

WHO ORDERED THE UNIVERSE?



WHO ORDERED  
THE UNIVERSE?

NICK HAWKES

MONARCH  
BOOKS

Oxford UK, and Grand Rapids, USA

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Published by Monarch Books  
an imprint of

**Lion Hudson plc**

Wilkinson House, Jordan Hill Road,  
Oxford OX2 8DR, England

Email: [monarch@lionhudson.com](mailto:monarch@lionhudson.com)

[www.lionhudson.com/monarch](http://www.lionhudson.com/monarch)

ISBN 978 0 85721 598 7

e-ISBN 978 0 85721 599 4

First edition 2015

**Acknowledgments**

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A catalogue record for this book is available from the British Library

Printed and bound in UK, June 2015, LH26

*To Isaac, my grandson...  
that he might learn to wonder  
and seek truth*



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## ACKNOWLEDGMENTS

All books are a team effort, and this is certainly the case for this book.

My heartfelt thanks goes to Greg Denholm, my friend and editor. I would be lost without his care for detail.

Mary, my wife, has been my champion, my second editor, and the one who has ensured that this work is accessible to those without specialist knowledge.

I was fortunate to secure the help of Professor Michael Clapper, who rescued me from the worst excesses of mathematical folly. Michael heads up the board of the Australian Mathematics Trust based at the University of Canberra.

My friend, Dr Leonard Long, helped me understand the intrigues surrounding the Galileo trial. He has a fine mind.

Chris and Naomi McPeake, together with Mark and Colleen White, have been the prayer team for this project. It is fabulous for any Christian author to have such people behind them providing spiritual support.

Professor David Wilkinson (Principal of St John's College, Durham University) has a gracious character and a magnificent intellect. He began this project by introducing me to Monarch Books – and taught me to trust God for the results.

Finally, I owe a huge debt of thanks to Tony Collins (Publisher for Monarch Books and Lion Fiction) who never stopped believing in me.

*Nick Hawkes*



# FOREWORD

**Revd Professor David Wilkinson**

**BSc, PhD MA, PhD, FRAS**

Professor David Wilkinson is an astrophysicist and theologian. He is the current principal of St John's College and a professor in the Department of Theology and Religion at Durham University.

I have always been fascinated by evidence. My first school science project in the 1970s was trying to test the then fashionable claims of extrasensory perception – from bending spoons to predicting symbols on cards. The results were inevitably less exciting than the claims! Then, at a slightly more advanced level, the evidence for the bending of light by gravity... and the energy distribution of electrons ejected from a surface bathed in radiation. This introduced me to the strange worlds of relativity and quantum theory. Here evidence led to the exciting realization that the world of everyday common sense was very different to how the universe actually is. In my work as an astrophysicist, models of galaxy evolution depended on the evidence of gamma rays, radio waves, and infrared radiation. Indeed, the model of the Big Bang itself was both supported and challenged by evidence collected over decades in the twentieth century.

Yet the gathering of evidence does not easily result in scientific answers. Galileo did not point his telescope at the moons of Jupiter and immediately receive a computer printout saying, “The earth is not at the centre of the universe.” Every research scientist knows that evidence has to be critically assessed. Models that interpret the evidence have to be imagined, constructed, and tested. The weight of evidence for a proposed model then

has to be judged. It takes both courage and faith to send your work off to be probed and questioned by the rest of the scientific community.

Such a process is not a million miles away from my experience of becoming a Christian. I was intrigued by the awe I experienced at discovering the order of the universe. The other thing that intrigued me was the “something else” that Christian people seemed to have in their lives – something they attributed to the life, death, and resurrection of Jesus of Nazareth. I needed to explore the evidence behind this... and risk uncovering something I might have to act upon. But what is the best way to interpret this evidence... and does its weight point to the Christian picture of a God who desires to not simply be an intellectual explanation but to be in personal loving relationship with men and women? And finally, what does this mean for how I live my life today?

Since the age of seventeen, I have been shaped, challenged, and sustained by this evidence as I have attempted to follow Jesus. Faith for me is trust on the basis of evidence... which leads to action. The truth of Christianity cannot be proved, for at its heart is a personal God, not a mathematical equation. However, this does not mean that faith is irrational or so personal that it cannot be examined with reason, in the context of a conversation.

Nick Hawkes invites us into such a conversation. This book is not about proving God but is an invitation to consider a wide range of evidence that gives clues to the meaning, purpose, and value of both the universe and human life. It does so in a way that allows the best conversations to develop. Here is a conversation partner who is engaging, passionate, knowledgeable, and yet gracious in respecting the other. From his extensive experience of science, theology, and life, he invites us to examine the evidence.

He does not impose simplistic answers, nor does he dodge the difficult questions.

He represents superbly the God who has revealed evidence of his love and power... but wants to be in an enriching and intimate conversation with all men and women. It is a conversation that is both life enhancing and life changing.

# INTRODUCTION

What you believe is important. It is not incidental. Your beliefs define you and form your identity. They may even be something for which you are prepared to die. Your beliefs are a sacred thing... so, let me make you this promise: I shall tread gently in the places where you let me wander.

With this assurance, let me invite you to explore with me whether belief in God is reasonable. Has God left clues about his existence in the universe?

As we begin this journey, I am driven by a conviction that I find both disturbing and intimidating. It is this: Only the truth is worthy of you – so I must be careful.

Taking care with the truth means we can't just accept everything as being right. It is not the case that we can believe whatever we like, provided we are nice to people. That is simply giving up the search for truth. Being good to others is a belief that can only have meaning if we know what authentic "good" is. Otherwise, being "good" is not really good. It is just the most convenient and efficient way for most of us to get along. Fundamentally, it is an expression of the self-interest of the majority.

It is tempting in these days of political correctness to be deeply suspicious of any religion or philosophy that claims to have a handle on truth. Today's mantra is "everything must be tolerated".

To say this, however, is to capitulate to evil. It gives the worst abuses of religion the power to prevent you from searching for spiritual meaning, and it allows those abuses to be tolerated. Some religions and philosophies should not be tolerated. "Honour killings" (a dreadfully inappropriate name), the execution of those who convert to another faith, suicide bombers... these

things should be named for what they are: evil.

The problem is, as soon as we do that, we are thrust into a dangerous world. For who decides what “good” is? It is sobering to think that the greatest sins committed by humankind – the starving to death of thirty million people in China during the Cultural Revolution and the murder of six million Jews by the Nazis – were legal according to the laws of the land in which each of these atrocities occurred.

Tolerance is a warm and cuddly word. But we shouldn’t allow it to be a blanket under which we hide to avoid truth.

All good people want to be tolerant. Of course we should be civil towards others who think differently to us, but this shouldn’t mean we dispense with the idea of truth. We must be allowed to search, explore, and disagree. The important thing is not to be disagreeable in the process.

To tolerate everything is to believe that there are no universal truths, just personal convictions that may change according to the circumstances. Holding such a low view of truth is a very bleak position to adopt philosophically. It must inevitably result in pragmatic self-interest that competes against the interests of others.

This book invites you to take an exciting journey, to unfreeze old patterns of thinking, to consider the real significance of who you are, and to explore what your meaning is. Amidst the competing claims of a thousand different philosophies and religions, it dares to introduce you to the possibility of God – and for good reason.

### **Character and courage**

Let me read to you a small excerpt from Lewis Carroll’s *Alice in Wonderland*. Are you sitting comfortably? Then I shall begin:

*“Cheshire Puss,” she began, rather timidly, “would you tell me, please, which way I ought to go from here?”*

*“That depends a good deal on where you want to get to,” said the cat.*

*“I don’t much care where,” said Alice.*

*“Then it doesn’t matter which way you go,” said the cat.*

This little exchange prompts the question: Where do you want to go in life? I’m not talking about achieving goals such as paying off the mortgage or buying a new car. I’m asking what you want your life to count for.

If you believe life has meaning, then it is terribly important for you to discover what that meaning is and live in a way that reflects it. If you don’t do this, you risk your life becoming shallow and self-obsessed.

A book by C.S. Lewis contains a chapter entitled “Men Without Chests”. It is based on Plato’s notion that the chest is the location of a person’s spirit, heart, and character.<sup>1</sup> When contemporary culture gets locked into the idea of “doing your own thing” and denies any universal truth or value, it develops a mind that is adrift, not controlled by anything other than unbridled desires. The Bible speaks about people who think like this, saying, *“Their destiny is destruction, their god is their stomach, and their glory is in their shame. Their mind is set on earthly things”* (Philippians 3:19). Such people have no character, no chest.

There is another reason why it’s important to find your true identity and meaning: quite simply, no one who lacks this knowledge is getting on very well. The famous psychologist and philosopher, Carl Jung, once wrote:

*About a third of my cases are suffering from no clinically definable neurosis, but from the senselessness and emptiness of their lives. This can be described as the general neurosis of our time.<sup>2</sup>*

He was saying that there are an awful lot of people for whom life seems utterly meaningless. They lack purpose.

But to find your purpose, you need to work at finding out what is true.

### **Explore the possibility**

The American journalist and satirist Henry Louis Mencken (1888–1956) wrote:

*God is the immemorial refuge of the incompetent, the helpless, the miserable. They find not only sanctuary in his arms, but also a kind of superiority, soothing to their macerated egos; he will set them above their betters.<sup>3</sup>*

Mencken is calling me incompetent, helpless, and miserable because I'm a Christian. Fortunately, I know enough wonderful and brilliant Christian people to convince me that he is quite wrong.

There is good evidence that Christianity is more than a crutch for ineffectual people with an anxiety complex. Christian faith is historically, morally, and scientifically reasonable – and is held to be true by millions of people across many nations and centuries. While that doesn't prove anything, it should at least suggest that we ought not to dismiss Christianity carelessly.

The fact that anything bothers to exist at all demands more from us than a shrug of the shoulders. To believe the universe

came from nothing, and that its incredible mathematical order is meaningless, takes very great faith. It is not a faith I share. Neither is it one shared by thousands of the world's most eminent scientists.

So, while our physical existence doesn't prove God's existence, it does challenge us to think about the possibility of God.

### **The subtlety of God**

If Christianity is right, then God is not one to prove his existence with overwhelming displays of might. God is subtle. He invites rather than coerces. Throughout this book, you will hear this refrain repeated time and again in different contexts. God whispers his invitation in the cosmos and in nature. His voice is insistent. It is always gentle, yet it can be heard by anyone. As such, you will not find a "knockout" proof of God in any of these chapters. There is simply a whisper of God that is intellectually reasonable.

If God exists, then all truth (both scientific and theological) comes from the essence of who he is. This means, logically, that it is perfectly reasonable for science to point to the possibility of God. Certainly, science cannot get in the way of anyone coming to God.

The genius of God, however, is that he cannot be known through intellectual study alone, for that would mean Christianity is reserved for academic elites. The only way to know God is through the humbling door of faith. Faith is the great leveller. The professor, the peasant, the child with Down's syndrome, the Olympic star, and the prime minister all need faith. This is why Jesus taught that unless we have faith as humble and trusting as that of a little child, we will not enter the kingdom of God (Mark 10:15). God never compromises on the need for faith.



This doesn't mean there is no place for reason. Science and reason can (and should) point to the possibility of God – as I hope this book will show. Both can lead you to the doorway to God, but neither can force you through it. To go in, you will need to take a step of faith – faith that is informed by reason.

If you look at the door between yourself and God, you will see that it is very low. You must bend low with humility to go through. If you take another look at the door, you will notice that Jesus has unlocked it and is there ready to meet you. He stands waiting to take you on from where science has left you. But only you can decide whether or not to walk through.

### **Dare to think big**

This book invites you to be thoroughly discontent with shallow thinking. It is an invitation to think about the big questions of life, to discover who you are and why you exist. These are vital issues. So, may I encourage you to think big? Dare to read God's signature on the invitations he's sent you. Learn to be amazed at the things around you. Let yourself say "Wow!" frequently.

### **More than a "nasty smell"**

If there is no God to give meaning and worth, then we are simply an organic accident that has drifted aimlessly to the top of an evolutionary tree to flourish briefly before dying and leaving a rather nasty smell.

My hope is that when you die, you will leave more than a "nasty smell".

Enjoy the adventure of this book.



## THE EVIDENCE OF GOD IN THE COSMOS

The universe is amazing – I mean, really, really amazing. It blows your mind.

And I have a sneaking suspicion that it is meant to. Certainly, the modernist dictum that “a scientific breakthrough a day will keep the need for God away” has started to look a little dog-eared in recent decades. The more scientists understand the universe, the more mysterious and spectacular it becomes.

This fact is not always appreciated.

I once listened to a symphony orchestra play Rachmaninoff’s Symphony No 2. Now, Rach was a bloke who knew how to use an orchestra. Big, rich tones poured out like a well-aged Shiraz. This was no sweet, demure work content to be played in the background. It demanded your attention and mugged your emotions. From my vantage point in the balcony, I glanced down on the people below... and was staggered to see someone engrossed in their smart-phone.

It seems that no matter what amazing spectacle you place in front of people, some will choose not to see it.

So, let’s agree to give ourselves permission to wonder and be amazed, to recover the childlike delight of saying “Wow!” – because I think we are meant to. I think God hangs his business card in the cosmos and invites us to see it. A 3,000-year-old songwriter certainly seemed to think so. The psalmist writes in the Old Testament:

*The heavens declare the glory of God; the skies  
proclaim the work of his hands. Day after day they  
pour forth speech; night after night they reveal  
knowledge. They have no speech, they use no words; no  
sound is heard from them. Yet their voice goes out into  
all the earth, their words to the ends of the world.*

(Psalm 19:1–4)

I believe it is reasonable to suggest that the outrageous bigness and splendour of the cosmos is an invitation for us to consider the possibility of a Creator and perhaps learn a few things about him. Doing so should ensure that any conclusions we draw about God are in harmony with the best understandings we have of science.

It's worth noting, in passing, that the Apostle Paul believed it was reasonable to expect people to ponder the significance of creation and to let this introduce them to the possibility of God. In fact, they were culpable if they did not:

*For since the creation of the world God's invisible  
qualities – his eternal power and divine nature – have  
been clearly seen, being understood from what has  
been made, so that people are without excuse.*

(Romans 1:20)

Now, that's a bold statement!

### **Aren't scientific truths and theological truths irreconcilable?**

No.

Perhaps I should explain. If God exists, then all truth has its origin in God – including scientific truth and theological

truth. Because the two truths both derive from the essence of who God is, the two disciplines cannot fight each other. They might answer different questions, but they must ultimately be compatible. Indeed, it would be reasonable to expect each discipline to give a deeper perspective of the other. Theology goes deeper than the “how” and “when” of science, and asks why things are as they are. It seeks to do more than say, “Things exist simply because they do.” Theology, therefore, puts science in a bigger context. This brings to mind Einstein’s famous aphorism, “*Science without religion is lame; religion without science is blind.*”<sup>1</sup>

It’s worth pausing here to talk a little about Einstein. If you do an Internet search for “Einstein and Christianity” you will discover an unseemly squabble between Christians wanting to claim Einstein was a Christian, and atheists who want to insist he was an atheist. Each wants Einstein, and his genius, to be on their side to lend them credibility.

The truth is actually much more interesting – and, I submit, significant.

Einstein was a brilliant scientist. He was not, however, a brilliant theologian. It is perhaps unfair of people to expect him to be one: theology was not his area of study. What is highly significant is that science took Einstein as far as it could towards God. Einstein’s scientific study convinced him of the existence of God. Like the philosopher Spinoza, he believed the universe and the physical laws of nature to be expressions of God. As such, science gave good reason to believe in a higher being. However, that was as far as he was able to go. Although he was firmly convinced of the historical reality of Jesus Christ, he was not a Christian. He didn’t believe in a personal God who had a plan for humankind. Rather, Einstein believed that humanity existed

solely because of the cause and effect of physical laws – a view that has more in common with deism.

The fact that Einstein had this understanding is perhaps not surprising. Einstein's parents were atheistic Jews, so he didn't have a Christian heritage. He'd also experienced some overbearing behaviour from church institutions and this did nothing to endear him to conventional Christianity. Consequently, Einstein contented himself with being a theist. Why? Because that's where science took him. For him to know a personal God, he would have needed to journey on from science – into a knowledge of Jesus Christ. He did not make that journey.

The significance of Einstein's story is that science led one of the greatest minds of modern history to God. To suggest that science must inevitably do the opposite is therefore quite wrong.

### **The universe is very big and very mysterious**

The first thing the cosmos suggests about God is that he has a majesty beyond that which our minds can comprehend. The night sky has amazed people from the Bronze Age to the age of the Higgs boson.

Here are some basic statistics.

We live on the third planet out from a middle-aged star called the Sun. That star sits three-quarters of the way along the edge of one of the spiral arms of a galaxy called the Milky Way, containing about 300 billion stars. If that wasn't extraordinary enough, our home galaxy of 300 billion stars is just one of over 100 billion galaxies in the universe. And this mind-bogglingly huge universe exploded into being from a tiny, almost infinitely dense particle (called a "singularity") about 13.7 billion years ago.

You can't help but get the feeling that God might have been showing off, just a bit.

The universe is certainly big. We have to measure the distances between galaxies and stars using the speed of light. As light scurries on at the goodly pace of nearly 300,000 kilometres per second, you can imagine it would cover a fair distance at that speed over a whole year. We call this distance a “light-year”, and that’s what astronomers use to measure the distance between stars and galaxies.

The nearest star to our Sun (Proxima Centauri) is a paltry 4.3 light-years away. This compares favourably with the distance to our nearest neighbouring galaxy, which is 163,000 light-years away. All this, and you haven’t yet begun to seriously journey across the universe. Oh, I forgot to mention: the universe is expanding at an ever-increasing rate, so it’s getting bigger all the time!

The universe is not only big, it is mysterious. In fact, only 5 per cent of it is visible, with 27 per cent of it thought to be composed of “dark matter”, and 68 per cent thought to be composed of “dark energy”. Dark matter neither absorbs nor emits any form of electromagnetic radiation, so it can’t be seen. We only know it’s there because of the gravitational effect it has on other heavenly bodies.

Dark energy is something of a hypothesis only. Scientists have very little idea of what it is, but they think that it is the energy that is causing the universe to expand at an ever-accelerating rate. Certainly, some sort of force is doing this and overcoming the natural tendency for gravity to cause the heavenly bodies to crunch back together again.

### **You’re a star**

Let’s talk about stars. Our Sun has a diameter about 109 times greater than the Earth. That’s pretty impressive. Now imagine a