CHAPTER 10

The Epilogue

Having concluded this account of 'The Physics of Creation', I can but let the reader judge and form his or her own opinions on the subject. Defining God as the Creator, the better our understanding of the creative forces at work in our universe, the more likely we are to find the ground on which to build a common religion conducive to a peaceful existence.

However, as indicated in the INTRODUCTION on page 1, those who lead in this quest will have to be conversant in the language of physics, as otherwise they will be basing their beliefs on fictional notions, historical hearsay or mere hope and intuition. Awareness of the Science of Creation plus a will to embrace the discipline of a common and universal moral code of behaviour should surely suffice as the intellectual basis for one's religious horizons, without the promise of life after death.

The scientific approach reveals how the universe was created as a system of order developed from chaos and so established an aether in which events governed by statistical factors created the forms of matter we see evolving around us. We are part of that system of matter and though subject to a game of chance we can, as thinking beings, optimise our prospects of survival in a secure and happy environment, albeit having, as do all particles of matter, a limited lifespan. Education founded too heavily on religious indoctrination in ignorance of the physics that rules the universe can but lead to unnecessary strife given that there will always be those who challenge the word of those who say they speak for a God of their own making.

Concerning the physics, however, there are lessons from history that we must learn. Though the language of physics is universal, the stories told in that language can be conflicting and the truths of Nature have yet to be presented in their ultimate form. This work on 'The Physics of Creation' is a major step in that direction.

As to history, in recent centuries it has been important for scholars to build their scientific convictions on religious foundations, rather than build their religion on the evidence emerging from scientific discovery. Admission to the scholarly fraternity and the funding of institutions of learning depended upon religious disposition. Rivalry and prejudice combined with dogmatism have been dominant factors amongst scholars and there is no reason to think that what has been presented in this work will emerge unscathed from the debate which it will hopefully foster.

With this in mind, it is interesting to compare the physical picture of the aether as now envisaged with what is implied in the following words, quoted from a book *"NEWTON: The Making of a Genius'* (MacMillan, 2002) by Patricia Fara. On pages 82-89, under the heading 'DISCIPLES', she refers to the physician George Cheyne (1672-1743) concerning Newton's conjectures about gravity, with this as a statement on page 87:

> "Cheyne was one of the first of Newton's successors to explore aether models, which became increasingly prevalent from around 1740. Interpretations varied enormously, largely because as the mediators between matter, motion and spirit, aetherial fluids carried huge theological implications. Relying on arguments that ranged from the ineffably vague to the extraordinarily convoluted, natural philosophers described weightless invisible fluids of subtle particles seeping through the pores of solids, forcing gases to expand, and cushioning the sun in a great repellent cloud whose graduating density maintained the planets in their appropriate orbits.

> Often authenticated by the adjective 'Newtonian', aethers proliferated and diversified as authors with very different religious commitments summoned them up to explain mysterious phenomena like electric charge, magnetic repulsion, or human memory."

Our modern generation as a result has been brain-washed, as it were, into believing that the aether is non-existent, merely an old-fashioned idea that has been disposed of by scientific evidence. It was seen as a medium which provides an absolute frame of reference in which the speed of light is constant, but experiment based on reflecting light back on itself in different directions in the laboratory on Earth which moves at very high speed relative to the cosmic background, failed to provide a measure of speed through the aether. As the aether did not live up to man's expectations it had to be discarded in favour of a philosophy based on Einstein's doctrines on 'space-time' and 'relativity' which makes the observer the frame of reference.

Yet, surely, we must bear in mind that the existence of the aether is not a question of whether Newton was right or wrong in that belief, or whether, in modern physics, Einstein's authority is the governing factor. The experimental facts in the discipline of physics, if interpreted correctly, tell us what we need to know about the aether and neither Newton nor Einstein has shown us how Mother Nature determines G, the constant of gravitation in terms of a unified theory.

As to scholarly debate and challenge of one's ideas, in a chapter entitled 'ENEMIES', Patricia Fara's study of Newton shows how God features in the aether discussion. On page 113 of her book one reads:

> "Protagonists on both sides often used the metaphor of a clock to portray the conflicting accounts presented by Leibniz and Newton of how God superintends the universe. On Newton's model, God is constantly active throughout the cosmos, and intermittently exerts His

> supreme power to intervene and alter the laws of nature. Leibniz was scathing about this view: 'Nay, the machine of God's making is so imperfect, that he is obliged to clean it now and then .... and even mend it, as a clockmaker mends his work.' Surely, he protested, God is no sloppy mechanic, but a skilled craftsman who could initially wind up His clock to run perfectly throughout eternity. According to Newton, God created independent, individual particles that, as they travelled through empty space, constantly interacted with each other and formed new associations. In contrast, Leibniz maintained that God has established a harmonious universe completely filled by inherently active entities called monads. Although they operated independently, and no longer needed God's direct control, Leibniz's nomads had been in a sense pre-programmed so that they worked together to fulfil His plans."

It is no wonder that, by invoking God, these ideas about the aether should attract comment and, indeed, ridicule by the non-scientifically minded men of religion. National rivalry also contributed to the criticism directed at Newton, as we see from some words on page 139 in Patricia Fara's book in the chapter entitled 'FRANCE'.

> "Nor does great NEWTON'S famous system stand,
> On one compact foundation, simply plann'd
> Reflect how vainly is that Art employed,
> Which founds a stately fabrick on a Void
> Confess the fair result of sober thought,
> Who builds on vacuum, merely builds on nought."

This was attributed as a quotation from a poem *'Anti-Lucretius'* by Cardinal de Polignac (1747), dedicated to promoting 'Religion and Virtue' and said to be 'resolutely Cartesian'.

In presenting an account of the aether in this year 2003 it seems unlikely that the religious opinion will intrude in such a way, given the state of science and technology of our modern day. However, one has to consider the climate of opinion prevailing amongst the scientific community. I therefore introduce what I have to say on this by making one final quotation from Patricia Fara's book which appears on page 254 in a chapter entitled 'INHERITORS':

> "Newton may have regarded himself as a giant who stood on other's shoulders, but new contenders for the position of outstanding genius would, in their turn, come to surmount him. During the twentieth century, the main competitors for Newton's place were Einstein and Hawking."

I find this a curious assertion as it is hard to belief that, in the pursuit of scientific truths, one should be 'contending for the position of outstanding genius'. In this modern world of communication with its all pervading 'media' activity one would surely need to have a publicity agent to engage in such a contest and the winner claiming the title could but feel somewhat foolish.

One need not question Einstein's 'genius', as such, given the impact he has had on those who teach physics. However, whereas the physics of Newton will survive in the teaching curriculum it seems improbable that Einstein's 'space-time' notions can survive for long, given that physics students emerging from their school education may have heard of Einstein but know next to nothing about his theories. Already in this work we have seen how aether theory can so easily explain the phenomena on which Einstein has built his claims. Certainly, I see no case for saying that Einstein could ever displace Newton as a figure head in the world of physics.

Einstein made his contribution in the earlier years of the twentieth century and the 'contender' for Newton's place at the end of the twentieth century is, according to Patricia Fara, Stephen Hawking, a professor at Cambridge University in England. Hawking bases his claim to fame on 'Black Holes' and their effects on leptons in nearby vacuum, but one must wonder how anything meaningful can emerge from a study of effects in remote space, given that the study is based on insufficient knowledge as to the nature of gravitation. There seem to be some stellar objects in galaxies that exhibit enormous mass compared with our sun, if that estimate of mass is based on the value of G that we associate with Newton's observations of our solar system. However, G depends upon those gravitons discussed in chapter 2 and therefore one could say that a star which finds itself in a region of aether subject to intense energy activity might have its quantum dynamic motion balanced by gravitons that are leptons of the heavy electron variety, muons, rather that tau-leptons that are super-heavy electrons. The mass of the stellar object need not be too different from that of the sun, but the volume of the associated graviton system in the vicinity of that object could be greater by tens of thousands, meaning that G as applied to that object could even be many millions of times greater than applies in our solar system.

Stephen Hawking may have been born 300 years after the death of Galileo (1642), as we are told by his books, just as Isaac Newton (1642-1727) was born 100 years after the death of Galileo, but that is hardly a qualification adding authority to their respective contributions. If it were, then I too, being born in 1927, two hundred years after the death of Newton, would hope that this could add a little weight to what I have offered in this work.

It is on this light-hearted note that I now close this account, whilst noting that more information concerning my theory and its onward development can be found by inspecting my website www.aspden.org which I maintain in my retirement as my voluntary contribution to the scientific community.