

NOTES ON SCIENCE AND CHRISTIAN BELIEF

By Professor Allan J Day

With contributions by others as listed under Chapter Headings

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Edited by Bruce Craven and John Pilbrow

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PREFACE

Over the last decade or so an increasing interest in the relationship between science and religion has developed. This has resulted in the proliferation of courses in science and religion at many tertiary institutions and the appointment of senior academics to positions in this area. Oxford University e.g. appointed its first Professor of Science and Religion within the Faculty of Theology in 1999.

The interest in this area has also been stimulated by the active financial support of the John Templeton Foundation. The Foundation awarded 100 Course Awards annually internationally for courses in Science and Religion over a five year period from about 1998 until 2002.

These notes form the basis of one such course in Science and Christian Belief conducted as part of the Ridley College Certificate of Bible and Ministry in Melbourne, Australia. They are intended to give a basic understanding of the issues raised by modern science and of the relationship of these issues to the Christian Faith. They cover briefly the historical background of the development of science and the interaction of such development with religious faith. They also address some of the philosophical issues with respect to religious and scientific knowledge and consider some of the positions that have been taken by various groups with respect to the science faith interface.

On this basis they explore the implications for theology of discoveries in modern science – important among these are the recent developments in cosmology and biology. Some of the misconceptions commonly held by secular humanists, by the general public and also by many Christians, with respect to the relationship between science and faith are considered.

The approach to Science and Faith is presented in a way that is consistent with both scientific integrity and Biblical authority. These notes are designed for both science and theological students as well as teachers who encounter these issues. Indeed our hope is that they will be useful to any who have an interest in the rapidly growing interface between science and religion.

The notes are also very much a work in progress. We recognize the cryptic format of some material and also that thinking evolves as new issues emerge. It is our intention to review these notes regularly and update them as the opportunities permit and in response to feedback.

These introductory notes, originally mostly written by Allan J Day in 2001, have been edited recently by Dr Bruce Craven and Prof John Pilbrow.

CHAPTER HEADINGS AND OUTLINES

Science and Christian Belief - Introduction to the Issues

Allan J Day

This provides a brief introduction to the relations between science and spirituality, and the diverse attitudes that some have taken. The following chapters explore these questions in detail.

1. Historical Overview – From Aristotle to the 18th Century¹

Jonathan D A Clarke and Allan J Day

Chapter 1 surveys the various ideas held, from ancient Greece to the 18th Century, concerning the natural world and its relation to theological ideas. Points of note are Galileo's exposition of the relation between the bible and the book of nature, ideas of a mechanistic universe from Newton onward, and questions of the age of the earth, leading up to Lyell's uniformitarianism.

2. Darwin and the Aftermath – Science and Faith in the 19th & 20th Centuries

Allan J Day

Chapter 2 continues the story, to Darwin's *Origin of Species*, and the various reactions to it. There was then no united opposition to evolution by Christian thinkers; attitudes varied. Only much later did the "young earth" viewpoint and many other anti-evolution positions become an article of faith for many Christians.

3. God's Interaction with the World— Some Metaphysical Considerations

Jonathan D A Clarke & Allan J Day

Chapter 3 outlines various "world views" on the relation of the natural world to divinity, or to the belief that there is none. Of note here are "naturalism", the belief that the physical world is all there is, "deism", that God set the world going and then left it alone, and "theism", that God is constantly active in the world.

4. Rational Inquiry – Science and Theology and their Limitations

Allan J Day

Chapter 4 discusses the limitations of science and of theology. In particular, what is scientific knowledge, what are scientific theories? Science describes truth, and does not prescribe it; and scientific knowledge is not the only kind of knowledge. What is theology, and what is meant by verifying a theological theory? Theology of "motivated belief", not just "subjective perception".

5. Ways of Relating Science and Faith

Allan J Day

Chapter 5 discusses ways to relate science and faith under the headings of conflict (scientism, creationism), separation, complementarity, integration (assimilation), and rejection (new age).

¹ Throughout we will use 19thC and 19th Century etc. interchangeably.

6. Cosmology, Creation and the Biblical Record

Allan J Day & John R Pilbrow

Chapter 6 discusses the biblical doctrine of creation in relation to the scientific picture of origins, as in modern physics and cosmology. Many recent viewpoints are surveyed, as well as the implications for God's continued activity, and some analysis of creation in Genesis.

7. Evolution and Creation

Allan J Day

Chapter 7 on evolution and creation, considers evolution by natural selection as a proposed mechanism, to be assessed on scientific grounds, whereas creation should be judged on theological and biblical grounds.

8. The Nature of Humanity

Allan J Day

Chapter 8 discusses the nature of humanity, with regard to the genetic code and neurophysiology, and also to biblical anthropology, regarded as a complementary approach, also valid.

9. Genetics, Reproductive Technology and Ethics

Allan J Day

Chapter 9 discusses genetics in relation to reproductive technology, and the consequent ethical questions.

10. The Earth and Its Environment

Ross H. Macmillan

Chapter 10 discusses the earth and its environment, with regard to the various understandings of the earth, and the several attitudes that may be taken to environmental questions (including utilitarian, conservation, sustainable development), and a theology of stewardship.

INTRODUCTION TO THE ISSUES

1. Allan J Day — Personal Background

At the time these lectures were last presented in 2001, Professor Allan Day had for 50 years a shared commitment to both science and Christianity. He had had time therefore, to think through and integrate the issues of science and Christian faith. In expressing a personal faith in Christ and pursuing a scientific career he found himself in the company of many scientists both in the past and in the present who have found no problem in being both scientists and Christians.

He argues that there is no need therefore for anyone to sacrifice intellectual integrity or to be embarrassed in having a Christian faith and in espousing a scientific approach to the world.

2. Issues That Need To Be Addressed

This is not to deny however that there are issues that need to be addressed and this is what this course is all about. Many of these issues have arisen as a result of the separation of science from theology. This separation was part and parcel of the development of modern science in the 16-17th Centuries and in some ways led on to the dominance of a secular world view, particularly over the last 150 years. This development was not intrinsic to the nature or practice of science, but rather of the way it was perceived by many as a dominant (or even exclusive) way of knowing about the world. These perceptions need however to be critically reviewed.

There are many misconceptions held by both non Christians and Christians about these matters that lead to unnecessary problems. We will attempt therefore, in the sessions that follow, to try and resolve some of these problems and misconceptions.

3. Fundamental Premise

As was expressed by some of the founders of the modern scientific movement, such as Francis Bacon and Galileo, we need to assert that God is the author of all truth, scientific and biblical. Scientific truth is the truth about nature read in the "Book of nature" while biblical truth is the truth about God read in the Scriptures. This separation was part and parcel of the liberation of science from medieval science and encapsulated in the comment of Galileo that

"The bible tells us how to go to heaven not how the heavens go".

This well known metaphor of the two books taken up by both Bacon and Galileo however also indicates that there can be *no conflict* between the truths derived from the respective approaches. If there is *apparent* conflict we need to re-look at our *interpretation* of both.

HISTORY OF SCIENCE

1. Origin of Science

The development of modern science presupposed a God of order who created a world that was contingent on His will and therefore could be explored by experiment, not just discovered by reason alone. The world was conceived as part of God's creation, not divine in itself.

2. Science as a Religious Activity

Many early scientists were devout Christians, who saw their science as an expression of their faith, as a way of exploring God's ways in nature. This object is expressed in the Charter of the Royal Society, the first of the scientific societies, founded in 1662, as the account of its first historian, Spratt, records.

MISCONCEPTIONS

There are conceptual problems about the relationship of science and faith held by non-Christians, including secular humanists, but also by many Christians. These misunderstandings need to be addressed if we are to understand the proper approach to science and belief. We cannot prove or disprove God by science, but we do need to see the logical issues and the mistakes made which have resulted in some false understandings.

We will consider seven misconceptions.

1. *That Science Does Away with the Need for God*

This is the secular humanist argument, i.e. God is a "God of the Gaps". Faith is a medieval construct, made redundant by scientific explanations.

History of the enlightenment

Medieval science did not separate primary and secondary causes — God was the ultimate cause. Now, it is reasoned, phenomena can be better explained by science. Thus God is envisaged as a 'stop gap' explanation — evidence of our previous ignorance, e.g. lightning — Act of God/static electricity. Laplace stated there was "no need of that hypothesis".

God of the gaps — A shrinking God

This represents a mistaken concept of God, an inadequate view of God. "A God who is too small". It reduces God to a secondary cause. It is not the Christian God. The God of theism is envisaged as being ultimately responsible for all of nature ("He makes the grass to grow"), but whose actions are described by scientific laws discoverable by science.

Evolution/Creation issue

This is well illustrated by the evolution-creation debate. The failure to distinguish God as the primary cause and evolution as a secondary cause investigated and decided by science.

As Christians we can allow for a full explanation of natural events in scientific terms — this does not constitute a threat to faith. God is not threatened by "our explaining him away". What is threatened is our **concept** of God, a God of the gaps made in our own image.

2. *That Science and Faith Are Incompatible.*

That they are strange bedfellows and cannot co-exist. **Thus it is assumed that only the material is real.** The only real knowledge is obtained by what we can observe, by the scientific method. Cf. Medawar.

There are, however, other views of reality. e.g. "Religious or aesthetic or moral experience" is real.

Science is concerned with "how" questions. By observation and experiment. Its information is thus limited by its method.

Faith asks "why", "who" questions. The two complement each other cf. relationships, painting, SOS. Represent different "windows" of information. A different approach to reality — "complementary".

Science needs Theology for a full explanation i.e. Science generates "why" questions, but cannot answer them.

Questions posed by the new physics e.g. quantum physics and relativity. Where do the "laws of physics" come from? The role of "purpose", "elegance", "design". These all raise issues beyond physics or metaphysics.

3. That Christian Faith Is Irrational – Superstition

But the Christian faith is based on rational data. It can be investigated.

Death/resurrection events. Historic facts of the gospel and the Old Testament, and one can approach this with reason.

However faith goes beyond, but faith and sight are the poles of faith and truth. We can observe facts, draw conclusions - gives a basis for faith.

Atheism is just as much an act of belief — no more logical. i.e. We can choose to believe/disbelieve — one is not more logical.

4. That Science Is Determinist

Preset — rigid i.e. There is no basis for God to interact.

Newtonian science certainly presented a determinist world, with God as a "watchmaker" — Deism.

Now replaced by Einsteinian physics. Einsteinian science — quantum — "open systems", world of probabilities. Indeterminism e.g. Chaos and the butterfly effect, therefore less certainty — chance.

God interacts with his world — prayer/providence. See Polkinghorne (1989).

5. That Science Can Prove God

Many Christians consider science proves God — the argument from design. This is over-optimism. It can also be used to replace God. Deism etc. The new physics does not prove God. Ps. 8 "The heavens declare the glory of God ..." but as seen by the worshipper.

Problems of natural theology.

Cannot discover God by reason alone. We are both finite and sinful, cf. Rom. 1:18ff.

Therefore do not overrate science.

It raises questions, but faith extends it.

Scientists are both non-Christian and Christian — neither standpoint is more logical but we acknowledge God "by faith" cf. Heb. 11 3.

6. That a Scientific World View Is Unnecessary

Non-Christian mysticism

In the present post-modern world scientific verification is giving way to mysticism, to incredulous practices such as astrology, Tarot spirituality, i.e. a rejection of "order" in the created world. For the Christian — God is a God of "order", i.e. God acts in a 'logical' way. The Gen. 1 mandate is to investigate this ordered world.

Christian Semi-deism

Many Christians consider God as an interventionist God. They fail to recognise God is the God of natural events; that nature is a picture of his works. Scientific Laws express God's rationality and make science possible.

Creation science — has a pseudo scientific approach to cosmology.

7. That the Bible Is a Scientific Text Book

i.e. That we can learn "how" God created world from Gen. 1 — NO!!

E.g. "creationism — creation science".

Literal interpretation — therefore must rewrite science. Correlate scientific theory with the Bible.

However, the Bible doesn't speak with scientific inerrancy but speaks in everyday language. e.g. 'The sun sets.' Poetic language, myth revealing truth, creation expressed in terms of the cosmology of the Ancient Near East.

Bible is concerned with who God is and who we are.

Not with origins. Except that it affirms that without God the universe would not exist.

CONCLUSIONS

Faith and Science are complementary, not in conflict. They represent different windows on reality. Faith looks at the God of nature — by Scripture. Science looks at the Nature of God — by creation. Thus we can be both Christian and Scientists.

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