

Topic 2.2 Science versus religion

Procedure

Descartes and his influence - the disappearance of God
- the significance of the cogito

History teaches that there is no such thing as the relationship between religion and science. Both have always been interrelated with fluid lines and shifting boundaries. Science as a human activity is not done in a vacuum. It is affected by the wider cultural context, by social, moral and spiritual questions. Beliefs and moral values are part of the scientific enterprise.

This can be illustrated by the cross-traffic between the science and the beliefs of its practitioners.
e.g. Descartes mechanical world view

For higher level only teach / review Syllabus Section A, Part Three, Topic 3.3 on Descartes proofs for the existence of God

Read *Student Work: DESCARTES' THEORY* or

Research Assignment: DESCARTES AND HIS INFLUENCE

SOURCES: Religion and Science – F. McCarthy & J. McCann etc.

Discuss: What were the implications of Descartes' theory for science and religion at this time?

Take feedback and conclude Rene Descartes undermined the Aristotelian world through his dualism of subject and object. Descartes had a place for God in his scheme of things; he accepted the two books metaphor. But the consequence of his science was to remove God from a mechanical universe.

for higher level only - Newton and the mathematical paradigm

Brainstorm: What is a paradigm?

Take feedback and note answers on the chalkboard. Conclude that a 'paradigm' is a framework of ideas and concepts comprehensively explaining a field of study. Thomas Kuhn defined paradigms as "universally recognised scientific achievements that for a time provide model problems and solutions to a community of practitioners" While a particular paradigm holds science proceeds normally, following a rational pattern. When a generally recognised pattern begins to fall apart, a new paradigm can suddenly emerge, which overthrows the old ideas in a stunning reversal of all the principles and propositions that made up the old framework. e.g. the transition from the medieval earth-centred world view to the sun centred view of Copernicus. (For further reading see *Religion and Science – F. McCarthy & J. McCann*)

Research Assignment: NEWTON'S DISCOVERIES

SOURCES: Religion and Science – F. McCarthy & J. McCann etc.

Discuss: What was the mathematical paradigm?

How important were Newton's discoveries for the relationship between science and religion?

Take feedback and conclude Isaac Newton's physics reinforced the view of a mechanistic world determined by laws, the human being an exception. Newton had a place for God in his scheme of things; he accepted the two books metaphor. But the consequence of his science was to remove God from a mechanical universe. Newton's mechanical paradigm had an enormous impact in the wider social and cultural context of the early eighteenth century demonstrating that science does not exist in a vacuum.

Science and religion in the enlightenment

Research Assignment: SCIENCE AND RELIGION IN THE ENLIGHTENMENT
SOURCES: Religion and Science – F. McCarthy & J. McCann etc.

Discuss: What were the major developments in science and religion at the time of the enlightenment?

Take feedback and conclude that Descartes (and Newton – Higher level only), in attempting to use the new science of mechanics as the foundation for religion and the existence of God, contributed the seeds for undermining religion in the eighteenth century. Deism made God external to the universe, rather than being immanent, bound up with what happened within it. There was an assumption that if the idea of the world as a purposely designed mechanism, pointing to a divine Designer, was overturned, that would be the end of God and religion.

History teaches the limitations as well as the strengths of science and religion and the importance of focusing on their proper objects.

An appreciation of the limitations as well as the strengths of science leads to an appreciation that:

- Scientific ideas change through time and scientific theories can be overturned and replaced
- Science may raise questions which it is not competent to answer e.g. questions about ultimate origins, moral values and the meaning of life

History helps to appreciate the limitations as well as the strengths of religion:

- the confusion of science and religion in the Middle Ages
- the importation of religious ideas to support scientific constructs. e.g. Newton
- Difficulties between science and religion can be resolved when the literary genre of ancient texts is taken into account. e.g. Book of Genesis.

The first scientists (Galileo, Kepler, Descartes, and Newton) were Christian believers, who were motivated by religious duty to discover the wonder of God's creation and saw their science as being compatible with their religious faith.

Assignment: Compare Galileo's work to what can be observed in -

- Dunsink – Working observatory
- Armagh Planetarium- panoramic view of interstellar space
- The Birr Telescope –once upon a time a very powerful telescope (See:birrcastleireland.com)
- Schull Planetarium, Schull, Co. Cork.

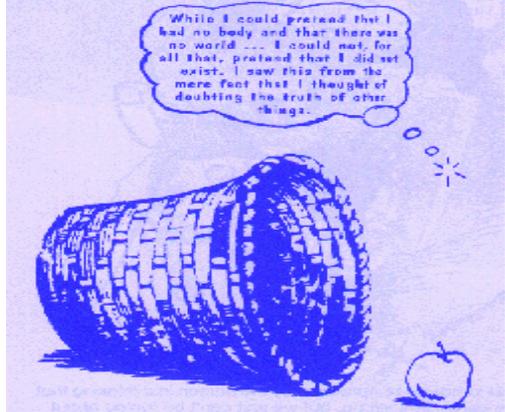
Outcomes:

- Outline Descartes' theory and explain its importance for science and religion
- For higher level only - explain the importance of Newton's discoveries in mathematics for the relationship between science and religion
- Describe one major development in science and one major development in religion at the time of the enlightenment.

Resources which teachers have suggested include:

Poole, Michael, (1995) *Beliefs and Values in Science Educatio*, Buckingham: OUP
McGrath, Alister, (1999) *Science and Religion: an Introduction* Oxford: Blackwell

Student Work: DESCARTES' THEORY

	<p>In a letter Descartes wrote to a friend, he explained his special method of doubting like this ... Imagine someone has some apples that he wishes to store in a basket. A wise man will make quite sure that all the apples are perfect - because if an apple does go rotten then it will eventually infect all the others. So, any apple that has even the slightest blemish has to be ruthlessly rejected as unsuitable. Any "apple" of knowledge that is finally left behind after this procedure would obviously be very special. It would be the real thing - guaranteed, unquestionable knowledge.</p>
	<p>By going through this process of rigorous doubt, Descartes eventually realized was that there was always one thing that he could never doubt - the fact that he was doubting or thinking. And thinking just can't happen in mid-air. There has to be a consciousness or mind doing it, so Descartes can't doubt that he exists either. Hence the famous Cogito ergo Sum - "I think therefore I am".</p>
	<p>Descartes set out to prove that God exists. He began by saying that he already has a clear and distinct idea of God in his mind. His ideas about God were the standard and traditional theological ones about a perfect, infinite, immutable and permanent being.</p> <ul style="list-style-type: none"> → Something must have caused this idea to be in my mind. → A cause must have as much reality as its effect. → Ideas like this one don't come from nowhere, so God must exist. <p>Descartes thought that human beings were all born with innate ideas, including those of mathematics, the soul and God's existence. He maintained that God has created eternal truths about the world and us and that if we perceive them as clear and distinct, then they are guaranteed.</p>

(Adapted from *Introducing Descartes* by D. Robinson and C. Garrett)

Question: What were the implications of Descartes' theory for science and religion?