Introductory resources for the interaction of science and Christianity

Steve Bishop

The following list of resources is intended to facilitate the study of the interaction of science and Christianity. It is not an exhaustive list. I apologize for its far too British flavour.

Bibliographies

Includes, as an addendum, a bibliography by John C. Sharp. Works cited there will not be included in this listing.

Available from CISE, split into eight categories, including Miracles, Evolution, The nature of human personality and Environmental issues.

Contemporary Issues in Science and Christian Faith: An Annotated Bibliography
This resource book is published by the American Scientific Affiliation. It includes a list of video and audio tapes and a list of speakers, as well as hundreds of books.

Isis: an international review devoted to the history of science and its cultural influences
The final issue of the journal Isis each year carries an extensive bibliography, one section of which lists journal articles and books that deal with the historical aspects of science and faith.

J.M. Kerr, 'Bibliography: Cosmology and theology', *Modern Churchman* Vol. 32 (3) (1990–91), pp. 64-70
A useful article dealing with recent cosmological books and how they relate to theological issues.

Contains an extensive bibliography (c. 1300 works) which takes up almost half the book.

An international 'User's Guide' to people, organizations and journals active in the science-theology dialogue.

Christian works: books and articles

Serious works: books

Examines, and finds deficient, the claim that science and religion are two distinct realms of thought that have no bearing on each other.


Religion in an Age of Science (SCM, 1990)
The first volume of the 1989–91 Gifford Lectures.

Oliver R. Barclay (ed.), *Christian Faith and Science* (UCCF, 1988)
A collection of papers presented to various Christians in Science conferences. (Previously published as *Science and Christian Belief* in 1985.) Contributors include: Boyd, Hooykaas, MacKay, Russell and Tyrell.

A 'historically based commentary' on the relationship between science and religion. Finds the 'conflict' and 'harmony' models inadequate and suggests that 'theological and scientific concerns have been mutually relevant in the past'. Also contains an extensive bibliographic essay.

Vincent Brummer (ed.), *Interpreting the Universe as Creation: A Dialogue of Science and Religion* (Kok Pharos, 1991)

—, *Cosmos and Creator* (Scottish Academic Press, 1980)
—, *The Purpose of It All* (Scottish Academic Press, 1990)
Jaki is both a scientist and a theologian, and has doctorates in theology and physics. He is Distinguished University Professor of Seton Hall University in New Jersey and specializes in the history and philosophy of science. A full bibliography and an introduction to Jaki’s writings has been written by P.E. Hodgson: *Science and Theology: An Introduction to the Writings of Stanley L. Jaki* (Science and Theology Seminar Papers No. 3, Farmington Institute, 1987). See also ‘Theologian–physicist: Stanley L. Jaki’, *Occasional Papers* No. 24 (Farmington Institute, nd (1988?)).


Includes a 12-page bibliography split into historical periods.

Examines the response by evangelicals to evolution in the 19th century.

Eighteen of Professor MacKay's essays are gathered together here. MacKay was an advocate of complementarity as a description of the relationship between science and Christianity.

—*Behind the Eye* (Blackwell, 1991)

MacKay's 1986 Gifford lectures, published posthumously.


This book is the result of a consultation organized by the Lutheran Church in America in 1987.


—(ed.), *The Sciences and Theology in the Twentieth Century* (Oriel Press, 1981)

—, *God and the New Biology* (Dent and Son, 1986)

—, *Theology for a Scientific Age: Being and Becoming – Natural and Divine* (Basil Blackwell, 1990)


John Polkinghorne, *One World* (SPCK, 1986)

—, *Science and Creation: The Search for Understanding* (SPCK, 1988)

—, *Science and Providence: God's Interaction with the World* (SPCK, 1989)

These three books represent a trilogy from the pen of a former Professor of Mathematical Physics, now an Anglican priest. Polkinghorne's work is very important; however, I find his explanation of reality as a 'noetic world' – a complementarity world of mind – matter – and his view of humans as mind/matter amphibians unsatisfactory.

—, *Reason and Reality: The Relationship between Science and Theology* (SPCK, 1991)

More heavyweight than his 'trilogy', and deals in more detail with some of the issues raised there.


A book for the layperson on the history of science, written from a Christian perspective.


Angela Tilby, *Science and the Soul: New Cosmology, the Self and God* (SPCK, 1992)


—, *The Ground and Grammar of Theology* (University Press of Virginia, 1980)


A full bibliography of Torrance's work is to be found in: *Torrance Scottish Journal of Theology* 43 (1990) pp. 225-262.


A collaborative volume produced under the auspices of the Calvin Center for Christian Scholarship. This is the best book on the relation of modern cosmology and contemporary natural science (astronomy and geology particularly) 'to the biblical account(s) of creation' (Langdon Gilkey). Contains a critique of 'creation science' and an illuminating discussion on the interpretation of the first few chapters of Genesis.


One of a series sponsored by the Christian College Coalition. 'The book... is the outcome of the honest struggle of a devout Christian and skilled biologist to arrive at wholeness, integrity – to arrive at the point where he sees how his faith and his biology fit together' (Nicholas Wolterstorff, in the Foreword).


**Popular and introductory books**

R.J. Berry (ed.), *Real Science, Real Faith* (IVP, 1991)

A number of scientists who are Christians explain how science and their faith cohere.


An apologetic written to answer the questions that arise from the science-faith debate. The Christian authors accept a rationalistic Baconian view of science. Contains 17 pages of bibliography.


An accessible introductory work.

Peter Hodgson, *Christianity and Science* (Oxford University Press, 1990)

A short but helpful introductory booklet, aimed at sixth-formers.


'The exploration of this book brings together, so far as I am able, two important strands of my life – namely my experience and my career as a physicist and my experience as a Christian' (the author, p. 9).


An examination of Genesis 1-11 in the light of science.

Mike Poole, *A Guide to Science and Belief* (Lion, 1990)

Highly illustrated, popular treatment aimed at school pupils.


**Journals**

The following journals are largely devoted to the relationship between science and religion:

*Perspectives on Science and Christian Faith* (formerly *Journal of the American Scientific Affiliation*)

Published by the American Scientific Affiliation, Box 668, Ipswich, MA 01938, USA

*Science and Christian Belief*

'A journal concerned with the interactions of science and religion, with particular reference to Christianity.' Published on behalf of Christians in Science and The Victoria Institute by the Paternoster Press, Paternoster House, 3 Mount Radford Crescent, Exeter EX2 4JW. Recent issues have included articles by C.A. Russell, D.M. MacKay, R.J. Berry, J. Polkinghorne and A.R. Peacocke. Also has a useful book review section.

*ZYGON* (subtitled: *Journal of Religion and Science*)

Joint Publication Board of Zygon, c/o Rollins College, Winter Park, FL 32789, USA

*Progress in Theology*

A recently launched quarterly newsletter produced by the Templeton Foundation's Center for Humility Theology.
Robert L. Hermann is the editorial coordinator. The newsletter seeks to 'promote greater awareness of the impact of new developments in the sciences on traditional religion, and to encourage a more open and experimental approach in theological thinking to both theologians and scientists'. Editorial offices: P.O. Box 668, Ipswich, MA 01938, USA.

Also of interest is the Expository Times. C.S. Rodd the editor has an interest in the subject and often his 'Talking Points from Books' section deals with recent relevant publications. See, for example:

Vol. 97 (May 1986) review of Polkinghorne's One World;
Vol. 99 (June 1988) reviews of Spanner, Biblical Creation, Berry, God and Evolution, and Livingstone, Darwin's Forgotten Defenders;
Vol. 100 (July 1989) reviews of Polkinghorne's Science and Providence and Johnson's Genesis, Geology and Catastrophism;
Vol. 102 (August 1991) review of Polkinghorne's Reason and Reality;


The British Journal for Religious Education has devoted an issue to science, technology and religion: Vol. 13 (1) (1990). It contains articles by Mike Poole, Helmut Reich and Russell Sannard, among others.

'Physics and faith' was the subject of a special feature in Physics Education Vol. 22 (1) (1987). This included articles by John Polkinghorne, Mike Poole and Colin Russell.

Articles

A number of relevant articles written from a Dooyeweerdian (Reformational) perspective are available from the Institute of Christian Studies, 229 College St, Toronto, Ontario, M5T 1R4, Canada:

W. Brouwer, 'Christian commitment and scientific theories' (ICS, nd (1977))
Tim Delagar-Seerveveld, 'Gene's anti-reductionist ontology: an inquiry into the foundations of biology' (ICS, 1982)
J.H. Diemer, 'Miracles happen: toward a biblical view of nature' (ICS, nd)
T.H. Leith, 'Faith and scientific theory' (ICS, 1985)
Del Ratzsch, 'Abraham Kuyper's philosophy of science' (ICS, 1987)
Egbert Schuurman, 'Technology in a Christian—philosophical perspective' (ICS, 1979)
Robert E. VanderVen, 'Reflections on Christianity and chemistry' (ICS, nd)

Also written from a Dooyeweerdian perspective is a valuable series of unpublished papers by Dr Arthur Jones; these are available from Dr A.J. Jones, Oak Hill School, 16 Cotham Park, Cotham, Bristol BS6 6BU, UK:

'Science in faith: an outline of a Christian approach to science teaching' (1992)
'Discarded images: An introduction to the philosophical commitments that have shaped Western science through more than two millennia' (1991)
'Connectedness and continuity: the pagan roots of evolution' (1990)
The Galileo affair: modern myth and ancient idolatry' (1991)

Denis Alexander, 'Science and scientism', Third Way Vol. 16 (1) (February 1993), pp. 21-25


William Lane Craig, 'God, creation and Mr Davies', British Journal for the Philosophy of Science Vol. 37 (1986), pp. 163-175


—, 'What place, then, for a creator?': Hawking on God and creation', British Journal for the Philosophy of Science Vol. 41 (1990), pp. 473-491


—, 'Science and Christianity', Expository Times Vol. 85 (March 1974)

P.E. Hodgson, 'The implications of quantum physics parts I—IV, The Month (1984); also available as The Science and Theology Reprint Seminar Papers No. 1 (Farmington Institute, nd)

—, 'Science and creation', Occasional Papers No. 17 (Farmington Institute, nd)

—, 'Pierre Duhem: historian of the Christian origin of science', Occasional Papers No. 30 (Farmington Institute, nd)


—, 'God, GUTs and gurus: the new physics and New Age ideology', Themelios Vol. 16.3 (1991), pp. 4-7


James Moore, 'Speaking of "science and religion" — then and now', History of Science Vol. 30 (1992), pp. 311-323

John Polkinghorne, 'Not just any old world', The Tablet 23 (January 1993), pp. 102-103


—‘Beliefs and values in science education: A Christian perspective’ (Parts 1 and 2), School Science Review Vol. 71 No. 256 (1990), pp. 25-32; No. 257, pp. 67-73
—‘Life and soul of the universe?’, Third Way Vol. 15 No. 5 (June 1992), pp. 23-25


**Philosophy of science: Christian and non-Christian**

Important works by Harre, Kuhn, Lakatos, Polanyi, Popper and Toulmin were cited in John Sharp’s bibliography. Specifically Christian works are denoted by an asterisk.

Baruch A. Brody and Richard E. Grandy (eds.), Readings in the Philosophy of Science (Prentice Hall, 1989)
A useful selection of primary sources. Split into four sections: Theories; Explanation and causality; Confirmation of scientific hypotheses; Selected problems of particular sciences.

—*Science and its Fabrication* (University of Minnesota Press, 1990)
The latter elaborates on the former’s critical scrutiny of science. In it he develops his own understanding of science that stands midway between glorification and denial. The former provides a valuable introduction to the philosophy of science.

Superlatives fail when describing this book! A powerful exposé of the myth of neutrality, it also shows how a distinctive biblical perspective for theorizing can work.

From ‘analogy’ to ‘vitalism’: each entry has a useful list of references and sources of additional information.

Paul Feyerabend, *Against Method* (Verso, 1975)
Outlines Feyerabend’s anarchistic philosophy of science: there is no scientific method and anything goes.

Aims to develop a ‘constructive empiricist’ alternative to scientific realism.

Explores the interplay between science and philosophy.

Provides a defence of realism, which it splits into two parts: realism about entities and realism about theories.

*Clarence W. Joldersma, Beliefs and the Scientific Enterprise* (M.Phil. thesis) (Institute for Christian Studies, Toronto, 1983)
Provides a valuable summary of Kuhn, Polanyi and Gerard Radnitzky, and then develops a composite model of the scientific enterprise. Has a useful list of primary and secondary sources.

An introductory work, suitable for the non-specialist.

A valuable set of readings focused around four issues: explanation; the validation of scientific knowledge; historical development of science; and realism versus anti-realism. Includes articles by van Fraassen, Toulmin, Popper, Duhem, Lakatos, Kuhn, Laudan and Hacking.

‘In sum, this is a book about the role of cognitive values in the shaping of scientific rationality’ (p. xii).

Provides an overview of the realism/anti-realism debate, with contributions from McMullin, Putnam, Hacking, Laudan and van Fraassen.

John Losee, *Philosophy of Science and Historical Enquiry* (Clarendon, 1987)
Explores the relationship between philosophy of science and history of science.

Contains the responses of 60 scientists on six key questions, including ones on the relationship between science and religion, and their view of God.

*J.P. Moreland, Christianity and the Nature of Science: A Philosophical Investigation* (Baker, 1989)
Comes to the conclusion that science has no method or definition, and develops an eclectic approach to the realism/anti-realism debate. Has an invaluable 13-page bibliography.

Useful criticisms of Popper, Kuhn, Feyerabend and Lakatos.
He defends a realist or ‘temperate’ rationalist view of science.

A mammoth compendium dealing with all aspects of science. Includes articles by John Hedley Brooke on science and religion and David Livingstone on geology, as well as important summaries of the history, sociology and philosophy of science by acknowledged experts in the field.

*Ted Peters (eds.), Cosmos as Creation: Theology and Science in Consonance* (Abingdon, 1989)
The various authors, who include Peacocke, Barbour and Pannenberg, deal with issues such as cosmology, creationism and the big bang.

*Del Ratzsch, Philosophy of Science: The Natural Sciences in Christian Perspective* (IVF, 1986)
‘The purpose of this volume is to give Christians an initial understanding of what natural science is, what it can do, how and why it works, and what it cannot do’ (p. 11).

Has chapters on modern physics, biology and psychology.

Provides an excellent introduction to the thought and work of Michael Polanyi.
T.D. Singh and Ravi Gomatam (eds.), *Synthesis of Science and Religion: Critical Essays and Dialogues* (The Bhaktivedanta Institute, 1987)

An interesting collection of 32 essays and four interviews, many of which were presented at the World Congress for the Synthesis of Science and Religion, Bombay, January 1986. The diverse participants/authors include the Dali Lama, Brian Josephson, Harvey Cox, Jurgen Moltmann and Fritjof Capra.


The sub-title provides an adequate summary; Stafleu offers a Dooyeweerdian perspective on theories.

**RECOMMENDED:** Chalmers (1976); Clover (1991); Hacking (1983); Joddenma (1983); Kounany (1987); Moreland (1989); Newton-Smith (1981); Olby et al. (1989); Ratzsch (1986); Stafleu (1987).

**Organizations**

American Scientific Affiliation P.O. Box 668, Ipswich, MA 01938, USA. The purpose of the ASA is 'to investigate any area relating Christian faith and science' and 'to make known the results of such investigations for comment and criticism by the Christian community and by the scientific community'. They publish a journal (see above, p. 17), a bimonthly newsletter and an occasional publication: *Search: Scientists Who Serve God*.

**Christians in Science** c/o UCCF, 38 De Montfort St, Leicester LE1 7GP. Formed in 1943 as The Research Scientists’ Christian Fellowship; today its membership is open to ‘all Christians with a scientific training or a professional interest in science’. They produce a biannual journal, together with the Victoria Institute: *Science and Christian Belief*. Two subgroups of the CIS have been established: Christians in Science Education and History and Philosophy of Science Group:

- **Christians in Science Education** John Bausor (secretary), 5 Longcroft Road, Edgware, Middlesex HA8 6RR. Produce a twice-yearly newsletter.
- **History and Philosophy of Science Group** Rev. Michael Roberts (group secretary), The Vicarage, Chirk, Wrexham, Clwyd LL14 5HD.

Farmington Institute for Christian Studies Manchester College, Mansfield Road, Oxford OX1 3TD. Produces a number of publications which occasionally deal with science and religion.

**Society of Ordained Scientists** Secretary: Rev. Derek Leyland, St Helen’s Vicarage, Churchtown, Garstang, Lancs PR3 0HS. Originally a ‘society’ of scientists who are also ordained Anglicans, it is now open to all ordained ministers of the church. A newsletter is published three times a year.

**Creation science**

**The advocates**


J. Kerby Anderson and Harold G. Coffin, *Fossils in Focus* (Zondervan/Probe, 1977)

John M. Moore, *How to Teach Origins* (Without ACLU Interference) (Mott Media, 1983)


**The critics**


Ashley Montagu (ed.), *Science and Creationism* (Oxford University Press, 1984)

Robert E. Snow, ‘A critique of the creation science movement’, in *Portraits of Creation*, H.J. van Till et al. Suggests that there might be two kinds of ‘creationists’: the extremists, e.g. Moore and Morris, and the moderate and balanced, e.g. Friar and Davis.

Howard J. van Till, Davis A. Young and Clarence Menninga, *Science Held Hostage: What is Wrong with Creation-Science AND Evolutionism* (IVP (USA), 1988)

**Science, technology and Christianity**


—, ‘The religious dimension of technology’, *RE Today* Vol. 10(3) (Summer 1993)


An indispensable book.

Carl Mitcham and Jim Groote (eds.), *Theology and Technology: Essays in Christian Analysis and Exegesis* (University Press of America, 1984)

Has an extensive annotated bibliography, as well as containing articles by Ellul and Schuurman among others.


A study book; each chapter comes with suggestions for study and reading.


**Organizations**

Society, Religion and Technology Project Church of Scotland, Department of Ministry and Mission, 121 George Street, Edinburgh EH2 4YN, Scotland

Beliefs and Values in Technology Education Ruth Conway, Coordinator, Selly Oak Colleges, Birmingham B29 6LQ

A network for those interested in technology, values and religion.