

SCIENCE AND RELIGION

by Kevin O'Brien from the writings of Stanley L. Jaki
© 2012 Theater of the Word Inc.

[Explanation of the way the text is formatted]

Anything in brackets in the text is my own verbiage, written mostly to serve for continuity. Anything not in brackets is verbatim Jaki, taken from a number of his works. Also note the sections in smaller font - these were the moments when I would look up from the page and improvise. This was Jaki's style when lecturing. He would read from his text and occasionally look up and add off-the-cuff anecdotes and illustrations before returning to his text. I tried to emulate that. Instead of reading the smaller font text word for word, I would work off the page and improvise the sense of it. But the smaller font text is still Jaki, generally verbatim (unless bracketed) - and more Jaki than my improvised remarks given in performance.

I was surprised at the enthusiastic reaction this "show" received. Thank you for that. Fr. Jaki was a very important voice in the confused arena of Science and Religion—and indeed in the confused arena of philosophy. I encourage you to read his works, which, though challenging, are always very spirited and filled with the fruits of his learning and his piety.

[My name is Stanley Jaki. I was born in Hungary in 1924. I am a priest of the Benedictine order. I have a doctorate in theology from the Pontifical Athenaeum St. Anselm in Rome, and a doctorate in physics from Fordham University, where I studied under the Nobel Laureate Victor Hess, one of the discoverers of cosmic rays. I am a Distinguished Professor at Seton Hall University. I was a Gifford Lecturer at the University of Edinburgh and Fremantle Lecturer at Balliol College, Oxford. I was awarded the Lecomte du Noüy Prize in 1970 and the Templeton Prize in 1987. I have written over fifty books and hundreds of essays on the history of science, the philosophy of science, and on the relation between science and the Christian Faith, and I have lectured around the world. However, I was so excited to be invited to speak here at the Portsmouth Institute that I made this a top priority—making sure I would appear, even though I died in 2009. And although I have not written any new material since

then, most of what you will hear today is taken *verbatim* from a variety of my works.]

[And, amazing though it may be for me to be lecturing here after my death, how much more astonishing if Jesus Christ Himself, risen from the dead, were to be speaking to you—or to a group of scientists from this very podium.] What would He say to a gathering of scientists and what would they tell Him? He would, of course, tell them that He had come to save them for eternal life, a message which most of them would not be interested in at all. In turn they would tell Him things that, humanly speaking, would make the Son of God utterly speechless insofar as his human knowledge is concerned. Some quantum cosmologists would tell him that they do not need his heavenly Father, the Maker of heaven and earth, because at least in theory, so they claim, they can create not one but millions of universes out of nothing. They would tell Him that this universe of ours might, for all we know, have been created in a basement laboratory in another galaxy. Nonplussed, the Son of God might dryly remind them that basement laboratories are dark places in more than one sense.

As for string theorists, they would tell Him about their firm belief that they are working on the ultimate physical theory, which would make a Creator unnecessary. For the theory would show that the universe necessarily is what it is and cannot be anything else. This would be their trump card against the age-old theological argument that the universe is contingent and therefore needs a Creator. Humanly speaking the son of God might remind those string theorists that they should brush up their information on Gödel's theorem, which shows that there can be no mathematical system with a proof of built-in consistency. And since physics has to be highly mathematical, no one can construct a physical theory that would be strictly final. Most string theorists would be taken aback. Nobody likes to be reminded of ignorance about fundamentals.

Now it would be the turn of the Son of God. [And His audience of] scientific minds, locked in the admiration of quantities, would find incomprehensible the claim that eyes have not seen, ears have not heard what God has prepared in heaven for those who love Him. [This would frustrate the audience, for this would address man's] elemental longing for a sense of purpose, about which science can say nothing at all, simply because purpose cannot be measured.

Most scientists are simply unprepared to listen to such considerations. They do not want to accept that science is just about quantities. Or more specifically and speaking only of physics as the ideal exact science, science is just the quantitative study of things in motion. Nothing more and nothing less. Science is not about being, not about purpose, not about free will, not about morality. And this says an awful lot. Nothing is more mistaken than to expect science to deliver a proof of the existence of God, [for example], or of the creation of the world out of nothing.

[On the latter point], the expansion of the universe carries us back into the past to a moment when the entire universe was no bigger than the millionth of a pinhead, with all the matter of trillions of galaxies compressed within that unimaginably small volume. Science can trace one state of the physical universe only to another state. The transition from nothing into being will forever elude the eyes of physicists, simply because it takes metaphysical eyes to see the nothing. The notion of nothing is perhaps the most metaphysical of all notions. There is indeed something devilish in the fashionable philosophies of modern physics, especially of quantum mechanics, whose proponents claim that there is an "almost nothing," a "virtual nothing" corresponding to "virtual reality". Such claims lack logical and scientific foundation and witness to an incredible measure of philosophical poverty.

1 Limitations

The opposite of philosophical poverty is philosophical riches, which hardly ever can be acquired through courses in philosophy. Such courses can teach one what other philosophers have already thought, but those courses usually do not teach one to think. Etienne Gilson used to say that everyone has to be his own philosophy teacher. Let me give you one example, the example given by Chesterton, who once said that the existence of God is proven by any telephone pole. He might just as well have stated that any pencil, any fork, any knife, any stone or pebble can be effectively used to demonstrate the existence of God.

Why? Because any object is finite and therefore specific. Were that object truly infinite, it would comprise all possible perfections and therefore as such it would lack specificities and therefore would not be recognizable. We recognize things because they lack something. We recognize a pencil because it lacks the properties of other objects. We live and learn by limitations. But we do not wish to admit that limitation is a huge mystery. Infinite perfection can easily be understood, but a limited thing begs the question about its being limited. Once this is appreciated one may be on his way to becoming a philosopher. And when one becomes ecstatic on contemplating a pencil as a limited object, one has achieved the status of a philosopher. Short of this one is merely a professor of philosophy, or a graduate student of philosophy, or just perhaps a logic chopper.

[And, philosophically speaking,] unless one considers science and religion as two distinct, separate, and mutually irreducible enterprises, one may be lured, and this has happened all too often, into trying to fuse the two together. The result has invariably been not a fusion but a confusion.

Science and religion are separate areas in more than one sense. First, there is the [question of the *should*—the question of free will and morality]. Religion, just think of the Ten Commandments, all of which begin with the words “thou shalt not”, is about moral precepts. These have nothing to do with science. Otherwise Einstein would have not said that he had not derived a drop of moral value from all his science which was surely vast and decisive.

2 Kelvin

In fact, science does not tell us what we should do, it does not even tell us what *is*. Still fully valid is the remark which Lord Kelvin addressed to a young man who guided him, without knowing who he was, through a plant of electrical appliances. After he listened patiently to the young man explaining such elementary

notions in electricity as voltage and resistance, Lord Kelvin expressed his wish to be informed as to what electricity *was*. The young man fell silent. The great scientist patted his back and said: "No matter, that is the only thing about electricity which you and I do not know."

What is true of electromagnetism applies to any other branch of physical theory. Newton's theory of gravitation does not reveal what gravitation is. It merely states that what is called gravitation operates along strictly specifiable quantitative lines, summed up in the idea of a central field of force. One of its implications is the inverse square law of gravitation, another is the times-squared law of the free fall of bodies. They are exact mathematically and therefore provide for exact predictions.

3 Why vs. How

[So I reiterate:] exact science [is] the study of the quantitative aspects of things in motion. Nothing more and nothing less. This notion of exact science gives competence to scientists whenever they deal with matter, but it does not enlighten them as to what matter is, let alone what scientific study is—as an exercise of the intellect.

[And while science cannot tell us what a thing *is*, or even *that* a thing is, it can attempt to tell us how a thing works. Science can tell us the *how*; philosophy and especially religion tells us the *why*. And yet we see on the one hand philosophers pontificating about the *how*, which is beyond their competence; while scientists pontificate on the *why*, which is beyond theirs.

Examples of the former—philosophers pontificating on the *how*—include almost all statements made by Aristotle that relate to the physical world. Another example] is Hegel's verbiage about astronomy, physics and chemistry. When the first installment of that verbiage appeared in 1801, in the form of an essay on how many planets [there] *ought* to be, the essay prompted the astronomer Von Zach to characterize it as the "monument to the madness of the 19th Century."

[The *how* is a scientific question because the *how* can be measured and demonstrated.] The *how* relates to the manner in which things work and react on one another.

4 St. Joseph

About that *how* religion, by which I mean revealed religion, and not Zen meditation or New Age or Yoga, or something even cheaper, about that *how* religion has nothing to say. You may rush to a statue of St. Joseph before exams in calculus or organic chemistry, but it will not help if you have not done your homework.

[And yet] for all its progress about the *how*, science has remained impotent to discuss the *why* of things, that is, their ontological status and origin. [When I say, this desk is here], that statement hinges on the validity of the verb *is*. By using that verb man recognizes the ontological status of an object, of a thing, in this case a desk.

5 Measuring Being

Science has nothing to do with that status, simply because there are no units of measurements for *is*, or for *are*, or for *will be*. You cannot have two grams of *is*, or three feet of *are*, or four fluid ounces of *will be*.

Yet all revealed religion depends and rests on that verb *is*. This is so ever since God revealed His name as "I am Who Is," and even more so when his Incarnate Son testified on His own behalf as He identified Himself as "I Am" in speaking to the Jews.

And since science is incompetent about the *is*, it has nothing to do with the manner in which things react causally, that is, as causes of one another. [This may be almost as shocking for a modern audience to hear as the Son of God saying "I Am" was to an ancient Jewish audience, for it flies in the face of] the widespread belief that Heisenberg's uncertainty principle has done away with causality. Surely, if science can do away with causality, then it has something to *do* with it—[but it does not]. Heisenberg himself thought that his principle definitively disproved causality. In saying so he merely prompted the formation of a disastrous climate of opinion.

6 Monument to Insanity

That climate may rightly be called a monument to the insanity of the 20th Century.

For instance, for the past 75 years or so the history of exact science has been a worship of the Myth of Chance. [This myth is the product of a basic error in logic that comes to us from Heisenberg and the Copenhagen interpretation of quantum physics, an error that has taken on a popular currency in the modern mind, in the same way that materialistic Darwinism did generations earlier. And that error in logic gives rise to the idea that cause and effect break down at the subatomic level. This conclusion arises from the mistaken] claim that what cannot be measured exactly cannot take place exactly. The fallacy consists in taking the same word "exactly" in two very different senses. One is operational, which refers to the impossibility of measuring atomic interactions exactly as long as one has to work with quanta and the non-commutative algebra of matrix mechanics. The other is ontological, as carried by the phrase "taking place exactly." Only by a somersault in logic can one infer the second sense from the first.

7 Segue to Chance

[And yet this somersault has stood the modern world on its head. It has led to the cult of Chance, with Chance being almost worshipped as a kind of omnipotent force. This is a far cry from the notion of Chance during the Age of Reason.]

"What we call chance is not and cannot be except the unknown cause of a known effect," declared Voltaire. Schiller may have paraphrased Voltaire as he put in Wallenstein's mouth the words: "Happenstance does not exist."

In both those statements, and many others could be quoted, chance is taken in the sense of non-entity, or the opposite of

reality. The same sense also turns up in the late 19th century in a very important context, in T.H. Huxley's reminiscences on the reception of Darwin's theory. There Huxley took to task those who rejected Darwinism on the ground that it was a "reign of chance." "Do they believe," Huxley asked, "that anything in this universe happens without reason or without a cause? Do they really conceive that any event has no cause, and could not have been predicted by anyone who had sufficient insight into the order of Nature?" A scientist, Huxley declared, is a convert with only one act of faith, which is "the confession of the universality of order and of the absolute validity in all time and under all circumstances of the law of causation."

Today, [however,] all Darwinists and almost all evolutionists speak in a manner of which the title of J. Monod's famous book, *Le Hasard et la Nécessité*, is a capsule formula. They think that chance and necessity can coexist in the very same process because they almost invariably endorse a dismissal of causality which Heisenberg was the first to tack on [to] the principle of uncertainty. Already in 1927 Heisenberg declared: "Since all experiments are subjected to the laws of quantum mechanics . . . the invalidity of the law of causality is definitely proved by quantum mechanics."

8 Segue to Eddington

Clearly, this meaning given to the uncertainty principle should seem very drastic in comparison with the one which merely states the inability of physicists to secure precision to their measurements beyond a certain limit. Most educated laymen (at least in the Anglo-Saxon world) learned about that drastic meaning from Eddington's books and addresses.

As early as 1927, he spoke of the emergence in the new physics "of an attitude more definitely hostile to determinism." [Eventually John von Neumann saw in his inability to predict subatomic reactions via a mathematic construct of hidden variables], an imperative to endorse the drastic meaning of Heisenberg's principle. He wrote, "There is at present no reason

to speak of causality in nature—because no experiment indicates its presence and . . . quantum mechanics contradicts it.” Causality, von Neumann added, was an age-old way of thinking which “has been done away with.”

Causality could easily be rejected in a philosophical atmosphere which had grown increasingly skeptical since the days of Hume and Kant.

The last [few] decades [have] witnessed, for instance, the proposition (and a very valid one), that Heisenberg’s principle leads to the multiworld theory which states that there are as many worlds as there are observers. If such is the case, the fact that scientists, each of whom has his own individual world, or perhaps even better, *is* his own individual world, still understand one another, becomes a mystery, or perhaps a sheer miracle. Another example of the same process leading to a philosophically disturbing situation is the principle of “man-centered objectivity,” advocated recently by the prominent French physicist Bernard d’Espagnat. No comment is deserved by [this form of] solipsism, which has for long been recognized as an inevitable implication of the drastic meaning of Heisenberg’s principle.

[For if a man accepts this drastic meaning , that man] is not allowed to say that a thief took his wallet, but only that he has the sensation of his wallet having been taken away. What this shows is that the world as articulated in terms of [this drastic meaning of Heisenberg’s principle] is a world of [robbery—of] *philosophical* robbery. Those who do not resolutely challenge its proponents lend their support to a situation in which thieves can freely operate without the possibility of ever being apprehended. Such an outcome, in which to *be* and *not to be* are ultimately indistinguishable, is not something to cheer about.

At any rate, if it is impossible to distinguish between being and non-being, then efforts to say anything about freedom and determinism become utterly meaningless. Of course, scientists including the leading spokesmen of the Copenhagen school,

would never admit that they were not truly free as they searched for and made their great discoveries. For if they were not free, what is the ground for their receiving awards and Nobel Prizes?

9 Purpose and Greek stillbirth

Once objective causality was abandoned, it became almost unavoidable to attribute volition to atoms in order to retain the semblance of coherent discourse and of a coherent nature. This came into the open already in 1927 in connection with cloud chamber tracks. While the visible track was a unity, no connection could be assigned to the millions of ionized molecules because interaction between any two of them was not measurable. Was their succession, resulting in an obvious unity, a choice on the part of Nature? To answer affirmatively this question posed by Dirac to Heisenberg was of course inadmissible within a science which since the days of Galileo and Descartes excluded from its domain any volition, purpose, and goal.

[And so today, we are moving toward a world where science is dumbfounded by a capricious, organismic universe, a world in which subatomic particles have free will, but a world in which living men and women do not. Determinism is rejected where it rightly belongs—in physics; and imposed where it has no place—in psychology—through a denial of man's freedom of will and his acting for a purpose. And this all results from science encroaching on philosophy and from philosophy encroaching on science. Indeed, science achieved no valid birth but only a stillbirth in the ancient West largely because of Socrates and Aristotle and their view of the universe as an organism.]

Note Aristotle's claim that of two bodies the one with twice the mass of the other would fall from the same height in only one half the time taken by the other body. The proposition was patently contrary to plain evidence. One could refute Aristotle's claim by merely standing on a chair and performing the experiment.

Why then was Aristotle, one of the keenest minds ever and a most careful observer in biology, lured into such an absurdity? There must have been most powerful motivations on hand. [Those motivations were, quite simply, religious]. To see them one should recall Socrates' agonizing search in the *Phaedo* for a human purpose that lasts beyond the grave. He felt he had convincingly found such a purpose if it could only be shown that all material bodies moved towards a terminus that was best for them. It was that terminus which Aristotle later presented in terms of the doctrine of natural places. But a physics which aimed at the saving of purpose, was not physics but philosophy. Insofar as that physics contained quantitative propositions, the latter could be tested, indeed refuted and help thereby reveal some wrong presuppositions at work beyond them.

Therein lies the source of the big tragedy of Greek science, of its stillbirth. The Greeks thought of the universe as being a huge living being. But it is not possible to have genuine science of motion about a being full of volition. Such a being can be capricious and its moves therefore unpredictable. Strict predictability is, however, the very essence of exact science. This is why all the three laws of Newton are totally free of volitional, of animistic considerations. They relate to purely quantitative aspects in bodies. In Newtonian physics bodies move because they are given a push, a kick, so to speak, and not because of some inner volition of their own.

[But Newton's view of motion can be traced back to] 1348, when John Buridan of the Sorbonne took a most original look at some passages of Aristotle's *On the Heavens*. [Buridan disagreed with Aristotle that some form of volition moved celestial bodies.] In essence Buridan stated that when God made the heavens and the earth He gave a certain quantity of *impetus* to all celestial bodies, which quantity they keep undiminished because they move in a realm in which there is no friction.

With some qualifications, this is the law of inertial motion. Beneath the discovery of inertial motion there lay a concept of creation and Creator that is indispensable for the formation of an idea of nature, which, though fully a creature, is fully autonomous. The prosperity and sanity of science hang on that autonomy. But this kind of autonomy could not be conceived within a pantheistic framework. There the universe—it is enough to think of the role of Aristotle's Prime Mover—was in continuous quasi-physical contact with the First Cause—[thus this pantheistic universe was a kind of organism, behaving in willful and not mechanical ways]. Worse, since the Prime Mover was not a creator, the universe could only be an emanation from it (as articulated in great detail by Plotinus), and therefore the universe necessarily had to be what it was. About such a universe nothing is so tempting as to figure out its workings on an *a priori* basis. And why not? If the universe and the mind are generated by the same emanation, it should seem natural to assume that an introspecting mind, being an organic part of the universe, should be able to fathom its laws. But then no need, or at least no acute need, will be felt to investigate the physical universe on an *a posteriori* basis, that is, by performing experiments about it.

[For Buridan's notion of *impetus* and of an autonomous world which could be investigated, measured and predicted] meant a complete break with all philosophical traditions, *all* of which were steeped in some form of eternalism, as was also the case with Aristotle's cosmology. [For in] *On the Heavens* Aristotle states that the motion of celestial bodies is eternal, because the world is eternal, that is, uncreated.

10 Eternity and Pantheism

The eternity of the world was and still is the basic dogma of all pantheists, materialists, and agnostics. Aristotle was a pantheist and therefore he had no choice but to endorse the eternity of the world. This eternity excludes, for all practical purposes, the idea that there was an absolute beginning of motion, and indeed of material existence.

Of course, Buridan was not the first Christian who opposed Aristotle on the eternity of the world. By the time Buridan started teaching at the Sorbonne around 1330, three generations had gone by since Aristotle's work began to be known in the Christian West. With Thomas Aquinas in the lead, all Christian theologians and philosophers of pre-Buridan times had opposed Aristotle's claim that the world was eternal.

11 Fourth Lateran Council & Creation in Time

They knew the Creed which begins with the tenet that all was made by God and they also remembered the Fourth Lateran Council, which, in 1215, stated as a dogma that the world was created in time, or that the past history of the world was strictly finite.

[But even more specific is the doctrine] that the Father created everything in Christ, who is the only begotten of the Father. This theological factor should not be left unexplored because all other factors one can cull from the history of science fail to explain why Buridan perceived something that Jewish and Muslim scholars failed to notice. It is just not enough to say that

Buridan's discovery would have come anyhow. His discovery came because long before Buridan the Son of God, or the only begotten of the Father, came as a man among men.

12 Monogenes

This may sound an atrociously surprising statement. In order to make it appear less so, one should recall that the term "only begotten" or rather "unigenitus" and "monogenes" means two things whether in Latin or Greek. One meaning is that one is the only son of a father. The other is the universe, the cosmos. This latter meaning can be found in Plato, Plutarch, Cicero and other classical authors. Now let us have a so-called thought experiment. Let us assume that around 110 A.D. a friend of Plutarch gave him a copy of the Gospel of St. John, which had by then been in circulation for at least forty years. There in the first chapter Plutarch would have found a Jew referred to as the only begotten of the Father. Now further assume that Plutarch had been thinking about becoming a Christian. This would have meant that Plutarch would have had to accept that Jew as the only begotten Son of God. But Plutarch was a pantheistic philosopher and a man of letters, in fact the most learned man of his day. As such Plutarch would have recalled that he himself had called the universe a "monogenes," namely the only direct emanation from the ultimate divine reality. Later in Plotinus' *Enneads* we find the whole process given in detail. In other words in becoming a Christian, Plutarch would have had to break with his pantheism. There could be no two "only begotten" beings. The only begotten was either Jesus or the universe.

This means that belief in Christ was to serve as a tremendous antidote to the ever present lure of pantheism. More than a hundred fifty years ago Newman thought that pantheism was to be the great heresy of the age to come. That age has arrived, dressed either in the wrapping of an ideology presented as science, or in the form of the ideology of ecologism.

13 Pro-Life vs. Ecologism

Public opinion today is more concerned about a half-dead dolphin washed onto the seashore than about babies killed as they come out of the womb.

The so-called "new" theology is full of telltale traces of pantheism borrowed from Kant, Schelling, Hegel, Max Scheler, Husserl and others. The champions of that theology often *refer* to

science but they know very little about it. Worse, they talk very little about the Word become flesh. They at most talk about the idea of flesh. They endlessly speak of a cosmic Christ as the culmination of the evolutionary process, but they do not want to take note of what took place on the earth and in very humble circumstances.

The coming of Christ in Bethlehem surely was not noticed in Rome or in Athens. The moment of his coming was haphazard by worldly perception. Christ escaped Herod's henchmen by mere chance. Luckily Buridan formulated his law of inertial motion before the Black Death in 1348-50. Had he not done so and had he died during that plague which decimated Europe, including Paris and the Sorbonne, the discoveries of Copernicus, of Kepler, of Galileo, of Newton might not have taken place. In that case there would be no electricity, no cell phones, no internet.

As I said before, the only way to explain Buridan's breakthrough is that he was a good Christian. Of course scientists do not have to be Christians in order to do good science. Once the three laws of Newton were in place, they propelled the progress of science on their own terms. [And this is because the scientific method, though narrow], when dealing with the quantitative aspects of things in motion has a supreme validity. This is a most important thing to note for those who hold that Christ was *the* beginning. Since His coming He has exerted a great purifying impact on mankind. He rescued at least part of mankind from the shackles of pantheism, which in all ancient cultures prevented the birth of science. All those cultures were dominated by the quintessence of pantheism or the doctrine of eternal recurrence. In modern times that doctrine reappeared in the writings of Nietzsche who knew no science, and then in the writings of Whitehead, a first-rate scientist, according to whom the universe would take on all possible forms through eternity.

In pantheism there can be no strict beginning. But there is one in biblical revelation. The universe was a necessary emanation in all contexts except in the Christian context. And

that Christian context owed itself to belief in Christ, in whom God created all. This is why Catholic Christian religion, unlike other religions, including non-Catholic forms of Christianity, did not yield to pantheism and still resists it.

14 Savior of Science

In other words, Christ is the Savior of science, but in a way which has nothing to do with the way of doing science. Christ, or rather belief in Him as the only begotten Son of God, rescued science from the stillbirths it had suffered in all ancient cultures.

[But this split between quantity and purpose frees both science and religion.] As science Darwinism, [for example,] or the theory of natural selection, cannot touch on purpose, which it cannot measure. About Darwinism taken for philosophy it should be enough to recall a remark Whitehead made at Princeton in 1929. In delivering the Vanuxem Lectures there, he said: "Scientists animated by the purpose of proving that they are purposeless constitute an interesting subject for study."

Darwinists and quantum theorists keep talking to others and do so for a purpose. Purpose, the longing for purpose, remains inextricably embedded in human nature, and remains safe from scientific criticism as long as one takes science for the quantitative study of the quantitative aspects of things in motion and not for something more. Therein lies the security of theologians. But they must realize that whenever quantities arise on the horizon, they rule about anything quantitative.

15 Literalism and Genesis

Hence the importance of not taking literally the words of Genesis 1, according to which God created each species separately, let alone taking literally the biblical chronology of the age of the world.

[Therefore] theologians or exegetes should be grateful to quantities, so to speak, because quantities can perform a purifying effect on theology, whether biblical or other. Quantities ground the truth of the statement which may have originated with the great Cardinal Baronius, a statement by Galileo, who did not seem to understand the full bearing of it: "The Bible teaches man not about how the heavens go but how to go to heaven." By heaven much more is meant than the condition of seeing God face to face. Since that condition is the fulfillment of all conceivable human purpose and striving, it has to include the reality of any purposeful action, however simple or apparently trivial.

As Nobel laureate Sir William Bragg wrote, "From religion comes Man's purpose; from science his power to achieve it. Sometimes people ask if religion and science are not opposed to one another. They are: in the sense that the thumb and fingers of my hand are opposed to one another. It is an opposition by means of which anything can be grasped."

[To grasp with the mind is to comprehend, and when the light came into the world, the darkness could not comprehend it. For beyond the grasp of science and beyond the grasp of anything shy of revealed religion, the purpose of life, and the final cause of the material universe, is a God Who is Love.]

It is in love that religion completes all the progress it is capable of. It has already done so on countless occasions, long before the advent of science, and will keep providing the only means whereby science may act not as a curse but as a blessing.

16 Love

In this age of science, and in coming times to be increasingly more scientific, no claim may be more startling than the one that love rooted in religion would be around long after all science is gone. Long before science had arrived, religion also foresaw a stage where even faith and hope would cease by finding their completion in love [First Corinthians 13:8-13]. That stage will consist in knowing God as he is.

Such is the deepest aspect of the true harmony between intellectual honesty and Christian love, between science and religion, and also the crowning phase of their progress.

LOVE NEVER ENDS. WHERE THERE ARE PROPHECIES . . .