

Emily Sturgess, Development Officer, The King's Centre, Osney Mead, Oxford, OX2 0ES. Telephone: 07852 310603 do@cis.org.uk  
Diana Briggs, Secretary, 5 Northmoor Road, Oxford OX2 6UW. Tel: 01865 420007 diana@cis.org.uk

## STUDENT ESSAY COMPETITION: WINNING ENTRY

Last summer we had several impressive entries to our student essay competition. The winner was Paul Roberts, a Mathematical Biology PhD student at the University of Oxford, with his essay 'How does God interact with the world?' Paul spoke on this subject at our Student Conference on 21st February this year.

How does God interact with the world? This question, or rather its answer, is as complex as it is significant, touching all areas of theology, science and life. It is a question that has occupied Christian scholars for the last two millennia, leading to intense (and frequently divisive) debate.<sup>1</sup>

In seeking to explore this issue we must draw upon all the resources available to us, using both reason and revelation, looking to both the 'book of God's word' and the 'book of God's works'.<sup>2</sup> As we do so, revelation must be given priority, recognising that God's ways are not our ways,<sup>3</sup> and that our mental faculties, whilst a remarkable gift, are both finite and fallen. We must have the humility to let God tell us what he is like and how he acts, rather than imposing our own framework upon the data. Having said this, God's word must be interpreted, and whilst it is true, it is not exhaustive. Therefore, we must use reason to make sense of God's word and to relate it to our experience of the world around us. In particular, we may use science to help us to interpret God's word and scripture to make sense of our scientific discoveries.

Starting with the book of God's word, we are told that God freely created the universe out of nothing<sup>4</sup> (*ex nihilo*) and that it is entirely separate from him (*contra pantheism*).<sup>5</sup> Having created the universe, God interacts with it through

providence and miracles. In his providence God sustains all things in existence, maintaining their properties (preservation),<sup>6</sup> works through the properties of each created object, causing it to act in accordance with his will (concurrency)<sup>7</sup> and directs creation in such a way that his purposes are fulfilled (government).<sup>8</sup> In thinking about concurrency it is helpful to use the language of primary and secondary causes. God works behind-the-scenes as the invisible, primary cause, whilst, at the same time, each object behaves according to its intrinsic properties, the secondary cause.<sup>9</sup> It is the job of science to discover and understand these secondary causes.

Whilst God usually interacts with creation through providence, he also acts, though less frequently, through miracles. Scripture mainly uses three terms when referring to miracles: signs, wonders and miracles or mighty works.<sup>10</sup> Both the terms used and the contexts in which they occur, suggest that we should think of miracles as any action by which God 'arouses people's awe and wonder and bears witness to himself'.<sup>11</sup> Having surveyed the Bible's teaching on God's interaction with the world, we turn now to the book of God's works.

It was in the context of a Christian worldview, in particular the belief that the universe was created and is sustained by a faithful, law-giving God, that modern science developed. It led scientists to believe that nature is governed by universal laws, and that these laws can be captured and encoded in mathematical language.<sup>12</sup> Scientists attempted to do just this through the development of what is now called classical mechanics (CM). Many of its most famous proponents, including Isaac Newton, Robert Boyle and Gottfried Leibniz, were committed Christians who sought to formulate and interpret this new science in such a way as to be compatible with divine action. Newton, for instance, did this by combining the idea of the passivity of matter, from the school

of mechanistic physics, with that of active principles, from the Neo-Platonist tradition.<sup>13</sup> However, his later interpreters reduced these active principles to mechanistic phenomena, resulting in what is known as the 'Newtonian Worldview': a clockwork universe with a deist God, who either will not or cannot 'interfere'.<sup>14</sup> It is a supreme irony then, that despite its metaphysical underpinnings and the beliefs of those who developed it, CM was used to write God out of the picture.

But God is not so easily eliminated. Firstly, CM describes reality only at the level of secondary causes. Therefore, the possibility (or necessity) of God acting as the primary cause, to sustain and direct these causes, remains. Secondly, the laws of CM apply only to systems which are causally closed; however, this assumption is no part of CM, its being metaphysical, not scientific, in nature.<sup>15</sup> Therefore, if God acts in the world in such a way that is not consistent with the laws of CM, he does not violate these laws, since, at this point, the system is open.<sup>16</sup> It might be argued that by performing miracles, God would destroy the regularity upon which science is based; however, the rarity of miracles, together with the fact that they are not the acts of a capricious deity, but rather have a purpose, as discussed above, argue against this.

The picture is further complicated when we consider quantum mechanics (QM). Even in a closed system, QM is non-deterministic, so that we can only assign probabilities to the state of a system at any given time. Its implications for the present discussion depend heavily upon our interpretation. If we take an antirealist or 'soft realism' approach,<sup>17</sup> then the indeterminacy

may exist only at the level of the mathematical models, whilst the underlying reality remains deterministic. In this case, the above discussion concerning CM applies. However, if we take a realist interpretation, then reality itself is non-deterministic. In this case, intriguing possibilities arise. As before, QM only applies when the system is closed; however, God may interact in a special way even when the system is closed, choosing the state to which a system collapses from amongst the possible states predicted by QM.<sup>18</sup> God's action at the nanoscopic scale may then be amplified to the macroscopic scale by chaotic effects.

Whilst science has enriched the debate concerning God's interaction with the world, we are unlikely to reach a definitive conclusion in this life. Perhaps the most important thing is not that we reach a conclusion, but the way we go about our investigation, honouring God with our minds<sup>19</sup> and responding in awe and worship as his mystery unfolds.

*Paul A. Roberts, University of Oxford*

- 1: Gundry, S.N. & Jowers, D.W. (eds) (2011), *Four Views on Divine Providence*, 7 - 23, Zondervan.
- 2: Bacon, F. (1605), *Advancement of Learning*, quoted in: McGrath, A.E. (2011), *Christian Theology: An Introduction* (5th edition), 162, Wiley-Blackwell.
- 3: Is. 55:8.
- 4: E.g. Gen. 1:1; Ps. 33:6, 9; Jn. 1:3. Grudem, W. (1994), *Systematic Theology: An Introduction to Biblical Doctrine*, 262 - 267, IVP.
- 5: E.g. Eph. 4:6. Grudem, W. (1994), 267 - 271.
- 6: E.g. Col. 1:17; Heb. 1:3. Grudem, W. (1994), 316 - 317.
- 7: E.g. Eph. 1:11. Grudem, W. (1994), 317 - 331.
- 8: E.g. Ps. 103:19; Dan. 4:35; Rom 11:36. Grudem, W. (1994), 331 - 332.
- 9: Grudem, W. (1994), 319.
- 10: E.g. Ex. 7:3; Acts 2:22; 2 Cor. 12:12. Grudem, W. (1994), 355 - 375.
- 11: Grudem, W. (1994), 355.
- 12: Pearcey, N.R. & Thaxton, C.B. (1994), *The Soul of Science: Christian Faith and Natural Philosophy*, 21 - 37, Crossway.
- 13: Pearcey, N.R. & Thaxton, C.B. (1994), 79 - 95.
- 14: Pearcey, N.R. & Thaxton, C.B. (1994), 79 - 95.
- 15: Plantinga, A. (2011), *Where the Conflict Really Lies: Science, Religion, and Naturalism*, 65 - 90, OUP.
- 16: Plantinga, A. (2011), 65 - 90.
- 17: Ratzsch, D. (1986), *Philosophy of Science: The Natural Sciences in Christian Perspective*, Downers Grove, IL: IVP, quoted in: Pearcey, N.R. & Thaxton, C.B. (1994), 211.
- 18: Plantinga, A. (2011), 91 - 125.
- 19: Mk. 12:30.



Paul, presenting his paper at the Student Conference, 21/2/15

**INTERVIEW WITH BOB SLUKA**  
 Dr Bob Sluka has recently joined the CiS committee as the International Secretary, succeeding Prof Ard Louis in the role. Bob is a marine biologist and consults with a number of organisations, as well as being the lead scientist with A Rocha's Marine and Coastal Conservation programme. Emily Sturgess,

Christians in Science in collaboration with  
Nazarene Theological College present

NTC, Didsbury, Manchester, M20 2GU  
Saturday April 18th 2015, 10 am – 4:30 pm

For more information and booking,  
contact Lee Cook on [pa@nazarene.ac.uk](mailto:pa@nazarene.ac.uk)

*Speakers include:*  
Prof Tom McLeish, Prof David  
Watts, and Dr Althea Wilkinson

Towards a Theology of  
the Scientific Enterprise  
CIS NORTHERN CONFERENCE 2015

# GOD LOVES SCIENCE

the Development Officer, met him in Oxford to chat about his international life so far, and his hopes for his new role on the committee.

## **What is your story so far?**

I grew up in Detroit, the son of a fourth generation immigrant family, a typical American dream type of story. My great-grandparents were all born in Europe, primarily in the Czech area, and my Grandparents, born in the US, were workers. My dad was the first one to university, and I was the first one to go to graduate school. So living that dream, I went off to the University of Miami to study Marine Biology – which is a big story in itself. I had a love of the ocean from really early on, and started scuba diving when I was 13. I met my wife in Miami; she's an oboist, so a classically trained musician. I didn't even know what an oboe was, she had to tell me – I'm a bit of a Barbarian! We met and married there at the University of Miami, and had a great passion for serving people. We were really involved there with ministry at university, through Intervarsity, and then God called us to go overseas. So, in 1996 we left for the Republic of Maldives, and lived for about a year and a half in a little fishing village. Basically no one there had ever met a Christian before; it was an Islamic republic. We ended up having to leave there, and moved to India, and subsequently lived in South Asia for about ten years. Then, one of the charities we worked with wanted us to come here to England – their headquarters is here – so about nine years ago we moved into a little village in the Chiltern Hills, Chignor, and just really love getting involved there.

And that's where I came in contact with Christians in Science, and with A Rocha, so God really used being here in England to expand my thinking and really used CiS and A Rocha, both, to help me think about the science-faith issues in a way I never have before. So it's been a very exciting journey.

## **What do you do for fun? What are your major interests outside of work?**

I guess I would have to summarise: my family, really! We've got the four kids: a boy, 14, two girls, 12 and 11, and another boy, 8, so we're ferrying them around! But also playing with them – I've really taken to heart people saying when you're dying you're not going to regret time with your kids. So we go walking on the weekends, go camping and play games. The kids are into sports and music, and active in the local church. We've seen a lot of the UK: we've been here nine years and have been to Europe for only one day! All of our holidays have been in the UK, so we've tried to really explore, and love travelling around.

## **Who have been the most important role models in your life?**

Well, it'd be a cliché, but of course, my Dad. I think because of his faith, and he's always been there for me. My mum, as well, but my dad especially. I realised later what he was doing; that he was turning me onto people like Francis Schaeffer, with a more Philosophical way of thinking about the scripture. That led into many things, opening me up to a lot of things I learned here in England. And also, my Professor at University, her



was Kathleen Sullivan Sealey. She was also a Christian, Catholic background, and had a strong faith. The way she conducted the lab as a group, not independent, taught me a lot of things. I met her, actually, when I was at high school, at a visit to the university, and I went on a field trip with her to Australia for six weeks, so we camped out in the outback together. Then I became her PhD student, and we'd go off to remote islands in the Bahamas and live on boats. And when you spend a lot of time out in the field together...a lot of her rubbed off on me, and I appreciate that.

**What challenges, if any, have you come across as a Christian and a Scientist?**

I think what I would say is really hard right now is asking how do you be a good Christian partner with other researchers and organisations that haven't got a Christian ethos? How do you deal with people when you feel like maybe you're being taken advantage of? How to be free with your data, and sharing knowledge in a way that is really Christ-like? I think that is the struggle right now. I mean, we're doing really cool stuff with A Rocha, but how do you promote that without being so self-promoting that it turns into something that's un-Christian? A Rocha is somewhat unique in the Christian environmental world, where we're really trying to work hard with all the major non-Christian groups. So how do we partner when sometimes there are different values? It's not that everybody's bad, or being mistreated, but it's just learning to really live as a Christian in that environment; especially in giving up data, and letting people use it, and making sure people get credit even if you don't. And I guess suffering in some ways because of that.

**What science-faith book/resources have you most enjoyed or found most helpful?**

I thought about this, and it's going to be, maybe, a strange list, particular to my field. I think to me the science-faith dialogue has always been dominated by some basic questions which actually to me aren't that interesting. The interesting thing to me is: 'How do I be a marine biologist and a Christian?'

So for me, *Planetwise* by Dave Bookless was really important in the biblical understanding of taking care of the environment, and why marine conservation is actually worship to God. Another one was more on some of those traditional views - Simon Conway Morris's *Life's Solution*, which talks about convergence. That was really powerful; I was really taken by that

book. Another one was called *A Moral Climate* by Michael Northcott, which basically looks at the philosophical and theological thinking behind climate change issues, and it was really challenging to me because he's coming from a very different perspective which made me really



think. And lastly, and this is not specifically a science-faith book, but N.T. Wright's *Surprised by Hope*, because it was the thing that tipped me over into a paradigm-shift. With all the stuff I was hearing about in *Christians in Science*, and A Rocha, reading that book was like, 'Boom!', I'd put on a new set of glasses. It helps me to see the science world very differently, and really interpret it in terms of faith and especially related to the new creation kind of thinking. It was really huge, and significantly affects my science-faith understanding, even though it wasn't intended as a science-faith book.

**And finally, what are your hopes for your new role as International Secretary with CiS?**

I'm still really trying to figure out what the role entails; but I think, rather than trying to create some other things that we do and try to create something international, to me, we already do all this great stuff with *Christians in Science*, so we should ask how do we get that to an wider audience? I'm someone who is not British, and I've hugely benefitted. But, I've benefitted because I've been here in the UK, and there are people like me sitting in all these places around the world who could really be blessed, and their science and faith enhanced by the projects that we're already doing. So how do we extend the reach of CiS to different places and get access to these people? So that's something that I'll be hoping to explore in the next six months – how do we extend our reach and bring blessing to the ends of the earth, as Christ commanded, through what we're doing.

*This is an abridged version of the transcript - to read more, go to [www.cis.org.uk/resources/articles-talks-and-links/interviews](http://www.cis.org.uk/resources/articles-talks-and-links/interviews)*

## BREAKING NEWS

We are delighted to announce that the Templeton Religion Trust has taken the decision to award us a substantial grant for a new project entitled "Equipping and supporting the next generation of Christians in Science".

Further details will soon be on the website ([www.cis.org.uk](http://www.cis.org.uk)), and will include the proposal to appoint a new Executive Officer role, which will be advertised in due course.

## LOCAL GROUP NEWS

If you live somewhere that does not have a CiS local group but you wish it did, please get in touch with the Development Officer, ([emily@cis.org.uk](mailto:emily@cis.org.uk)) about starting up a new group in your area. Full event details are available at [www.cis.org.uk/events](http://www.cis.org.uk/events)

### ABERDEEN

A discussion group runs in Aberdeen. If you would like details of meetings please contact David Ely at [aberdeenlocalgroup@yahoo.co.uk](mailto:aberdeenlocalgroup@yahoo.co.uk).

### ABERGAVENNY

If you would like to get involved with the discussion group in Abergavenny, please contact Dr Huw Morgan at [jhcmorgan@gmail.com](mailto:jhcmorgan@gmail.com).

### BIRMINGHAM

During February, the Birmingham group hosted a lively discussion between Prof Andrew Steane and Prof Peter Atkins. If you would like details of future happenings in Birmingham please e-mail [bhamcis@gmail.com](mailto:bhamcis@gmail.com) or join the Birmingham CiS Facebook group [www.facebook.com/groups/cisbirmingham](http://www.facebook.com/groups/cisbirmingham)

### BRISTOL

The next Bristol group meeting will be on Thursday 4th June, when Ernest Lucas will speak on the Theology of Origins, at Tyndale Baptist Church. Contact Tina Biggs for more information ([cmdbiggs@googlemail.com](mailto:cmdbiggs@googlemail.com))

### CAMBERLEY

If you are interested in joining a group in Camberley, Surrey, please contact the Development Officer.

### CAMBRIDGE

For details of upcoming events in Cambridge please go to [www.st-edmunds.cam.ac.uk/faraday/Lectures.php](http://www.st-edmunds.cam.ac.uk/faraday/Lectures.php).

### CENTRAL SOUTH

If you would like more information about the group please go to our webpage or e-mail Peter May on [petergeorgemay@gmail.com](mailto:petergeorgemay@gmail.com)

### DUNDEE

For information about the Dundee group, please email [christiansinsciencedundee@gmail.com](mailto:christiansinsciencedundee@gmail.com).

### DURHAM

Contact Alan Roberts ([a.w.roberts@durham.ac.uk](mailto:a.w.roberts@durham.ac.uk)) for information about future events in Durham.

### EDINBURGH

If you would like more details about the group, please email Gavin Merrifield ([g.d.merrifield@gmail.com](mailto:g.d.merrifield@gmail.com))

### GLASGOW

For details of future events in Glasgow please contact Prof Paul Younger on [paul.younger@glasgow.ac.uk](mailto:paul.younger@glasgow.ac.uk)

### HARROW

For details of future events in Harrow please contact Revd Lyndon North ([revlnorth@aol.com](mailto:revlnorth@aol.com))

### IPSWICH

For information about future events in Ipswich please contact Dr John Ling ([jjling@btopenworld.com](mailto:jjling@btopenworld.com)).

### IRELAND

The 2015 Walton Lecture is: Dealing with Darwin: Place, Politics and Polemics in Christian Engagements with Evolution, and will be given by Prof. David Livingstone of the School of Geography, Archaeology and Palaeoecology at Queen's University, Belfast. Friday 24 April at Maynooth University. Upcoming lectures in our "God and Science Lectures" series are: The New Atheists by David Montgomery (Director, IFES Ireland) in Maynooth on Tuesday 14 April 2015; and Privileged Earth by Dr. Mart de Groot (Armagh Observatory) in Belfast on Tuesday 28 April 2015. Details about the upcoming events in Ireland can be found at [www.cis.org.uk/ireland](http://www.cis.org.uk/ireland)

### LEEDS

On Wed February 4th we were visited by Rev. Professor David Wilkinson, Principal of St John's College, University of Durham. The title of his talk was "Hawking, Dawkins and God: Science and Religion in the Media". His talk



very popular and was a great success. Further details of meetings from John Lockwood at [jglockwood1@me.com](mailto:jglockwood1@me.com)

### LIVERPOOL

The Liverpool group meet regularly at Saint Philip Neri, Catherine Street. Contact Neville Cobbe for more information ([Neville.cobbe@liverpool.ac.uk](mailto:Neville.cobbe@liverpool.ac.uk)).

### LONDON

For more details about the group contact Anna Pearson on [cins.london@gmail.com](mailto:cins.london@gmail.com)

### MANCHESTER

With the Nazarene Theological College, the Manchester group will be hosting the Northern Conference on 18th April (details overleaf). Please contact the secretary, Alma Budd on [sec.cismanchester@yahoo.co.uk](mailto:sec.cismanchester@yahoo.co.uk) if you would like more details about the Manchester group, or to be added onto the mailing list.

### NORWICH

Please contact [info@cis.norwich.org.uk](mailto:info@cis.norwich.org.uk) for details about upcoming events in the Norwich area.

### NOTTINGHAM

The Nottingham group meets regularly for discussion about science - faith topics. Please contact Geoff Bagley ([geoffbagley@me.com](mailto:geoffbagley@me.com)) if you would like further information.

### OXFORD

On Friday April 17th, Ruth Bancewicz of The Faraday Institute and Bob Sluka of A Rocha will present an evening on "God in the Lab - how science enhances faith". For information about the Oxford local group, contact Diana Briggs at [diana.briggs@wolfson.oxon.org](mailto:diana.briggs@wolfson.oxon.org)

### READING

The Reading group meets bimonthly in central Reading. Contact Dave Law for details on [dave@readingatwork.org](mailto:dave@readingatwork.org)

### ROYAL HOLLOWAY

This term the RH group are running "The God Question" series as an informal discussion group. For more information from the group at Royal Holloway, or to be added to their mailing list, please contact Oliver Edy on [Oliver.Edy.2012@live.rhul.ac.uk](mailto:Oliver.Edy.2012@live.rhul.ac.uk)

### SHEFFIELD

The Sheffield CiS group meets regularly for prayer and

discussion during the university term. They will be joined by Dr Ruth Bancewicz on Wed 22nd April. For details about happenings in the Sheffield area or to be added to our mailing list please e-mail [shefuni.cisc@gmail.com](mailto:shefuni.cisc@gmail.com), join our Facebook group [www.facebook.com/groups/shefuni.cisc/](http://www.facebook.com/groups/shefuni.cisc/) or see their website <http://sheffieldchristiansinscience.wordpress.com>

### SOUTH WEST

If you would like details about future events in the South West, please contact Prof. David Huntley ([dhuntley@plymouth.ac.uk](mailto:dhuntley@plymouth.ac.uk)).

### ST ANDREWS

St Andrews will be hosting Dr Rowan Williams on 'What is Consciousness?', on 13th April. For more info about the undergraduate group at St Andrews, please contact Dr Andrew Torrance ([abt3@st-andrews.ac.uk](mailto:abt3@st-andrews.ac.uk)) or Joshua Sharp ([jas29@st-andrews.ac.uk](mailto:jas29@st-andrews.ac.uk)). For more information about the postgraduate group, please contact Dr Rebecca Goss ([rjmg@st-andrews.ac.uk](mailto:rjmg@st-andrews.ac.uk)).

### SURREY

For more details about future events in the Surrey area please contact Joy Perkins at [joyeperkins@googlemail.com](mailto:joyeperkins@googlemail.com).

### TYNESIDE & NORTHUMBERLAND

For information from the group in the Newcastle area, please contact Bill Clegg at [bill.clegg@ncl.ac.uk](mailto:bill.clegg@ncl.ac.uk).

### WEST MIDLANDS

While this is not a CiS event, CiS members may be interested in the environmental conference that Godfrey Armitage is co-organising at Coventry Cathedral in September. For details, please go to [www.reconcilingawoundedplanet.com](http://www.reconcilingawoundedplanet.com). The West Midlands Group meets infrequently and people should contact Godfrey Armitage if they are local and interested at [g.n.armitage@warwick.ac.uk](mailto:g.n.armitage@warwick.ac.uk)

### WORCESTER

The Worcester CiS group welcome Rev Dr Paul Beetham on 17th March 2015 at 8.00 pm to present his talk, 'A Jubilee World View – Climate and Environmental Choices'. The talk will be held at Lindisfarne House, 4 Barbourne Terrace, Worcester WR1 3JS. More details can be found at the website <http://bibleandscienceworcester.org.uk/> or contact Dr Kim Stansfield at [kimestansfield@gmail.com](mailto:kimestansfield@gmail.com).