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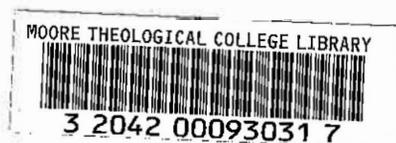
SCIENCE AND CHRISTIAN FAITH TODAY

by

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It has been said that the greatest mystery of Science is the Scientist himself- by this I mean that the Scientist, because he is human, finds himself an inhabitant of two worlds: the external world of Nature - the world of matter, and the internal world of human consciousness - the world of the Spirit. The existence of these two worlds - matter and spirit - has confronted mankind from the dawn of history as the basic data of science and the relationship between them as the central problem of philosophy. It was the philosopher Emmanuel Kant who said, "Two things fill the mind with ever-increasing wonder and awe - the starry heavens above me and the moral law within me." It is one of the paradoxes of history that these two worlds which meet in man - the world of matter explored by science and the world of the spirit revealed by religion, should from time to time have found themselves in conflict .

As we look into the history of man's developing understanding of these worlds, we discern a changing pattern in their relationship, and the clue, I suggest, is this:- Whenever man's spiritual insight has been able to cope with his knowledge of nature, harmony has been preserved. But, whenever this has failed and spiritual insight has been allowed to stagnate and to lag behind scientific knowledge, a state of conflict has occurred, and the pages of history are strewn with its victims.

If we may confine our thoughts now to the rise of 'modern' science in the Christian era, the hallmark by which it stood out from the speculations of the ancient Greeks was the technique of controlled experiment. And the basis of this is FAITH in the rationality of Nature, for without the BELIEF that Nature is intelligible, there could be no science. But the words faith and belief are words used more by Christians than by scientists, and it was the Christian belief that Nature is the work of one God, and therefore reliable and consistent, that freed science from the confusion of the polytheism and animism of the ancients and laid the foundation of modern scientific method. Hence modern science had its roots in the Christian West and thrived in the early Middle Ages under the nurture of the Christian Church. It was the brilliantly conceived and closely knit system of scholastic philosophy developed by Thomas Aquinas and his followers in the 13th Century, based as it was on a combination of Christian theology and the philosophy of Aristotle, which both stimulated and provoked scientific endeavour for the next four hundred years. But while the rationalism of the Scholastics provided a basis of belief in the experimental method, their unquestioning faith in the authority of Aristotle blinded their eyes to its results.

The first revolt against the authority of Aristotle came also in the 13th Century from Roger Bacon (a Franciscan Friar) who insisted that experimental methods alone give certainty in science." But Bacon was centuries ahead of his time and had little effect on the errors of his day. Up to this time, men had believed that the earth was at the centre of the Universe, and Heaven just above the starry dome. This view was first shaken by the work of Copernicus in the 16th Century when he showed that the earth was just another planet

revolving around the sun. The idea was denounced by the Church as "false and altogether opposed to Holy Scripture." Martin Luther branded Copernicus "a fool and a heretic", although he was a Canon of the Roman Catholic Church. A little later, Galileo incurred the wrath of the worshippers of Aristotle for making known the disturbing phenomena revealed by his telescope and for his support of the Copernican system. Galileo saw no conflict between science and religion and in reply to his critics quoted Cardinal Baronius that "the Bible was not intended to inform us "how the heavens go but how to go to Heaven."

The next hundred years saw the final collapse of geocentric astronomy and Aristotle's physics and led to the greatest synthesis in the history of science - the Physics of Isaac Newton, on which the whole field of classical mechanics has been built. Though Newton was himself a convinced Christian, his system laid the foundation for the philosophy of scientific materialism and the deepest conflict between science and religion that the world has yet seen. The central thesis of Scientific Materialism was that matter was synonymous with Reality. Professor P.G. Tait, an eminent professor of physics said, in 1876, "The grand test of the reality of what we call matter, - the proof that it has an objective existence - is its indestructibility and uncreatability by any process at the command of men." Clerk Maxwell, a few years later said of the atoms of matter that they were the foundation stones of the material universe, and though "cataclysms rend the heavens" these foundation stones would remain "unbroken and unworn."

So the security of 19th century physics was built on the indestructibility of matter and the concept of mechanical causality. The universe was like a great machine governed by rigid laws of cause and effect and man as a product of evolution was seen as part of the system, and also a machine which, by the same causal laws, grew out of nature. Those who believed in God at all invoked His power only as a last resort - to bridge gaps in human knowledge such as the origin of the universe and the origin of life, - all else was determined by rigid mechanical law. At best, the universe was like a great clock, originally wound up by a remote Deity and left to run on its own ever since. At worst, the universe was itself eternal and without purpose - a cosmic "mud pie" made by two blind children, Matter and Force. The conflict was deepest in the minds of many of the scientists themselves, for men of science who were also Christians struggled to maintain their faith in a God whose existence seemed now to rest on gaps in human knowledge, which were being closed one by one, by the advance of science.

Towards the close of the century the complacency of classical science received some disturbing jolts. Evidence began to appear from 1895 which shook the very foundations of the great structure of 19th century physics. Roentgen's X-rays, Becquerel's Radioactivity and J.J. Thompson's discovery of the electron in 1896 revealed a new world of wonder inside the atom itself, and began a new era in physics. The atom no longer remained the ultimate particle of matter - a hard, impenetrable, eternal and self-existent reality. It was shown in 1913, by the Danish Physicist, Niels Bohr, to be like a miniature solar system, comprising mostly empty space, with a system of electrons orbiting like planets around a central core, called the nucleus. The fact that the nucleus of the atom

is a storehouse of energy is now known to all. Demonstrated experimentally first in 1939, by Hahn and Strassmann in Germany, its manifestation to the world came first in the Atom Bomb of 1945 to be followed by the Atomic Age in which we now live.

The significance of the atomic bomb was not merely the fact that the atom contained energy, which could be used by man for evil or for good. It demonstrated a fact foreseen earlier by Einstein that matter is itself no longer an absolute reality, but another form of energy - that the nature of the universe has changed from merely matter in motion to waves of energy in space, like a pattern woven on a vast tapestry, a picture painted on a canvas, nearer, in the words of Sir James Jeans, to a "great thought than a great thing", - a vision in the Cosmic Mind of God. We have erred, if in the past we have tried to find God in the universe, when we should have sought rather the universe in God, whose presence permeates its every atom and gives meaning and significance to the whole. Yes, in the past, "our God has been much too small."

If we were ready to admit that science in the Middle Ages was guided by Christian Theology, we can scarcely deny that, in the 20th century, the concepts of Christian Theology have been immeasurably enlarged by science. In the words of Professor C.A. Coulson of Oxford, in his Rede Lecture, 1954:-

"It comes to this, that science is a language, - one of the languages in which God can be described; so that even if at first the scientist does not recognise it, it is none the less true that as he handles the things of earth, in that same act he is in contact with the things of heaven."

And again at the conclusion of his McNair lectures, published under the title of "Science and Christian Belief" (1955), Coulson reminds us that

"All life is sacramental; all nature is needed that Christ should be understood; Christ is needed that all nature should be seen as holy; that amid all its turbulence and tumult God's perfection might grow; and our hearts be filled with wonder at the significance of the least of all this work."

And this is none other than the message of the Christian doctrine of the Incarnation - All nature was needed as the vehicle of God's revelation of Himself - that Christ might be understood. "The Word became flesh and dwelt amongst us, and we beheld His Glory." As we behold the Glory of God in nature as revealed by science, we see no longer a dead universe of inert matter, but a dynamic universe, pulsating not only with waves of light and energy but with the very Presence of God.

Again, if Copernicus robbed us of the primitive comfort of a heaven just above the clouds, Einstein and the New Physics have restored to us the mature assurance that the Kingdom of Heaven is around us here and now; and faith is the insight which makes us realise this is true, and by which we become aware of the reality of the Spiritual World and of the Presence of God Who is both the Creator and Sustainer of the universe as well as the Author and Giver of life.

Science and religion today proclaim with one voice the 'great new fact of our time' that matter and spirit are no longer opposing concepts to be described in different languages, mutually incomprehensible. New meanings are being read into old words to describe the newer insights now clamouring for expression. One such word is space in terms of which both matter and spirit are now being expressed. The theme of the contemporary German Theologian, Professor Karl Heim, in his recent works "Christian Faith and Natural Science", and "Transformation of the Scientific World View", is that each human consciousness may be likened to the space inside a closed cell whose walls represent the world of matter, including our bodies, and through which we express ourselves and communicate with others. Intersecting these cells is another kind of 'space' in which God exists, upholding the world of matter as its Creator and confronting us, not as an object for our investigation, but as the supreme Subject with Whom we stand in an intensely personal relationship. In order to make that personal relationship complete, He came amongst us, as one of the 'Cells' and said "I call you not servants but friends." The Christian doctrine of the Incarnation, seen in the light of modern science, has given us a new vision from which we can never return to the old ways of thinking in terms of isolation and conflict between the secular and the religious. The idea of a 'God of the gaps' is as outmoded today as the 19th century physics from which it grew. God is either in the 'whole show' sustaining, controlling, confronting -- or else not there at all. And for those who believe that He is, and who hear His call, our response can involve nothing less than our whole lives dedicated to His service wherever we are - not in isolation from the world, but in it.

Just as all nature is needed that Christ and His Incarnation might be understood, Christ and His Incarnation are needed that all Nature might be seen as Holy - that our science and our technology, our civilisation, our resources and our wealth might be sanctified to His service and be the vehicles of God's love to mankind - "that as we handle the things of earth, in that same act we are in contact with the things of Heaven."