

# The Space Age And Religion

By Rev. Br. G. G. Sherriff, C.F.C.

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Every time man discovers something new, he is introduced to a reality or truth he did not know before. Since God is truth, any sincere man can, through discovery, be brought closer to God.

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## A SCIENTIST'S BELIEF

I Believe

- That the power of God is complete.
- That the authority of God is absolute and final.
- That God is both Creator and Redeemer.
- That in his providence, God is in control of his creation, and that he rules in the affairs of men and that for this, Christ is his instrument and our contact.
- That God is just (Yet I do not always understand.)
- That God is loving, for he has provided a way through Jesus Christ, so that by commitment to him we may meet God's requirements and be acceptable to him.
- That the Bible, as the revealed Word of God, is the supreme authority for my faith and life.

ELMER W. ENGSTROM, President Radio Corporation of America. February 10, 1970

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## MAN ON THE MOON

Christmas 1968 was a Christmas that will be remembered always, for then three men circled the moon for the first time. It was man's greatest scientific achievement to date. This pinnacle of human endeavour reminded mankind of the greatness of the universe and the power and the majesty of God. From 200,000 miles in space a message was beamed to mankind from Apollo 8 astronauts Frank Borman, James Lovell and William Anders. The message read:

"For all people back on earth the crew of Apollo 8 has a message that we would like to send to you.

"In the beginning God created the heaven and the earth. And the earth was without form and void, and darkness was upon the face of the deep. And the spirit of God moved upon the face of the waters.

"And God said, "Let there be light." And there was light. And God saw the light that it was good and God divided the light from the darkness. And God called the light day, and the darkness He called night. And the evening and the morning were the first day.

"And God said, Let there be a firmament made amidst the waters, and let it divide the waters from the waters. And God made the firmament and divided the waters which were under the firmament from the waters which were above the firmament. And it was so.

"And God called the firmament heaven. And the evening and the morning were the second day.

"And God said, Let the waters under the heaven be gathered together in one place, and let the dry land appear. And it was so. And God called the dry land earth, and the gathering together of the waters he called seas, and God saw that it was good."

"And from the crew of Apollo 8," continued Commander Borman, "we close with a good night, good luck and a Merry Christmas. And God bless all of you... all of you on the good earth."

Earlier Borman had prayed from 230,000 miles in space when he saw a small blue and green earth blob far outside his window.

- "Give us, O God, the vision which can see your love in the world in spite of human failure.
- Give us the faith to trust your goodness in spite of our ignorance and weakness.
- Give us the knowledge that we may continue to pray with understanding hearts.
- And show us what each one of us can do to set forward the coming of the day of universal peace. Amen."

So at the very pinnacle of scientific success when because of the co-operation and hard work of several thousand men three men orbited the moon, these men remind us of the power and goodness of God.

Jim Lovell summed up his thoughts by concluding his description of his lunar flight by quoting a poem written by a Canadian aviator in the Second World War.

"I thought about these lines," wrote Lovell, "they were with me through my entire flight. I guess they say what I wish I were articulate enough to say, about my experience up there:

"I've trod the high untrodden sanctity of space, and felt the face of God."

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Then at 6.18 a.m. (Australian Eastern Standard Time) on July 21st, 1969, an achievement unique in the history of mankind took place; man's first true spacecraft, Eagle, landed on the moon's surface. At 12.55 p.m. the same day Neil Armstrong took one small step on the moon's surface...

It was, in a sense, an achievement shared by the whole human race, because never before has an audience of 500 million people spread over most of the world watched breathlessly an exploration that could have failed at any second if one of the million or so parts had gone wrong. Probably half a million people had worked on the project. It was certainly unique.

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To honour this event a dedicatory inscription written personally by Pope Paul VI and a small Papal flag were among items the astronauts of Apollo 11 left on the surface of the moon.

The translated text of the Papal letter is:

PSALM 8.

- "O Lord, our Lord, how glorious is your name over all the earth!

You have exalted Your majesty above the heavens . . .

Out of the mouths of babes and sucklings You have fashioned praise, because of Your foes, to silence the hostile and the vengeful.

When we behold the heavens, the work of Your fingers, the moon and the stars which You set in place -

What is man that You should be mindful of him or the son of man that You should take care of him?

You have made him little less than the angels, and crowned him with glory and honour.

You have given him rule over the works of Your hands, putting all things under his feet; all sheep and the birds of the air, the fishes of the sea, and whatever swims the paths of the seas.

O Lord, our Lord, how glorious is Your name over all the earth."

#### THE DEDICATORY INSCRIPTION

- "For the glory of the Name of God, who gives men such power, We pray and wish well for this wondrous endeavour." -Pope Paul VI. - A.D. 1969.

All the astronauts have been amazed at the great beauty of the universe... the "richest blackness" of the sky; the "blue and white" of planet Earth from outer space, and its "almost iridescent band of blue which formed the horizon"... (all so beautiful that Schweickart of Apollo 9 "was just overwhelmed by the beauty of it all"); the remarkable colours on the moon that appear to change from tan to grey to black as one moves in relation to the sun;... the eerie effect of the transparent moon dust that radiates out parallel to the surface when disturbed. "Beautiful, beautiful," exclaimed Buzz Aldren when first stepping into the mystic surface of the moon. "It has a stark beauty all its own. It's very pretty out here." Neil Armstrong described its appearance after his historic statement, "That's one small step for man, one giant leap for mankind."

Edwin Aldren summed up his thoughts after his return to planet Earth... "in reflecting the events of the last several days, a verse from the psalms comes to my mind... "When I consider the heavens, the work of Your fingers, the moon and the stars which You have ordained, what is man that You are mindful of him."

Thus this "one small step for man" has truly become "one giant leap for mankind" because it has made men of all nations think of the greatness of the universe and so of the power of God... or to express these sentiments in the words of Albert Einstein... "the rapturous amazement at the harmony of the natural law." Though man's knowledge of science has increased so rapidly in the last decades, as Sir Isaac Newton says, "the vast ocean of truth lies still undiscovered before him."

To give but some insignificant idea of the divine magnificence of the universe we quote from the American astronomer, Dr. Conklin, who in 1969 has computed what may be the earth's Basic Motion in relation to the unimaginable reaches of the universe itself.

"By observation astronomers calculate that a "fixed" point near the equator is moving at 1,000 miles per hour round the earth's axis... That the earth moves at 66,500 miles per hour in orbit round the sun... That the solar system circles the core of our galaxy, the milky way, at 481,000 miles per hour... And that the milky way orbits the centre of a "supercluster" of some 2,500 nearby galaxies at

1,350,000 miles per hour; but even that is not all... In addition to the motions of the solar system, the milky way, and the "supercluster" of galaxies, astronomers believe that all these groups move through the universe itself."

Truly "What is man, God, that You are mindful of him?"

## GREAT SCIENTISTS OF THE PAST

Max Planck in his "Where is Science Going?" stated "It is not by accident that the greatest thinkers of all ages were also deeply religious souls."

The truth of such a statement can be fittingly illustrated from the life of Sir Isaac Newton, whose tomb in Westminster bears the inscription, "Let men rejoice that so great a glory of the human race has appeared." Voltaire claimed that "if all the geniuses of the universe were assembled, Newton should lead the band." Alexander Pope aptly expressed the same sentiment when he wrote, "Nature and Nature's Laws lay hid in night; God said, 'Let Newton be'; and all was light."

What Newton thought of himself, however, was different, when towards the end of his life he humbly stated, "To myself I seem to have been only like a boy playing on the seashore, ever finding a smoother pebble and a prettier shell while the great ocean of truth lies all undiscovered before me."

He was forever impressed by the greatness of God... "Whence is it that Nature does nothing in vain; and whence arises all that order and beauty which we see in the world?"

Speaking of God, he continued, "This being governs all things as Lord over all, and on account of His dominion He is called Lord God... It is the dominion of a spiritual being... the true God is a living, intelligent and powerful being."

Lord Kelvin, British mathematician and physicist, stated on more than one occasion that "Science positively affirms creative power... If you think strongly enough you will be forced by science to believe in God." And "Kelvin", according to Sir Bertrand Windle, F.R.S., M.A., Sc.D., I.L.D., Ph.D., "can hardly be said to have had a superior or even an equal save Newton alone."

Charles Darwin, the man who first proposed the theory of evolution, which created an intellectual and religious upheaval right throughout the world, concludes his famous book the "Origin of Species" with a firm testimony to his belief in a living God... Speaking of his theory of evolution he concludes his book with..."There is a grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, while this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been and are being evolved."

Science still speculates on the Darwinian Theory, though. Darwin wrote to Bentham, "When we come to details we cannot prove that a single species has changed." (Life and Letters 1, 210).

Sir Ambrose Fleming in his presidential address to the Philosophical Society of Great Britain, stated, "We can quite appropriately assert that the origin of man is to be looked for in the creative - power of a self-conscious Creator and supreme intelligence and will" and not to a blind evolution.

Blaise Pascal, Frenchman, achieved fame as a mathematician, a physicist, an inventor, a writer, a theologian and a philosopher. He abandoned science and mathematics in 1654 for "total submission to Jesus Christ". It is in his letters that his country praises him most - "A triumph of literary art of

which no familiarity dims the splendour and which no lapse of time can impair." After his death, his famous *Pensees* (Thoughts) were found. There were 924 of these religious thoughts that have become world known, particularly since these, his letters and his Scientific Treatises have been included in the "Great Books of the Western World". In June 1662 Pascal out of Christian charity gave shelter to a poor family suffering from small-pox. He himself moved to Gilberte, where he died later on in the same year aged 39. He had written in his *Pensees* years before, "All bodies together and all minds together and all their works are of less worth than the smallest act of charity. Charity is of an infinitely higher order."

Pierre Termier, world famous geologist, wrote over twenty-four pages of *Christian Witness*, including, "I cannot survey the history of the earth without finding the idea of God, who is not only a Creator but who governs that world with a loving providence, quite natural and almost necessary."

Fabre, the famous entomologist, wrote: "After 88 years of thought and observation I say not merely I believe in God - I can even say that I see Him. Before these mysteries of life reason bows and abandons itself to adoration of the Author of these miracles "... Alessandro Volta, famous for his experiments with electricity, claimed, "I have always believed and still believe the Holy Catholic Faith to be the one true and infallible religion; and I constantly give thanks to God who has infused into me this belief, in which I desire to live and die, with the firm hope of eternal life."

Louis Pasteur's statement, "It is because I have thought and studied much that I have kept the faith" is true for many intellectuals. He himself found God again through his study of science. "I see everywhere the inevitable expression of the Infinite in the world, through it the supernatural is at the bottom of every heart."

The great mathematical genius Augustin L. Cauchy testified to his faith... "I, with Tycho Brahe, Copernicus, Descartes, Newton, Fermat, Lubnitz, Pascal, Grimaldi, Euler Gulden, Boscovich, Gerdil, with all great astronomers, all great physicists, all great mathematicians of past ages, believe in the divinity of Jesus Christ."

Life Magazine, May 30th, 1955, paid a special tribute to Albert Einstein (1879-1955) in an article entitled "Death of a Genius" by Life editor, William Miller. It stated, "the entire world mourned for the greatest scientific thinker of his age."

This tribute contained an account of an interview between Einstein and William Miller, his son, Pat, and a Dr. Hermanns. The interview was conducted at Einstein's home. "Looking about the room," wrote Miller, "I was struck by a porcelain figure of a Madonna and Child in a corner." Einstein had had carved above the fireplace in a room at Fine Hall, Princeton, the words: "God, who creates and is Nature, is very difficult to understand, but He is not arbitrary or malicious." This silent testimony of his belief in God, unorthodox though it was, was certainly real. "I cannot prove to you," he told Miller, "that there is no personal God... the presence of a superior reasoning power, revealed in the incomprehensible universe forms my idea of God."

Einstein continued: "You will hardly find one among the profounder sort of scientific minds, without peculiar religious feeling of his own... His religious feeling takes the form of rapturous amazement at the harmony of the natural law. This feeling is the guiding principle of his life and work. It is beyond question akin to what has possessed the religious geniuses of all ages."

"I cannot conceive of a genuine scientist without that profound faith. The situation may be expressed by an image, 'Science without religion is lame, religion without science is blind'... Where

faith is lacking, science degenerates into a mechanical rule of thumb business." "One cannot help but be in awe when he contemplates the mysteries of eternity, of life and of the marvellous structure of reality."

We conclude this section with the testimony of Sir Ambrose Fleming, English physicist and electrical engineer, winner of both the Hughes Medal and the Albert Medal of the Royal Society. "We can quite appropriately assert that the origin of man can be looked for in the creative power of a self-conscious Creator and supreme intelligence and will. We cannot, however, assume that a mere abstract term such as evolution, which merely connotes a gradual change, is a vera causa in a scientific sense."

## MAX PLANCK - THE SCIENTIST WHO FOUND GOD

When the great Albert Einstein was asked to write an introduction to Max Planck's book, "Where is Science Going?" he was embarrassed, and stated, "Why should I tell of his greatness? It needs no paltry confirmation of mine. His work has given one of the most powerful of all impulses to the progress of science. His ideas will be effective as long as physical science lasts. And I hope that the example which his personal life affords will be not less effective with later generations of scientists."

In the introduction written by Einstein he mentioned that the majority of scientists were men who were either anxious to display their particular talents or anxious to become rich and famous because of their achievements. He then wrote, "Should an angel of God descend and drive from the Temple of Science all those who belong to the categories I have mentioned, I fear the temple would be nearly emptied. But a few worshippers would still remain - some from former times and some from ours. To this latter belongs our Planck. And that is why we love him."

Max Planck was born in Kiel, Germany, in 1858, of a long family of scholars. He studied at the great Universities of Munich and Berlin and later became Professor at both. On October 19th, 1900, Planck became world famous when he proposed his famous Quantum Postulate to the Berlin Physical Society. In brief his theory stated that a body does not radiate energy continuously but rather intermittently, in finite bundles called "quanta". It is reported that he told his son, "I have made a discovery today as important as Newton's."

Planck was Secretary of the Prussian Academy of Science and later won the highest academic post in all Germany when he became President of the Kaiser Wilhelm Society. In 1920 he received the coveted Nobel Prize. It was because of his influence that Einstein came to Berlin. These two great men became firm friends, and often relaxed by playing music together, Einstein the violin and Planck the piano. So it was that Planck's life was filled with joy amid the fullness of his own achievement and the company of scientific colleagues.

In his book "Scientific Autobiography" Max Planck wrote:

"Let us consider the confusion of the scientific viewpoint with the religious viewpoint. Even though science and religion, in their ultimate effects, are headed for the same goal, the recognition of an omnipotent intellect ruling the universe, yet they are basically different both in their starting points and in their methods."

"Religion is the link that binds man to his God. It is founded on a respectful humility before a supernatural power to which all human life is subject, and which controls our weal and woe. To be in harmony with this power and to enjoy its good graces is the incessant endeavour and supreme

goal of the religious person... He can enjoy that purest of all happiness, the inner peace of mind and soul that is secured only by a firm link to God, and by an unconditionally trusting faith in His omnipotence and benevolence. In this sense, religion is rooted in the consciousness of the individual."

"We stand in the midst of life, and its manifold demands and needs often make it imperative that we reach decisions. Long and tedious reflection cannot enable us to shape our decisions and attitudes properly; only that definite and clear instruction can which we gain from a direct inner link to God... This alone is able to give us the inner firmness and lasting peace of mind which must be regarded as the highest boon in life. And if we ascribe to God, in addition to His omnipotence and omniscience, also the attributes of goodness and love, recourse to Him produces an increased feeling of safety and happiness in the human being thirsting for solace. Against this conception not even the slightest objection can be raised from the point of view of natural science, for questions of ethics are entirely out of its realm."

"No matter where and how far we look, nowhere do we find a contradiction between religion and natural science. On the contrary, we find a complete concordance in the very points of decisive importance. Religion and natural science do not exclude each other, as many contemporaries of ours would believe or fear; they mutually supplement and condition each other... The very greatest natural scientists of all times - men such as Kepler, Newton, Leibniz - were permeated by a most profound religious attitude."

"The two roads (religion and science) do not diverge; they run parallel to each other, and they intersect at an endlessly removed common goal."

"Religion and natural science are fighting a joint battle in an incessant, never relaxing crusade against scepticism and against dogmatism, against disbelief and against superstition, and the rallying cry in this crusade has always been, and always will be: 'On to God'."

In his book entitled, "Where is Science Going?" Planck continued: "There can never be any real opposition between religion and science; for the one is the complement of the other. Every serious and reflective person realizes, I think, that the religious element in his nature must be recognized and cultivated if all the powers of the human soul are to act together in perfect balance and harmony. And indeed it was not by any accident that the greatest thinkers of all ages were also deeply religious souls, even though they made no public show of their religious feelings."

"Natural science wants man to learn, religion wants him to act."

"While religion and natural science require a belief in God for their activities, to the former, He is the starting point, to the latter the goal of every thought process. To the former He is the foundation, to the latter the crown of the edifice of every generalized world view."

It is not surprising then that in 1968 it was reported from Basle, Switzerland, that Max Planck had become a Catholic soon before his death in 1947. Planck who forever sought truth and had written that "truthfulness is the noblest of all human virtues" found Christ, "the way, the truth and the life".

Claus Zöge von Manteuffel, the reviewer, writing in the Zurich Gazette, asserted after noting Planck's conversion, "Religion and the natural sciences harmonize when it comes to the question of a Supreme Power."

He said that Planck recognized this in the course of his studies.

"There is, however, a difference in as much as the believer starts out from God while the scientist comes to God after starting out from empirical notions he obtains in his research."

#### THE TESTIMONIES OF LIVING SCIENTISTS

(1970)

Robert H. Cameron, Professor of Mathematics, University of Minnesota.

"I believe that Jesus Christ, the same yesterday, today and forever, is the Answer to the problems of every age, and in particular, the Answer to the problems of this space age in which we live... He is the Answer to nuclear armaments... He is the Answer to the racial problem, the freedom problem, and the sex problem... He is the Answer to the sin problem... Our Lord is the Answer to the problem of life and death. He said, "I am the Resurrection and the Life; he that believes in Me, though he were dead, yet shall he live; and whosoever lives and believes in Me shall never die"... Our wonderful Triune God is wiser than the wisest scientist and more powerful than the greatest monarch or dictator, yet He loves and cares for each one of us individually. He has a plan for each of our lives, and will communicate it to us if we wait on Him for guidance."

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Professor C. A. Coulson, Professor Applied Mathematics, Oxford University.

"The greater part of our schoolboy's acceptance of science and rejection of religion springs from his unexamined belief that science accepts no presuppositions, and must therefore be superior to Christianity, which is overloaded with them. Yet this view is wholly wrong.

"Think for a moment of some of the attitudes of mind with which any scientist comes to his search. There is honesty, and integrity, and hope; there is enthusiasm, for no one ever yet began an experiment without an element of passion; there is humility, before a created order of things; there is a singleness of mind about the search; there is co-operation with his fellows both in the same laboratory, and across the seven seas; there is heroic patience; above all there is judgement.

Science could not exist and certainly is not practised without these qualities.

"Patience, humility, fair-mindedness, integrity, co-operation, these are the hall-marks of our tradition. And they force me to the conclusion that this tradition is ultimately based on, and derives its final sanction from moral convictions which are often unrecognized, but none the less imperative."

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E. A. Milne, Professor, Oxford.

"The Christmas message - which is also the Christian message - is 'Gloria in excelsis Deo'... Glory to God in the highest and on earth peace to men of good will. This is not a bad definition of the aim of all true science, the aim of rejoicing in the splendid mysteries of the world and universe we live in, and of attempting so to understand these mysteries that we can improve our command over nature, improve our conditions of life, and so ensure peace."

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Professor Rutherford Aris, Chemical Engineering, University of Minnesota.

"As you study science and space you will discover many interesting and fascinating things which are worthy of your study and attention. But you will not find any ultimate explanations. Science tells the "how" of things. You have to study the Bible to get the "why" of it all. Science will give you wonder. Scripture makes you want to worship."

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Dr. Alex Wood, Physicist, Cambridge.

"What I really feel is that Christ has verified Himself in my experience and that He can do it in yours."

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Dr. Harry Windsor, M.S., F.R.C.S., who led the team that performed Australia's heart transplant at St. Vincent's Hospital on Wednesday, October 24th, 1968, said he felt the operation had brought him "a little nearer God".

Dr. Windsor was speaking at a press conference:

"When you are so closely associated with the cessation of life and you are endeavouring to give life to someone who is about to leave life, it takes you a bit closer to the Almighty."

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Australian Scientist, Dr. James H. Jauncey, holds ten academic degrees, including bachelor's degrees in science, psychology, philosophy and divinity; master's degrees in science and history; and doctor's degree in mathematics. His degrees were earned in Melbourne, Perth, London and Berkeley (California). He is listed in Who's Who in American Education and has professional standing in the British Psychological Society and the Royal Geographic Society.

"Scientists throughout the world today are largely frightened men. This does not mean that they are unduly pessimistic. It does mean that they are fully aware of the dangers that are facing civilization. Most of them have the confidence that mankind will find a way of getting things under control before it is too late. This is the major reason why so many scientists are returning to God as a final and only answer to the problems of the world.

"Intrinsically, there is nothing mutually contradictory about scientific and religious thought. Both science and revelation come from the one God... Increasing scientific knowledge has brought about greater vindication and understanding of the Christian Faith... In the end, the secrets of the universe must show the stamp of the Architect who made it, of Him Who was expressed in Christ. And He has already spoken in His Word."

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Dr. W. L. Starkey, Ph.D., Associate Professor of Mechanical Engineering, The Ohio State University, Columbus, Ohio.

"Men who study natural phenomena tend to reject the supernatural. Many in the scientific world do not accept Christianity simply because they have not sufficiently investigated Christianity. I would suggest to the earnest seeker for truth that serious consideration be given to the credibility of the revelation of God contained within the Holy Scriptures."

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Dr. Robert B. Fischer, Ph.D., Associate Professor of Chemistry, Indiana University, Bloomington,, Indiana.

"God has revealed Himself to man through that which He has created. Whether we observe and study this creation through the eyes of the astronomer, the geologist, the botanist, the chemist, the business man or the boy or girl, we are observing and studying the handiwork of God, whether we realize it or not."

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Dr. Brian P. Sutherland, Ph.D., F.C.I.C., Administrative Assistant, Consolidated Mining and Smelting Company, Trail, British Columbia.

"I find that for myself as a scientist and a Christian there is no more satisfying intellectual pursuit than the humble study of the revelation of God in nature and in the Bible."

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Dr. George K. Schweitzer, Ph.D., Associate Professor of Nuclear Chemistry, University of Tennessee, Knoxville; Research Radiochemist, University of Tennessee; Atomic Energy Commission Research Progress, Oak Ridge, Tennessee.

"Man has changed his world in a remarkable way, but has not been able to alter himself. Since this problem is basically a spiritual one, and since man is naturally bent toward evil (as history attests), the sole way that man can be changed is by God. Only if a man commits himself to Christ Jesus and submits himself to the Holy Spirit for guidance can he be changed. Only in this miraculous transformation rests hope for the atom-awed, radio-activity-ruffled world of our day and its inhabitants."

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Dr. Russell L. Mixter is professor of zoology at Wheaton College, Wheaton, Illinois. Dr. Mixter holds the Master of Science degree in zoology from Michigan State University and the doctorate in anatomy from the University of Illinois.

Dr. Mixter is the author of "Creation and Evolution" a monograph; and he is editor of "Evolution and Christian Thought Today," a symposium.

"Everywhere I look I see the evidence of intelligent planning and design. I would be a fool not to believe in an intelligent First Designer and Planner. Consider, for example, the co-ordination of our nerves and muscles. I may prick my finger with a sharp instrument. The nerve impulses go to my spinal cord and I withdraw my finger before I actually feel the pain. The reflex action is based on all animal life. Then consider how we can purposefully control our muscles. As you make notes, your brain orders your finger muscles to write the particular words you want. All living things testify to their marvellous Maker. As a scientist I can only bow in reverence."

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Dr. Edson Peek has been a distinguished professor of physics for twenty years at Northwestern University in Chicago. He holds the B.A. and the M.S. degrees from Northwestern and the Ph.D. in physics from the University of Chicago.

He has been a consultant to Argonne National Laboratory, the government's atomic research installation near Chicago.

Dr. Peck has been awarded research grants of more than forty-five thousand dollars by the National Science Foundation and the U.S. Defence Department.

"As a physicist, I observe the expansion of our universe. I observe that it had to have a beginning, and that it was begun by an intelligent Designer.

"I believe that the scientist who is a Christian has the task to speak to both the Church and the world, so that the Church may understand the role of the scientist.

"Many Christians have a vague feeling that science and the Bible conflict. I was glad to assure my fellow church members that that is not true."

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Dr. John H. Martin is an associate physicist at Argonne and one of the developers of a revolutionary new fifty-million-dollar atom smasher.

Dr. Martin earned his Ph.D. degree in physics from Washington University, St. Louis, in 1949. He taught for four years at Forman Christian College, Lahore, West Pakistan, before coming to Argonne as a research physicist.

"The new forces inside the nucleus of the atom compel me to believe in a Supreme Being.

"Not every scientist believes in our Christian concept of God. But I have never encountered a scientist who did not believe in some sort of higher power or force. In physics especially the student is compelled to believe in God. At least I am.

"For example, consider the new forces that have been discovered through recent explorations of the atom's nucleus. They represent a seemingly new order of physical law, but a law that is orderly. For example, they cannot be explained by our traditional laws of gravity, magnetism, and electrostatic attraction. The more deeply we delve into the mysteries of the atom the more imponderable these forces become. But the knowledge we have discovered has proved that they act and react in an orderly manner. It is this consistency in order that forces me to believe in a Divine Planner.

"My respect and admiration of God's handiwork grows with every passing day I spend in this lab."

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A key man in America's space program is Walter F. Burke, general manager of Project Mercury and Gemini, and vice-president of McDonnell Aircraft Corporation in St. Louis. Mr. Burke, and the fifteen technicians and scientists under his supervision, are charged with the designing, developing, building, firing, and launching of the Mercury and Gemini space capsules.

Mr. Burke holds science degrees from the Massachusetts Institute of Technology and the University of Michigan, where he taught courses in aeronautical science for four years.

"Personally, I think the space age has done a great deal of good. It has been a factor in the deepening of my spiritual life. I read the Bible more now. I have gone beyond the philosophical question: Is there a God? Each day I think more of God's purpose for my life and how I can be a better witness for Christ.

"In all my associations with scientists, I cannot recall ever meeting a true atheist. And since we have actually got into space, I have detected a deeper faith among my associates. Hardly a day goes by in my work that I do not hear someone speak of spiritual matters. In the past few months, I have

sensed a spiritual awakening among space people. They talk more freely now, and some have admitted Christian convictions to me that I never dreamed they held before."

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Dr. Frank A. Crane is professor of pharmacognosy and botany at the Chicago campus of the University of Illinois.

Dr. Crane holds four academic degrees, including Ph.D. from the University of Rochester, New York. His major field of study was plant physiology.

"I do not see how there could not be a God. Neither a plant nor a medieval castle could have been built by chance. In the plant world are many testimonies to divine planning and creation.

"The scientist has no special advantage with God. Science simply cannot meet the deepest needs of life. One cannot find God through a scientific method.

"The God I know is all-wise and all-knowing. He does not make mistakes. I am looking forward to the time when we can understand the present unsolved mysteries of the universe."

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Dr. Walter R. Hearn, Ph.D., Assistant Professor of Chemistry, Iowa State College, Ames, Iowa.

"Being a Christian is not just science or philosophy or morality or aesthetics; it transcends these things, as life transcends them. Indeed, knowing Christ means life itself to me, but a new kind of life, the "abundant life" He promised. Who could convey the meaning of life to a person who had never lived? One must live to know what life is, and one must know Christ to know what it means to be a Christian!"

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Sir John Hunt, C.B.E., D.S.O., Leader of the 1953 Everest Expedition.

"The satellites coursing round our planet give the Universe a new reality; they have focused our minds on another, infinite world and set us thinking on the wider meaning of Creation.

"In the exciting quest to Outer Space we are on the verge of further great discoveries - and clearly the majority of us can take no active part in them. For you and me, the prospect of a journey to the moon is remote. We will remain firmly on earth, awed spectators of the Space journeys of a few brave men.

"Yet the power to launch a satellite can bring destruction as well as discovery. Although most people are uncomfortably aware of this fact, few of them seem to think that they have any responsibility for it.

"In an age of such terrifying power, it is now more urgent than ever for ordinary men and women to remember that the hope of salvation, for the individual and for humanity, lies in the simple message of universal love which Christianity brings.

"There is no limit to man's power to discover and progress if he is guided by this message. But we must take care lest the abiding truths are crowded out by the torrent of words that follows each new scientific advance."

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Professor Julius Sumner Miller, Professor of Physics, El Camino College, California, A.B.C. Science Lecturer, in his introduction to "Men of Science" writes:

"Whatever science is, it is first of all human adventure on the highest intellectual grounds revealing constantly the great spirit of questioning and wonder which prevail in the human mind. In science proper lie the noblest aspects of man, the highest goals, the deepest hopes for things eternal. For this intellectual process has one singular intention, one noble ambition and it is this: to uncover the orderly Beauty of Nature. With this comes the greatest satisfaction of understanding which must indeed rank as the highest ambition of man.

"And so it is that Science, when viewed properly, in its noblest flights, in its deepest attributes, is indeed one with Religion, for there ever remains the sphere of Darkness beyond our reach. It is as with Newton that the great ocean of Truth lies all undiscovered."

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Jack King, the National Aeronautics and Space Administration (N.A.S.A.) chief of information.

"We have now about 50 astronauts in training. I know a number of them who are Catholic and they are very strong in their beliefs.

"You sometimes hear people, especially in the fields of science and technology, say that they do not need God - that science is their God. In my dealings with astronauts I really don't find this. The concept of atheists tying in with science is something you hear or read about, but I can't think of one that I have found here at the Cape, and I've been here since 1958."

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Doctor Wernher Von Braun, the scientist who developed the Saturn V Rocket which took the Apollo 11 Astronauts to the moon.

"God has built man with curiosity. God expects man to use this gift. Now we have the tools available to explore space and I believe if it were not the Creator's intent for us to explore celestial bodies, He would not have permitted us to have acquired the tools.

"Something else is apparent. God has not placed any visible obstacles in our way. I believe we have His permission and His blessing.

"Science and religion are NOT antagonists. On the contrary, they are sisters. While science tries to learn more about the creation, religion seeks a better understanding of the Creator. While through science man tries to harness the forces of nature around him, through religion he seeks to control the forces of nature within.

"Today, hundreds of millions of people, haunted by the destructive power of nuclear bombs, pin their hopes again on frail political structures. But the great reform which alone can put our fears to rest must come again from a rebirth of man's faith in God and love for his fellowman. The only force that can save the world from catastrophic war is the God-given power of reason and morality in man himself.

"Atheists all over the world have called upon science as their crown witness against the existence of God. But as they try, with arrogant abuse of scientific reasoning, to render proof that there is no God, the simple and enlightening truth is that their arguments boomerang. For one of the most

fundamental laws of natural science is that nothing in the physical world ever happens without a cause. There simply cannot be a creation without some kind of spiritual creator.

"The better we understand the intricacies of the universe and all that it harbours, the more reason we have found to marvel at God's creation.

"These are important formative years of our scientific and technological society. It is Christianity's role to see that it does not become a society without a soul. The trends set during the next few decades may shape the character of our civilization for ages. We have a glorious opportunity to change the imperfect, to raise our standards of behaviour, as well as our standard of living."

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Dr. Irving W. Knobloch has been a professor in the Department of Botany, Michigan State University, since 1945.

Dr. Knobloch holds graduate degrees from the University of Buffalo and Iowa State University. He is a specialist in cytology, morphology, and agrostology. He is the author of articles in both scientific and religious journals and is listed in "Who's Who in America."

"The conflict between science and Christianity lies not in the facts as known in science and given in the Bible but in the interpretations given.

"My faith in the Bible enables me to believe that life did not come about by pure chance. I believe that behind this universe is an intelligent, personal God, one in whom I can believe and with whom I can have fellowship."

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Malcolm A. Jeeves, until recently Professor of Psychology, University of Adelaide, now Professor of Psychology at the University of St. Andrews, Scotland. Author of "Scientific Psychology and Christian Belief."

"I believe that a Christian can pursue his investigations with a spirit of adventure and of freedom in the conviction that, ultimately, nothing that he discovers about the nature of man through his reading of the book of nature can conflict with a proper understanding of what God has given to us in His other book through revelation.

"Secondly, it is my belief that the more I understand the way man is made and how he works the greater will be my ability to treat him with the dignity and respect which are his due as the crown of God's creation, made indeed 'in the image of God'."

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## THE LEGEND OF THE COVER or SCIENCE, RELIGION AND STAMPS.

The Monastery in which I live, has an interesting collection of stamps as one of the Brothers is a keen philatelist. One of his displays he calls "The Space Age and Religion". It includes the following stamps.

The American stamp to commemorate Apollo 8 mission to the moon [6 cents, 1969] reproduces an actual photo of the earth taken from a window of the spaceship, and bears the inscription of the first sacred words of the Bible, "In the beginning God . . ."

The Paraguay stamp of Solar system reminds us of the vastness of God's creation, while the Australian Antarctic Territory stamp [1 cent] of the Aurora Australis recalls the ever changing beauty of the universe.

To mark the International Geophysical Year of 1957-58 the United States produced a three cent commemorative stamp depicting "the Creation of Adam" by Michelangelo. It shows the hand of God touching and instilling life into the hand of Adam. Beneath this is the earth surmounted with flames to illustrate the geological disturbances on the earth preparing it for man.

The Australian Christmas stamp of 1965 [5 pence] especially produced by Victorian artist John Mason shows the Virgin Mother and St. Joseph reverently paying homage to the Christ Child. This belief in a personal God, who so loved the world that He sent His only begotten Son to redeem and save it, has been acknowledged by most great thinkers and scientists.

The Paraguay stamp honouring Sir Isaac Newton recalls to mind his humility when face to face with the order and beauty of God's universe. The Albert Einstein stamp of the same series, [Triangular 40 pesos stamp with the famous 'E = mc to the power of 2' formula,] commemorates the great scientific genius of the twentieth century whose belief in God and in His greatness was real though somewhat unorthodox, but who humbly confessed: "One cannot help but be in awe when he contemplates the mysteries of eternity, of life and of the marvellous structure of reality."

The stamp to commemorate Charles Darwin's impact on the scientific and religious world of his time [from Argentina] recalls not only his theories of evolution but the firm statement of his belief in a personal God, with which he concludes his "Origin of Species". The Pierre Curie stamp in the same series [Romania, 55 Cs] recalls the scientific work of this outstanding Catholic Professor and his wife, and their fine example of dedicated Christian living and working for the benefit of mankind.

The Brien McMahon stamp, to pay tribute to the Senator who introduced the American Atomic Energy Act, whereby this great God-given source of power was to be used for peaceful purposes and not for the destruction of man, recalls that science must be the servant of intelligent and moral man and not his master. [U.S. stamp, with the slogan, 'Atomic Energy Act - Peaceful Uses'.]

The John F. Kennedy stamp is included in the collection because, after his interview with world renowned scientist Dr. Wernher von Braun in 1961, he, the first Catholic president of the United States, announced to Congress that the United States would "commit itself to achieving the goal, before the decade is out, of landing a man on the moon and returning him safely to earth." [U.S. stamp, with the slogan. ' . . . and the glow from that fire can truly light the world - John Fitzgerald Kennedy - 1963'.]

The Irish stamp of 1944 [two pence and a halfpenny, Eire] to commemorate the centenary of the death of Brother Edmund Ignatius Rice, Founder of the Christian Brothers, [now Blessed] also portrays a star and a burning lamp. The former symbolizes the Scriptural promise applied to teachers that they would "shine as stars for all eternity"; while the latter illustrates that our lives should bear witness to Christ, the light of the world, as a light shines in the darkness. This stamp is included to commemorate the dedicated and devoted teachers of all nations, who give their lives to pass on to youth the truths both of faith and of science.

That scientific and religious truths do not contradict is illustrated by the stamp honouring Max Planck (1858-1947), the scientist who found God, because of his study of science and the order in

nature led him to a belief in a personal God, and then to his becoming a Catholic. [German Federal Republic. 20 pfs.]

Some of man's recent scientific achievements in space are recalled by the American Project Mercury stamp commemorating Gemini 4; the Dubai (Arabian) stamp honouring astronauts; the Hungarian or Magyar stamp illustrating the successful space flight through the Van Allen Radiation belt [60 fs]; and the Australian World Telecommunications stamp commemorating Intelsat II. [25 cents showing the Parkes Radio-Telescope.]

The remaining eight stamps used in the cover design [and in the philatelist's display] were selected because they illustrate just a few of the 'insignificant' works of creation, and show to a certain extent the variety and richness of living organisms.

The Mongolian prehistoric creature [Democratic Republic of Mongolia, '30'] shows how life has apparently evolved according to the plan of God. The grace and beauty of pattern in the reddish golden *Voluta Ruckeri* shell of Papua [&] New Guinea, and the exquisite phosphorescent colouring of the Albanian fish, *Merluccius*, [10 ps] are just two illustrations of the beauty of marine organisms.

The Australian azure kingfisher stamp [24 cents] and the Papuan Butterfly stamp ['*Euplova Ducerrsteisius*', Papua and New Guinea] illustrate the variety and the richness of bird and insect life. The almost transparent wings of the butterfly are delicately woven, and when viewed through a microscope the colours and tissues are unbelievably beautiful as they shine with their iridescent splendour.

The humble Black Lizard depicted on the Nauru stamp performs its important work in the ecological order. It recalls the God-given plan in the order of nature where creatures rely and depend on one another. Destroy one species and the whole environment suffers.

Many stamps depicting the richness of flora could have been chosen even from Australian stamps alone. The rich colours and pastel shades of the Cooktown Orchid, the golden yellow Wattle and the crimson Waratah would have enhanced this selection had space permitted their inclusion. [Brother has separate displays for these.] Instead was selected the mysterious Kangaroo Paw of Western Australia - the plant that eats insects because it is unable to obtain its nitrogen supply directly from the soil. [Australia, 6 cents]

The remaining stamp on the cover is the 1961 Hungarian depiction of the Australian Kangaroo on display in a zoo. [Magyar Posta] This native marsupial, so often displayed as an emblem of Australia, is unique not only in its appearance but in the birth and development of its young.

According to Professor Julius Sumner Miller the aim of science is "to uncover the orderly Beauty of Nature..."

A scientist's rapturous amazement at the harmony of the natural law leads him to exclaim with Sir Isaac Newton... "This omnipotent Being governs all things as Lord over all, and on account of His dominion He is called Lord God."

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CONCLUSION...

Messages from Vatican II.

"To Men of Thought and Science."

"Never, perhaps, thank God, has there been so clear a possibility as today of a deep understanding between real science and real faith, mutual servants of one another in the one truth. Do not stand in the way of this important meeting. Have confidence in faith, this great friend of intelligence.

Enlighten yourselves with its light in order to take hold of truth, the whole truth. This is the wish, the encouragement and the hope, which, before disbanding, is expressed to you by the Fathers of the entire world assembled in Rome in Council."

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