

Christians in Science and Technology

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ISCAST is a think tank of Christian academics, scientists, professionals and theologians who explore the interface and interactions between science & technology

with the Christian faith.

Making sense of faith in the age of science and technology

By Prof. John R Pilbrow

The following is an extract from a sermon preached at St.Paul's Cathedral, Melbourne on 16th August 2009 at a service celebrating National Science Week. The full text is available online.

When modern science originated in 'Christian' Europe some 500 years ago, people still accepted Ptolemaic cosmology believing the sun orbited the earth. This was considered biblical!! However new opportunities to explore the world began to open up and eventually Ptolemaic cosmology gave way to Copernican cosmology, where it is believed that planets orbit the Sun. We don't argue about that today, but the issues got Galileo [1564-1627] into a lot of hot water!

A century later, a true intellectual giant, Isaac Newton [1643-1727], arrived on the scene and showed that the new laws of gravity and planetary motion could be expressed mathematically, establishing mathematics as a natural language for physics.

Science depends on empirical observation, repeatable experiments, testing of hypotheses and establishment of theories that can both explain existing phenomena and predict new phenomena. Science explores what is the case, not what might have been, by investigating the regularities in a world that really exists. Scientific laws, which only make sense in an orderly universe, codify the regularities we find in nature, but they do not cause things to happen.

The practice of science is universal. Scientists come from all cultures and religious traditions - or even no religious tradition at all. They share one thing in common, a commitment to scientific methodology which has an important in-built safeguard - peer reviewing of scientific papers, in contrast to items in Wikipedia. Published science is not just somebody's opinion!

Science also depends on trust. Since it is impossible to know everything, even in a single discipline, we have to trust others. Although my own experience is laboratory-based, I am persuaded by what biology, geology and astronomy reveal about the world. On the basis of the evidence, Big Bang cosmology and biological evolution provide the best understanding of the nature of the physical world available today.

Charles Darwin arrived at his theory of 'descent with modification', or evolution, without being aware that Gregor Mendel, a Czech monk, had already discovered principles of inheritance that would have made his case even stronger! Long before the modern genetics revolution, evolutionary biologist and Russian Orthodox Christian, Theodocius Dobzhansky stated "Nothing in Biology Makes Sense Except in the Light of Evolution". The relative simplicity of the genetic code, common to all living organisms, shows how intimately linked we are to the rest of creation. In fact our genetic history is recorded in our genomes and we share half of ours with bananas and 98% with chimpanzees! Such knowledge does not in any way diminish what it means to be made 'in the image of God'.

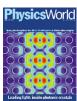
John Pilbrow is Emeritus Professor of Physics, Monash University.

In this Issue:

- News Items
- Journal Abstracts
- Upcoming Events
- More News Items

News Items

Items of interest to the interaction between science and Christianity and of significance to the ISCAST family. Your submissions of these are welcome.



John White in the UK Journal, Physics World, August 2000

Speaking at the opening ceremony for the new \$1.5 billion J-PARC facility, that consists of two protoron synchrotrons, a

neutron source and a neutrino experiment and a hadron facility all rolled into one, John White from the ANU and also past president of ISCAST, who was chair of the International Advisory Committee for J-PARC, praised the long term vision of the Japanese government and its "acceptance of world-leading science as an investment for the future...."



Associate Professor Alan Gijsbers to be the new ISCAST President

At its latest meeting the ISCAST Board asked Assoc Prof Alan Gijsbers to be its new President following Prof John Pilbrow who will be stepping down at the next

Annual General Meeting of the Institute on 20 September 2009 (at COSAC). More

www.iscast.org

News items continued next page...

News Items



The Stem Cell Debate

Denise Cooper-Clarke examines developments in the stem cell

debate in the latest issue of Engage Mail: President Obama and the Stem Cell Debate. What has changed? More



2009 "ALBERT EINSTEIN" World **Award of Science**

The 2009 "ALBERT EINSTEIN" World Award of Science will be presented to Professor Sir John Houghton, President of the John Ray Initiative. Sir Houghton was President of the Royal Meteorological Society from 1976 until 1978.



Series on "Life's Solution" at Jesus Creed

Dr. Scott McKnight from the respected Jesus Creed Blog at Beliefnet.com has just begun an interactive discussion series exploring Simon Conway-Morris' book "Life's Solution". **More**



CASE Training Sessions

The Centre for Apologetic Scholarship and Education (CASE) will be conducting two upcoming training sessions for those who would like to be able to

give talks on Christian ethics at the beginning and end of life. The two evenings of training will be held at New College Village, University of NSW on 23rd September and 3rd November and are open to all. More



Opinion: Do you believe in miracles?

Prof. Hugh McLachlan makes some thought-

provoking critiques of Hume and Dawkins and analyses the relationship between science and miracles in an opinion piece in the 5 August 2009 edition of New Scientist. More



Real Scientists, Real **Faith**

R. J. Berry's latest book "Real Scientists, Real Faith" is now available for purchase from Koorong and other local bookstores. More



Kepler telescope up and running

NASA's brand new Kepler space telescope has

the ability to demonstrated measurements that are precise enough to "prove we can find Earth-size planets", according to William Borucki, Kepler's principal science investigator. Kepler has just begun a 31/2-year mission to search for exoplanets and determine how common these planets are. More



Historian busts the medieval flat earth myth

Dr Karl Kruszelnicki examines the long-held myth that medieval Christians thought the Earth was flat in his July 22 article written for ABC Science. More



Scientists and astronauts implore Australia to reinstate **Spaceguard**

A group of concerned scientists and former NASA Astronauts has

written an open letter to the Rudd government urging the reinstatement of the Spaceguard Australia program and underscoring Australia's critical role in the worldwide planetary defence effort. More



Science and faith: the vantage point of one neuroscientist

William Newsome, University of California, San Francisco 2009. More



Science and Religion: Squabbling but loving cousins

Denis Alexander's in-depth review of the Darwin Festival in Cambridge (July 6-10) **More**



Religion Today --

Check out Science & Religion Today's sleek new redesign (and new Web address: www.scienceandreligiontoday.com). Now it's even easier to browse the stories, search the archive, and get involved in the conversation. More



Can Science and **Religion Co-Exist** in Harmony?

Some of the nation's

leading journalists gathered in Key West, Fla., in May 2009 for the Pew Forum on Religion & Public Life's Faith Angle Conference on religion, politics and public life. More



Obama will name Francis Collins as new NIH director

Former Human Genome Project leader Francis Collins will be nominated to

lead the U.S. National Institutes of Health (NIH). More



CASE Magazine: "God and Science"

The Centre for Apologetic Scholarship and Education (CASE) has just released its latest issue of CASE Magazine, dedicated to the

theme of "God and Science". More



Enhancing humans or a new creation?

Denis Alexander, June 2009

Enhancement involves giving abilities integral to the body beyond those we would

normally consider a human to possess. Transhumanism is an influential philosophy based on human autonomy in which enhancement technologies play a central role. More



Tom Frame -**Evolution** in the **Antipodes**

Tom Frame is an Australian academic and author of 23 books. He is a former Naval Officer and from 2001 - 2007 was Bishop to the Australian Defence Force. He has degrees in theology and history and is a regular commentator on ABC radio on military and church history as well as social matters. More

No access to the internet and want more information? Contact the ISCAST office (see back page) and we will forward it to you. Postage and handling fees apply.

Christian Perspectives on Science and Christianity: Journal Abstracts

The ISCAST Online Journal – Christian Perspectives on Science and Technology is a forum for those exploring the interaction between science, technology and the Christian faith. Submissions are invited and they may be academic articles, less formal discussions aimed at non-academic readers, opinion pieces, or book reviews. Articles and discussions will be refereed. The intended readers are Christians interested in science and technology, and scientists and technologists interested in the Christian faith. Specialist knowledge is not assumed. Below are selected abstracts from the journal. (see www.iscast.org/journalpage)



Review of Simon Conway Morris' Life's solution: Inevitable humans in a lonely universe

Cambridge University Press, 2003, 464 pp. ISBN: 0521827043, 9780521827041

Reviewed by

Robert Stening

Review extract

This book is written by a Professor of Evolutionary Biology who is also a convinced evangelical Christian. Page after page of intriguing scientific facts are built together to support Conway Morris's central thesis. He suggests that, if we were to examine the evolutionary process on an imaginary earth-like planet, Threga IX, situated far away from us, possibly in another galaxy, we would probably find beings very much like us living there. This is in direct contrast to the belief of Stephen Jay Gould, who proposed that living beings on Threga IX would be very different from us.

Conway Morris presents a book full of examples of how various organisms have developed the same properties independently, often in different isolated locations. The organisms were not similar because they were in the same evolutionary tree (phylogenetically related) but because the very structure of the Universe led them to evolve along similar paths to similar results.



Biotheology: Theology, Ethics and the New Biotechnologies

Brian Edgar, July 2009.

Author

Brian Edgar is the Professor of Theological Studies at Asbury Theological Seminary and a Fellow of ISCAST.

Abstract

This paper brings bioethics into line with biotechnology (which means extending the traditionally narrow definition of bioethics) and proposes a new field of biotheology as a theology of life which belongs alongside the more traditional sub-disciplines of systematic theology such as theological anthropology (doctrine of humanity), Christology, pneumatology and ecclesiology. An intentional focus on biotheology will enhance the understanding of the human person as a

part of the full spectrum of life created by God and it will provide greater form and depth to reflections on the diverse and difficult issues which biotechnology generates and with which bioethics needs to deal. The author proposes six biotheological principles which are designed to give ethical cohesion and theological structure to this new field.



Ethics in Research

Bruce Craven, December 2006.

Author

Bruce Craven was a reader in Mathematics at Melbourne University until retirement. Still active in mathematical research and writing.

Abstract

Some ethical questions in research are surveyed, including pressures on researchers, financial constraints, issues of quality and responsibility.



Climate change: problem or opportunity? Understanding

climate change in the context of the Gospel

Brian Edgar and Mick Pope, June 2009.

Authors

This is the text of part of an address given to the Synod of the Anglican Church in Tasmania on 2nd June, 2007 by Mick Pope of the Bureau of Meteorology, Melbourne and Fellow of ISCAST, and Brian Edgar, Professor of Theological Studies, Asbury Theological Seminary, Fellow of ISCAST. Parts A and C were written by Brian, Part B was written by Mick and Part D was a combined work.

Abstract

Climate change is a social, ethical and theological issue as well as a scientific one. It needs to be understood in the context of God's purposes for the world. Scientifically, it is important that the world take steps to reduce human induced greenhouse gases, globally, 30 to 60% reductions on 2000 levels by 2050 to stabilise at under 3o. An ecologically sound spirituality of creation will address the issue of human consumption and the use of resources. It will also deal with the nature of our spiritual relationship to Christ and creation. Climate change has the potential to help us enhance our understanding of 'stewardship as self-control' and to enhance our ethical thinking by moving beyond tribal understandings of moral responsibility. This has implications for, amongst other things, our understanding of nationalism, politics and the relationship of developed and developing countries. Climate change inevitably locates us within the broad context of the history of the world and civilization and challenges us to take on a moral responsibility for future generations. It raises questions of the purpose and meaning of life, into which a Christian eschatology has the opportunity to speak.



The Eureka Moment - A Reflection

James Garth

Author

James Garth [BEng (Aero) (Hons), MAIAA, AMRAeS] is a practising aerospace engineer and a member of ISCAST.

Article extract

Many scientists will be familiar with the concept of the 'Eureka Moment', that special point in time when you realize that you have discovered something special, an insight that adds to the sum of human knowledge, something unique that is verifiable and absolutely true. Engineers feel it too, in the sudden realisation that one's design is elegant and effective, and inherently works.

These deeply satisfying moments remain the holy grail of scientific endeavours. And yet, despite our best efforts, these moments remain stubbornly elusive, rare and unpredictable. The distinguished scientist Fred Hoyle once compared notes with Richard Feynman, and quizzed him about his own 'Eureka Moment' experiences.

'The elation lasts about 10 seconds in the short term and about three days in the long term', said Feynman. 'I've had three of them.'

(Pause.) 'Not much to show really, nine days' pleasure for a lifetime's work...'

Given the scarcity of such experiences, as scientists we may, like Feynman, sometimes wonder whether the whole enterprise is worth it. In many ways this is not unlike the dilemma faced by the religious believer, the person who eagerly seeks God but at the same time finds His transcendent presence intermittent, perhaps even elusive. I suggest that we can gain a couple of points of insight by comparing scientific 'Eureka Moments' with religious ones, as I think they have more in common than we might initially suspect.

Do you have an article to submit to Christian Perspectives on Science and Technology? Contact the editorial team via www.iscast.org/journalpage

Upcoming Events

Professor Simon Conway Morris Down Under

The following lectures will be presented by Professor Simon Conway Morris. FRS Cambridge University.

The topic is Darwin's Compass: How evolution discovers the song of creation.

More details on www.iscast.org/eventspage.

Public Lecture in Hobart

Date: Wednesday 16 September 2009 at 7.30pm

Venue: Stanley Burbury Theatre at the University

of Tasmania

Annual Lecture in Melbourne

Date: Thursday 17 September 2009 at 8.00pm

Venue: Glen Waverley Anglican Church, Glen

Waverley, Vic

Cost: \$15 (or \$12 concession for ISCAST

members, pensioners and students)

Order tickets from the ISCAST (Vic) Office or online at www.iscast.org/Annual Lecture Vic Tickets.

CEN Lecture* in Sydney

Date: Monday 21 September 2009 at 7.30 pm

Venue: Wesley Centre, 220 Pitt St, Sydney

Cost (on entry): \$20 (or \$15 concession for pensioners or students).

There will be an opportunity for discussion after the

*Organised in conjunction with CEN (Christian Education National) and CPX (Centre for Public Christianity)

There will also be a lecture held in Canberra.

Conversation in Federation Square

Guest participants:

Emeritus Professor John Pilbrow [by then -Immediate Past President of ISCAST]

Robyn Williams, Presenter of ABC Science Show

Archbishop of Melbourne's

Date: Wednesday 28th October at 7.30 am

on Radio National

COSAC 2009

Conference on Science and Christianity

18 - 20 September 2009

Christianity and the Origin of Species

Darwin 150 Years On

Venue: Geelong Conference Centre, Geelong, VIC

Keynote Speaker:

Prof. Simon Conway Morris Professor of Evolutionary Palaeobiology, Cambridge University. Fellow of the Royal Society

Call for Presenters:

Submissions to present papers at this year's conference are welcome. Responses can be submitted online.

For more information visit: www.iscast.org/cosac 2009











More News Items



Wedding Congratulations

Congratulations to Patsy and Sean who celebrated their marriage on 23 May 2009 at

Glen Waverley Anglican Church.

Patsy is the Chair of ISCAST's Communications Working Group, the body responsible for oversight of this website and other things communicative.

ISCAST Podcast

Selected ISCAST lectures are available as a podcast! Click here to access the podcast via the iTunes store.

Baby Congratulations

James and Belinda are proud to announce that Daniel James Garth was born on Friday 3rd July at 11:20pm weighing 6lb 14oz. Belinda is doing well and Wesley is delighted to have a new baby brother!

James is the Project Officer for the ISCAST Website.

Interview on ABC Radio

Prof John Pilbrow, Assoc Prof David Young [Melbourne University] and Dr Nicola Hoggard-Creegan [Laidlaw College and Carey Graduate School, Auckland, NZ] will be interviewed on John Cleary's Sunday Nights program on ABC 774 from 10 pm on Sunday 20th September.



This is an official organ of ISCAST (The Institute for the Study of Christianity in an Age of Science and Technology, a not for profit organisation registered in New South Wales, Australia).

It is published quarterly in both hard copy and digital formats. It includes news items of relevance to both the ISCAST family and to the engagement of science and Christianity in Australia, New Zealand and elsewhere.

It also includes abstracts of articles submitted to "Christian Perspectives on Science and Technology" ISCAST's online journal and the latest information of events hosted by ISCAST Chapters around Australia and New Zealand.

Items published on the ISCAST website and in this Digest explore the interaction between science and the Christian faith and will be published to foster the discussions and debate. ISCAST cannot endorse any or all of the opinions expressed here.

Details of events published will be correct as at the date of publication but you are encouraged to check the website or with the relevant contact before the event.

Hard copy versions of the Digest are available at the cost of \$10 pa and subscriptions can be arranged by contacting the ISCAST Victoria

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