction working as a creative scientist and knowing the grace of God infusing my heart.

My daily response sweeps from the Universe of galaxies to the Universe of the heart. In the words of Blaise Pascal, “The heart has its reasons which reason knows nothing of... We know the truth not only by the reason, but by the heart.” This is God’s Universe, wherein grace prevails: you and I need to be receptive to both reason and revelation.

***In closing, David, please tell us what you would say to a college student who read *The God Delusion* and came away from it thinking that science has disproved God.***

I would sit alongside the college student. I would encourage that student to see the world swinging on two hinges.

The first hinge belongs to the book of Scripture, which, to paraphrase John Milton, is understandable not only to the wise and learned but also to the simple, the poor, the babes. The first hinge requires spiritual revelation and divine grace and *cannot* be expunged by science.

The second hinge is the book of nature: God’s created world.

It is on both these hinges that we see the fullness of human existence. May we never place the first hinge on our personal index of forbidden books and therefore miss out on the clearest revelation of God’s love and purpose.

In my career, God was never known to me through human logic or experiment but through His self-revelation.

I would gently remind the college student that the science of today is not in a position to pronounce on the existence of God. It is simply outside the scope of the scientific method to be in a position to disprove the existence of God.