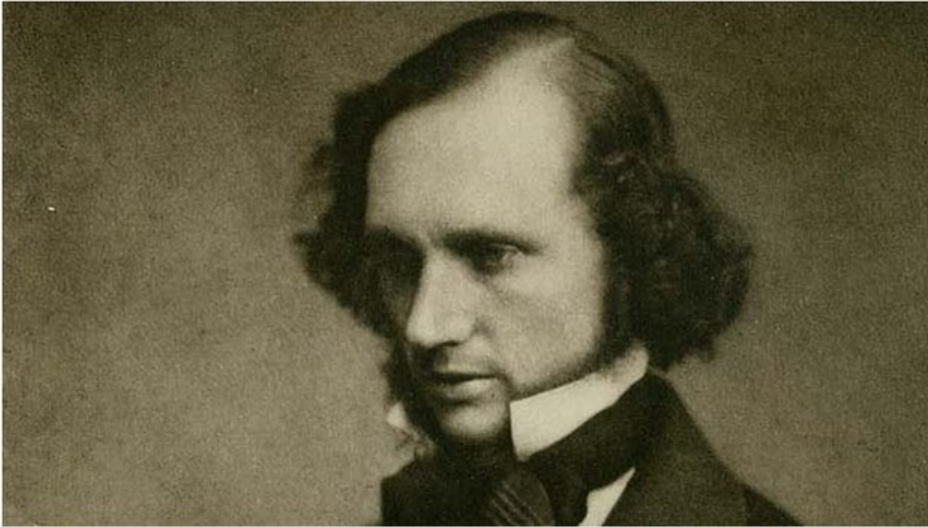


Kelvin's conundrum: Is it possible to believe in God and science?

By Peter Crutchley
BBC Knowledge & Learning



Lord Kelvin played a key role in laying the first transatlantic communication cable

Lord Kelvin is a giant of 19th Century science. He was also a devout Christian who found a way of reconciling his science and his faith, but not without finding himself in conflict with his contemporaries including Darwin.

This was a clash which has echoes with the modern debate between science and religion.

In addition to the [Kelvin Scale](#) of absolute temperature, for which he is usually remembered, his pioneering research in the fields of mechanical energy and mathematics proved vital in the task of laying the first transatlantic communication cable which connects Europe to America.

Kelvin was knighted in 1866 for his key part in this mammoth engineering feat.

BBC 2 NI: 'The Man who Shrank the World' - Lord Kelvin



[Watch: The Man who Shrank the World](#)
[Radio 4's Material World on Kelvin](#)

He was also the first UK scientist to be elevated to the House of Lords and maintained that his life-long Christian faith supported and informed his scientific work.

Who was Lord Kelvin?

Kelvin was born William Thomson in Belfast on 26 June 1824, moving to Scotland when his father, James Thomson, was appointed professor of mathematics at the University of Glasgow in 1832.

Kelvin himself became a professor at the University of Glasgow in 1846 and in a 53 year career his scientific achievements were many and diverse.

He married childhood sweetheart Margaret Crum in 1852, but her health broke down on their honeymoon and for the next two decades Kelvin was distracted by her suffering, with his wife dying in 1870.

Kelvin would eventually remarry. He met Fanny Blandy in Madeira in 1873. In May 1874 he returned to Madeira. As he approached the harbour, Kelvin allegedly signalled to the Blandy residence "will you marry me?" and Fanny signalled back "yes". The couple married the following month.

Reconciling faith and science

Kelvin believed science must be treated with reverence, as he explained:

"I have long felt that there was a general impression that the scientific world believes science has discovered ways of explaining all the facts of nature without adopting any definite belief in a Creator. I have never doubted that impression was utterly groundless.

"The more thoroughly I conduct scientific research, the more I believe science excludes atheism. If you think strongly enough you will be forced by science to the belief in God, which is the foundation of all religion."

Kelvin: Facts and fables

- His mother died when he was six years old and his father raised eight children
- He suffered heart problems and nearly died when he was nine years old
- He campaigned against legislative independence, or Home Rule, for Ireland
- He allegedly declared "there is nothing new to be discovered in physics" around 1900
- He remained something of a celebrity on both sides of the Atlantic until his death

Attendance at a chapel was part of Kelvin's daily routine and he faithfully studied the Bible.

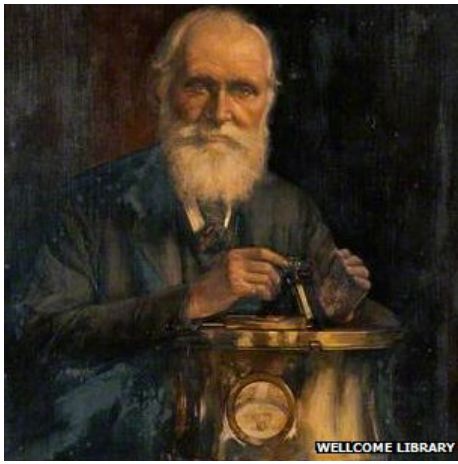
Kelvin's background and his father were considerable influences on him as [Dr Andrew Holmes](#), a lecturer in the School of History and Anthropology at Queen's University Belfast, explains:

"In all his endeavours, Kelvin sought to integrate his faith, politics, and professional interests. His Irish background was very important in shaping him.

"He came to the same position as his father: that the universe was a designed system that could be understood because God created the human mind in order, among other things, to understand the natural world."

Doubters and Darwin

Some of Kelvin's theories were proved wrong, most famously his calculation of an upper limit for the age of the Earth. Based on the cooling of the earth, Kelvin estimated its maximum age to be tens of millions years, as Dr Holmes explains:



[View more portraits of Lord Kelvin on the Your Paintings website](#)

"Kelvin can be easily dismissed by some because his scientific work on the cooling of the earth has been shown to be inaccurate and he did not take seriously James Clerk Maxwell's work on electromagnetism. But he is widely regarded as one of the preeminent physicists of the nineteenth century."

His estimation for the age of the earth was far too young to satisfy geologists and [Darwinists](#), but too old to satisfy [creationists](#), leaving him caught between religion and science in this instance.

Kelvin strongly opposed Darwin's evolutionary theories of natural selection believing Darwin ignored evidence of God's design in creation, and he refused to believe that atoms of dead matter could ever come together to make life. The laws of [thermodynamics](#) (how energy is derived from heat) were, to him, a sure sign of intelligent design.

Darwin and Kelvin's disagreements demonstrate that tension between prominent scientific and religious figures is nothing new.

Science v religion

Two of today's leading scientists, the world-renowned physicist Stephen Hawking and Richard Dawkins, author of 'The God Delusion', have been outspoken in their opposition to religion.

“ One of the greatest tragedies of our time is this impression that science and religion have to be at war”

Francis Collins US physician-geneticist

So is it common to find modern day scientists who, like Kelvin, retain a strong Christian faith, or are the two fields now just too far apart?

Professor Elaine Ecklund, Autrey Professor of Sociology at Rice University, Texas, was involved in conducting a 2005 survey of scientists at top US research universities, which found that 48% had a religious affiliation and 75% believe that religions convey important truths.

"Of course it would be inaccurate to say that there are more scientists who are Christians than not; the opposite is true. But there are certainly many scientists who do see their scientific work as connected to and even flowing from their faith.

In terms of real world conflicts between religion and science we see debates about human genetic reproductive technologies, teaching of evolution in school classrooms, and environmental care," Professor Ecklund said.

Francis Collins, the American physician-geneticist, famously stated: "One of the greatest tragedies of our time is this impression that has been created that science and religion have to be at war."

Perpetual conflict?

So are science and religion naturally in conflict?

Stephen Hawking in his book 'The Grand Design' wrote: "Spontaneous creation is the reason there is something rather than nothing, why the universe exists, why we exist. It is not necessary to invoke God to light the blue touch paper and set the universe going."

Professor John Lennox, professor of Mathematics at Oxford University, countered Hawking's argument in an article published in 2010.

"Much of the rationale behind Hawking's argument lies in the idea that there is a deep-seated conflict between science and religion. But this is not a discord I recognise," Lennox said.

[Lennox, who has engaged in a number of debates with Richard Dawkins](#), believes that far from being at odds with science, the Christian faith actually makes perfect scientific sense.

"For me, as a Christian believer, the beauty of the scientific laws only reinforces my faith in an intelligent, divine creative force at work. One of the fundamental themes of Christianity is that the universe was built according to a rational, intelligent design.

Some years ago, the scientist [Joseph Needham](#) made an epic study of technological development in China. He wanted to find out why China, for all its early gifts of innovation, had fallen so far behind Europe in the advancement of science.

He reluctantly came to the conclusion that European science had been spurred on by the widespread belief in a rational creative force, known as God, which made all scientific laws comprehensible," Lennox said.

Kelvin's legacy

As new discoveries are made, the debate over religion and science continues, just as scientific advancements meant some of Kelvin's estimations and pronouncements were later proved to be inaccurate.

But with a number of inventions named after him, statues in Belfast and Glasgow and his remains lying in Westminster Abbey next to Sir Isaac Newton in 'scientists' corner', the legacy of Lord Kelvin's work is secure.



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