TO TAKE YOU FURTHER...

The leap of faith

For I know that my Redeemer lives. (Job 19:25)

At the end of this week's film clip, we saw Stephen having a moment of inspiration. Cleverly depicted as the blurred images of light he sees when he fails to lift his sweater over his head, he begins to visualise the beginnings of the universe. It is the moment of an intuitive leap which he himself acknowledges as leading to his work on spacetime singularities (black holes to you and me) and his first breakthrough in the scientific quest for a 'theory of everything' (the unifying of understanding of the very large: general relativity, and the very small: quantum physics).

The film alludes at several points to the tension between Stephen's atheism and Jane's faith, a tension she makes clearer in her book, adding that it was one Stephen stubbornly refused to discuss.

> *Stephen usually grinned at the mention of religious faith and belief, although on one historic occasion he actually made the startling concession that, like religion, his own science of the universe required such a leap.*

In the realms of scientific theory it is always necessary to begin with an intuitive choice, and then invest time and energy working to prove it - an exercise which always contains the possibility of being wrong. So for the scientist it is, as much as for the religious believer, an exercise of faith.

Of course, forever pursuing his militant atheism, Richard Dawkins is having none of this:

> *Faith is the great cop-out, the great excuse to evade the need to think and evaluate evidence.*

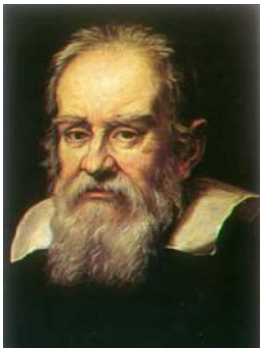
But what Dawkins is talking about is blind faith: 'It [faith] means blind trust, in the absence of evidence, even in the teeth of evidence.' Yes, there are Christians whose faith might fit this description, and those Dawkins is tilting at are the extreme campaigners for Creationism, but this does not describe the position of the vast majority of Christian believers (or indeed of all advocates of 'Intelligent Design').

Perhaps the best definition of faith I have found is drawn from philosopher Soren Kierkegaard: 'Faith is a passionate commitment made in objective uncertainty.' By this definition, faith is present in the adoption of almost any belief, and in almost every big life decision: marriage for example - as it certainly was when Jane decided to marry Stephen Hawking. Professor Keith Ward, a theologian working on the interface between science and religion and a one-time atheist, describes the process of faith thus:

> *You cannot be certain, you might be wrong, but you weigh things up. The evidence is relevant, but it doesn't compel you. There are pointers, indicators, evidence - strong enough to base a commitment on. Faith is based on the evidence of personal experience. Faith is far from blind, it often involves difficult decisions.*

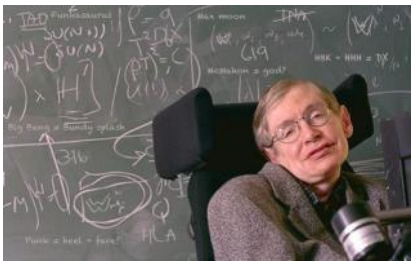
Alister McGrath, also now a theologian and previously an atheist scientist, points out that atheism itself is a faith position and in his experience 'actually not a very good one' .

The received wisdom that most scientists are atheists turns out to be very far from the truth. In 1916 a survey was done of biologists, physicists and mathematicians asking whether they believed in a God who actively communicates with humankind. About 40 per cent replied that they did. In 1997 the same survey was repeated verbatim, and to the surprise of the researchers, the percentage remained almost exactly the same .



If you look at the great scientists of history, Galileo, Kepler, Newton, Boyle and Maxwell, to name but a few, you will find that most retained their passionate commitment to both God and to science. If you look at scientists today you will find very many names in the top ranking of the scientific world who count themselves as Christian believers. To select just a few is an invidious process, but to give you an idea: alongside the already mentioned mathematician John Lennox and

head of the Human Genome Project Francis Collins, can be ranked geneticist Sam Berry, particle physicist Russell Stannard and theoretical physicist John Polkinghorne, all of whom have written clearly about science and faith. (For a much more comprehensive list, Google 'Christian thinkers in Science' and Wikipedia will give you a long list of names through the centuries")



So faith and scientific thinking are not at war with each other and the leap of faith is an integral part of any great advance in human understanding - and indeed any practical improvement of the human condition. A look at the life of Stephen Hawking makes clear that it does not depend simply on the great thinker themselves. Reading both Jane and Stephen Hawking's accounts, it is evident that his massive scientific achievements could not have come about without the faith of others, notably Jane. In *My Brief History*, Hawking writes that meeting Jane 'gave me something to live for' , both in lifting the emotional cloud that his diagnosis had cast and in very practical matters:

> *If I were to get married, I had to get a job and to get a job I had to finish my PhD. I therefore started working for the first time in my life. To my surprise I found I liked it.*

And of course, Jane's has not been the only 'passionate commitment in the face of objective uncertainty' that has allowed Hawking to continue his work. It has come from a legion of others: funders, carers, the academic establishment and the providers of aids like his famous voice synthesiser.

Arguably the leaps of faith that most benefit the world are not those of the great thinkers, but of the ordinary little people who commit to loving and caring with no certainty as to the outcome. It applies to every marriage and every act of parenting. And it comes very often from a prior leap of faith in a loving God. Faith is a risky business - as Paul Tillich has pointed out, 'Doubt is not the opposite of faith; it is one element of faith.' There is no avoiding uncertainty - and uncertainty is difficult.

And when it comes to faith in God, the jump can be huge and scary. It moves from the very safe belief that there might be a God up there, through the understanding that this God relates personally to the humans he has created, to the realisation that this is therefore a life-changing matter, and a leap of personal trust and commitment is required. Leading scientist Francis Collins, mentioned earlier, was brought up as a free-thinker and became an atheist for some years, before discovering the difference Christian faith brought to the patients he was treating. It was the words of a poem that identified for him the dilemma he was facing:

> *Between the probably and the proved there yawns*
> *A gap. Afraid to jump, we stand absurd*
> *Our only hope: to leap into the Word*
> *That opens up the shuttered universe.*

Collins took the leap and went on to discover not only the personal God who helps in life's crises, but also as he worked at decoding DNA, more of the mysterious wonder of the great Creator God.

Strangely, it is often in taking this leap that mystery and certainty come together, as Job demonstrated when out of the mystery of his deep suffering suddenly came his great leap of faith and certainty: 'I know that my Redeemer lives'!