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# REASON v. RATIONALISM

## PREFACE TO THE SERIES

WE propose in this series of papers to consider and answer various objections to religion and the supernatural which one hears expressed at the club, the "pub.," the workshop, the debating society, and the street corner, and which underlie much of the writing in the secular press—objections that are neither subtle nor profound, but which have a certain surface plausibility that recommends them. Many are gratuitous assertions, dictated, perhaps unwittingly, by a desire to escape the consequences which a conscientious faith entails; others spring from mere ignorance, or mental confusion, or inability to follow abstract reasoning; others, again, from misreading of history. Trivial as they commonly are, they need an explicit refutation, for they impress unthinking minds and by constant repetition acquire a sort of prescriptive claim to be accepted. The Bellman's dictum—"What I tell you three times is true"—suggests a style of argument very frequently met with in anti-religious propaganda.

## WHAT IS THE GOOD OF GOD?

"Earth's crammed with heaven,  
And every common bush afire with God ;  
But only he who sees takes off his shoes."

E. B. BROWNING, *Aurora Leigh*.

"Our thoughts come nearer to God's reality than our speech does, and He is yet more real than we can think."—ST. AUGUSTINE, *On the Trinity*, vii 6.

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### CONTENTS

	PAGE
1. There is no sign of a Creator in the Universe . . . . .	3
2. The Idea of Creation is based on a mistaken inference . . . . .	3
3. Creation is an impossible concept . . . . .	4
4. Chance may account for the Universe, thus making the notion of Design in Creation gratuitous . . . . .	6
5. Chance, plus unlimited Time, can explain the order ascribed to Creation . . . . .	7
6. A Creator is unnecessary to produce Life . . . . .	9
7. Why a Personal Creator rather than "Unknown Causes" ?	10
8. The proofs of Creation are not convincing . . . . .	11
9. Creation cannot at any rate be proved from Causality . . . . .	13
10. Belief in a Creator is traceable to Fear . . . . .	14
11. Belief in a Creator is due to Ignorance . . . . .	15
12. Many eminent Scientific Men reject Creation . . . . .	17
13. Science alone gives certitude, so Creation remains a hypothesis . . . . .	19
14. Creation depends for proof on Philosophy, a system now discredited . . . . .	20
15. Amid rival theories, Scepticism is the safest course . . . . .	22
Appendix . . . . .	24

The present paper follows in the main the plan of the excellent *Schutz- und Trutzwaffen*, by Fr. Peter Nilkes, S.J.

1. There is no sign of a Creator in the Universe.

*Science in these latter days has progressed wonderfully: the properties of nature have been thoroughly investigated: even invisible forces have been detected and controlled: but nowhere, on earth or in the skies, has man come across God. Therefore we are justified in denying what is in no way perceptible. Even the Apostle agrees with us, for he admits—"No one hath seen God at any time" (1 John iv 12).*

A puerile objection this, which supposes all knowledge to consist of sense-perception. A thing may be known directly or by inference. Robinson Crusoe knew that his solitude was broken by seeing, not a human being, but a human footprint, and the objector may examine his watch for a long time without detecting its maker's presence. Yet he knows that the maker exists. And, in like manner, we know of God's existence from His handiwork. Design, or adaptation of means to end, implies a Designer.

2. The Idea of Creation is based on a mistaken inference.

*God, ex hypothesi, in a unique conception. Therefore His existence cannot be inferred from common physical relations of effect and cause. Show me a real Creator at work on earth, and I shall be more ready to admit a heavenly one. Because matter may be arranged by man in different forms, it does not follow that it can be brought into existence.*

The analogy between the watch and its maker and the universe and its Creator is simply an application of the general law on which the argument is really based, viz., that every effect is due to a proportionate cause. If the various products of human activity point to adequate causes in the minds and manual skill that achieved them, so, we conclude, must the wonderful harmony and order of the visible universe. It is the expression of the Mind of God, and, as Kepler, the great astronomer, said: "All science is the reading of God's thought *after* Him." The question of actual

creation in the strict sense does not enter into the argument here, which simply proves that, there being manifest purpose displayed throughout the Universe, such purpose must be due to an adequate Cause, sc. an intelligent Designer.

### 3. Creation is an impossible concept.

(1) *From nothing only nothing can come—"Ex nihilo nihil fit." But creation supposes nothing to turn into something!*

We grant that *self*-creation is an impossible idea : the axiom quoted merely means that nothing can cause itself to exist, not that a thing existing in the Divine Mind cannot be given actual existence by the Divine Power. God does not take nothing as if it were a thing actually in being and give it another shape, &c. When finite creatures try to produce anything, they can only succeed in effecting certain changes and combinations in already existing matter. But an infinite Power can do infinitely more than we can ; it can produce existence where previously there was none. If it could merely change and not create, it would differ from our power in degree only, and not in kind. As things are, the divine power of creation is not only infinitely greater than ours, but so peculiar to God that it cannot be communicated to creatures. We do not profess to say *how* creation is effected : that is still a mystery, but it is much less mysterious than self-creation, or an effect without a cause, would be.

(2) *Spencer declares that the creation of matter "out of nothing" is incomprehensible, for such a notion involves the production of a relation in thought between something (the Creator) and nothing (the object-not-yet-created) ; of a relation, therefore, in which the one member is non-existent ; consequently, of an impossible relation.*

This is a good specimen of the mistiness of the agnostic philosopher, who prided himself on the originality and independence of his mental processes.

A child can see that the same "impossibility" arises whenever an idea is translated into fact. If Spencer's reasoning were sound, Tennyson could not have written his poems. Before they were composed and written they did not exist. Therefore the poet in composing them produced a relation between himself and something non-existent! The fact is, of course, that the materials of the poems existed *in the mind of the poet* before they were actually composed, and, in the same way, the universe, before creation, existed in the mind of God.

(3) *Eternal evolution is at least as simple and rational a concept as creation out of nothing. Therefore, the latter hypothesis cannot be said to hold the field. We postulate, then, eternal matter and force acting from eternity according to immutable laws. By the interaction of this matter and force the universe is gradually evolved, until at a certain point of evolution equilibrium is disturbed, the whole cosmos dissolves into chaos and the process starts afresh. So that instead of a continuous evolution, which, starting from eternity, must long ago have reached its term, we have a series of alternate cycles of construction and ruin. Thus the line of cause and effect is unbroken and unending, and the impossible conception of a self-existing cause is done away with.*

This argument, excogitated by the Germans, Strauss and Büchner, is no sounder than Spencer's. For this eternal matter-and-force either had in itself sufficient reason for its existence from eternity, or had not. If it existed of itself, then *it* is the First Cause, and a personal one, for intelligence, which undoubtedly exists in the world, cannot be accounted for by an unintelligent First Cause. If it did not exist of itself, and there was nothing to give it existence, it is an effect without a cause—a contradiction in terms.

Again, this matter-and-force substance must originally have been either homogeneous or heterogeneous. If homogeneous, the existing diversity of species is unaccounted for; if heterogeneous, then there were

originally a multitude of self-existing things, whereas only one such thing can be conceived.

Finally, from mere matter and force there cannot arise life, still less the rational soul of man. It will be noticed that these materialists who deride philosophy and plume themselves on scientific fact, yet build up their systems on pure metaphysical notions such as the Absolute and Relative, the nature of Causality, the idea of the Infinite. A little acquaintance with the Aristotelian philosophy which they sneer at would have saved them from many childish misconceptions, a thousand times explained in the past.

4. Chance may account for the Universe, thus making the notion of Design in Creation gratuitous.

*You are rather too hasty in postulating Design in the Universe. There may be another cause. What is there Chance cannot bring about? Very often a man's course of life is quite altered by chance. Great discoveries, the spread of disease, devastating fires, are often due entirely to Chance.*

In this and other similar arguments the word "chance" is used incorrectly. Scientifically speaking, there is no such thing as chance, if the term is taken to mean the occurrence of effects without adequate causes. But sometimes the word is employed loosely to distinguish what is due to causes merely mechanical, or to causes acting without our knowledge, from what is the effect of known intelligent purpose. Everything that happens has some cause or other—the unvarying operation of Nature's laws, the action of animal instinct, or man's free will, or the intervention of the Creator. But independent mechanical forces accidentally combining may occasionally produce an effect which simulates design, as when rain and wind and frost mould a jutting rock into the semblance of a human face. This result may be ascribed to chance, speaking relatively, not absolutely. To ascribe action

to "chance," meaning the absence of an efficient cause, is to speak quite unscientifically, not to say foolishly; a reproach which soi-disant scientists frequently incur.<sup>1</sup>

5. Chance, plus unlimited Time, can explain the order ascribed to Creation.

*There are acknowledged "treaks of Nature"—chance products of natural forces which exactly reproduce the works of intelligence. Why should not the whole harmony of the Universe be the result of the blind working of the laws and properties of matter, through endless ages? Given time enough, and the wonderful facts of chemical affinity and repulsion, order and harmony might evolve gradually out of initial chaos.*

First premising that this hypothesis does not do away with the necessity of a First Cause, to which matter and its properties are due, we reply that the order of the Universe emphatically requires Intelligence to account for it. A strictly fortuitous concourse of atoms, even endowed with invariable properties, will not do. All the laws of mathematical probability are against it. Let us examine this a little more closely. Instead of taking a quasi-infinite number of atoms, let us take seven little stones which, arranged in especial order, may represent the colours of the rainbow. How many other different positions are possible? Let the little stones be designated as a, b, c, &c. The first two have only two possible positions:—

ab, ba.

The first three only  $3 \times 2$ —

abc, bac, cab.

acb, bca, cba.

<sup>1</sup> No one has pointed out more eloquently the universal reign of causation than the agnostic, Huxley. After describing the sea-shore in a storm as a group of phenomena which the thoughtless would ascribe to "chance," he says:—

"The man of science knows that here, as everywhere, perfect order is manifested; that there is not a curve of the waves, not a note in the howling chorus, not a rainbow glint on a bubble, which is other than a necessary consequence of the ascertained laws of nature; and that with a sufficient knowledge of the conditions, competent physico-mathematical skill could account for, and indeed predict, every one of those 'chance' events."

The first seven have  $7 \times 6 \times 5 \times 4 \times 3 \times 2 = 5040$  possible positions. With twelve little stones the number would amount to 479,001,600; with thirteen, to more than six thousand millions; with fifteen, to over a billion; with twenty, to more than two trillions. The probability, therefore, in this latter case, against hitting on one special position is as *two trillions to 1*.

Here we have only twenty little stones, yet the number of atoms in the whole world are innumerable. The earth alone contains more than 2,700 cubic miles. How many atoms would that make? The sun is 333,000 times larger than the earth. Again, how many atoms? Our solar system is only a little part of the Universe. Celestial photography has already discovered a hundred million fixed stars. It is altogether beyond earthly arithmetic to calculate the odds against this definite arrangement of matter, which we call the Universe, resulting from the interaction of the material atoms composing it.<sup>1</sup>

On the hypothesis, therefore, that the original masses of atoms were like an immense and chaotic sandstorm "ruining along the illimitable inane," without any law or purpose impressed on them from without, who with any common sense could possibly imagine that they would so arrange themselves as to form the majestic and beautiful design of the Universe, so wonderful as a whole and in its smallest detail. It would be far less silly to assert that a child, if it hammered on the piano long enough, might ultimately produce, note by note, Liszt's "Hungarian Rhapsody." As a result, then, we must conclude that, since the Universe is not the outcome of the concurrence of blind forces, it must be due to Intelligence. Even the freethinker Voltaire asks, "If

<sup>1</sup> The odds against gaining a point in throwing a die are 5 to 1; with two dice and two points, 35 to 1. Krönig has reckoned that if for a million years a million men were born yearly, each of whom attained the age of ten thousand years, and each minute of his life cast thirty dice twenty times, it is not probable that any one of them would ever obtain thirty "lucky" dice at one throw.



a watch implies a watchmaker, and a palace an architect, how can it be that the Universe does not imply a Supreme Intelligence?"

We are all of us, atheists and agnostics included, constantly judging of causes from their effects, and ascribing to intelligence whatever shows marks of intelligence. A page of intelligible print is a certain indication that a mind originated it. But the Book of Nature is read by many who deny Intellect to its Author! Nowhere is the fixed desire to escape from a Personal Cause more evident than this appeal to blind laws working through indefinite time. This conception is so little "scientific" that a smattering of arithmetic is enough to dispose of it.

#### 6. A Creator is unnecessary to produce Life.

*The proof of God's existence which is drawn from the necessity of an efficient cause to produce life is worthless, for it has been maintained by modern scientists that life may originate from non-living matter. Herbert Spencer says: "At a remote period in the past when the temperature of the surface of the earth was much higher than at present, and other physical conditions were unlike those we know, inorganic matter through successive complications gave rise to organic matter."<sup>1</sup> And Huxley asserts that if it were given him "to look beyond the abyss of geologically recorded time" he might "expect to be a witness of the evolution of living protoplasm from non-living matter."<sup>2</sup> Weismann, the great biologist, declares that spontaneous generation, in spite of all vain efforts to demonstrate it, "remains for me a logical necessity";<sup>3</sup> and finally Virchow, speaking before the Science Congress at Munich in 1877, said: "There is indeed no positive fact to prove spontaneous generation ever took place . . . nevertheless the acceptance of this theory is the only possible way of explaining the first living being."*

These various dicta are good types of the abandonment of scientific methods to which even eminent

<sup>1</sup> *Nineteenth Century*, May, 1886.

<sup>2</sup> *Critiques and Addresses*, p. 239.

<sup>3</sup> *Essays*, p. 34.

scientists resort when they leave their special domain. Huxley, although owning that in the controversy between bio-genesis and abio-genesis the former were "victorious all along the line,"<sup>1</sup> is content to state his opinions unsupported by a single fact. Spencer, with more solemn show of argument, states his personal impression. The Germans imply, honestly enough, that their determination not to admit the supernatural forces them to maintain spontaneous generation. Yet the whole negative force of scientific testimony is against them. All the resources of science have been employed to no purpose in the endeavour to produce life, and Virchow himself proclaims: "Never has a living being, or even a living element—let us say, a living cell—been found of which it could be predicated that it was the first of its species."<sup>2</sup> Finally, Professor B. Moore, the celebrated bio-chemist, states positively: "The mode of production of living matter is characteristic, and cannot be brought about by the actions solely of inorganic forms of energy."<sup>3</sup>

#### 7. Why a Personal Creator rather than "Unknown Causes"?

*But why should I admit God? He is not a fact of experience, with which alone Science deals. His existence is merely inferred. And if I choose to "stick to*

<sup>1</sup> *Critiques and Addresses*, Address to Brit. Assoc., 1870.

<sup>2</sup> Address delivered at Wiesbaden, 1887.

<sup>3</sup> *Recent Advances in Physiology and Bio-Chemistry*. 1906, p. 7.  
Still, it is well to remember that the genesis of living from non-living matter, though it cannot be proved by present scientific methods, cannot yet be proclaimed a logical absurdity. It may very well be that certain properties of matter when brought into combination in a particular way will produce the phenomena of life. Such a discovery would not weaken the proof of the existence of the First Cause, for the presence of these supposed properties in matter must be due to its Creator. In the early days of science, spontaneous generation was commonly held by Catholic teachers, but the progress of Science itself has uniformly tended to disprove its possibility. Therefore, if held at all, it must be held on unscientific grounds. (Cf. Windle, *What is Life?* chap. vi; Gerard, *The Old Riddle*, chap. ix.)

*my last" and concern myself with the material Universe alone, saying of its origin—I know nothing: I ascribe it to unknown causes, to energies of matter which may well have existed under earlier and different conditions—who can complain of my attitude? Speculation is not science.*

The objection to such an attitude is that it is a deliberate narrowing or blinding of the human intellect. It is like the proverbial conduct of the ostrich in presence of danger. Man's mind is compelled by its constitution to search for truth and ultimate truth. To refuse to draw logical inferences from ascertained facts, lest the knowledge thus obtained should be inconvenient, should humble pride or rebuke sensuality, is a cowardly crippling of man's highest faculty. The position, once more, is an illegitimate claim on the part of physical science to the whole sphere of knowledge. There are many truths which are not within the purview of physical science. It is mock modesty to say we cannot go farther than she leads us. That were to limit all knowledge to the records of our senses. Our senses tell us the world exists; our minds tell us with at least equal certainty that it had a cause. An unknown cause, in one sense, because it cannot be fully comprehended; but known at least as completely as the force of gravitation is known, through its effects. Finally, to appeal to material forces and energies, as *possibly* existing in the beginning and capable of producing the Universe, yet of which matter has now no trace, and which, moreover, contradict all we know of matter, is surely to fly in the very face of scientific method, which is solely concerned with the observation of facts and *logical* deductions from them.

**8. The proofs of Creation are not convincing.**

*At best, it is one hypothesis against the other: materialists ascribe the Universe to the potentialities of eternal matter; theists to the creative act of a personal God. The proofs the latter advance do not as a matter of*

*fact carry conviction to many reasonable minds, as experimental or mathematical proofs do.*

There are other forms of evidence no less valid than mathematical or experimental proofs; for instance, the proof we call deductive or inferential. The proofs of God's existence are of this nature, not such as exclude all possibility of doubt, but such as make doubt or denial unreasonable.<sup>1</sup> And their cogency, as we have already implied, depends much on the moral and intellectual prepossessions of those to whom they are addressed. Some of these arguments are philosophical, some are scientific. We may take one of the former, referring the reader for further information to books quoted in the appendix.

The Principle of Causality which, rightly understood, is an axiom, asserts that nothing can come into existence except through the action of some adequate cause, independent of itself. Now the physical universe has had a beginning. Therefore it must have had an external cause, capable of giving it existence and independent of itself. This conclusion is irresistible once the premisses are granted. The first premiss is, as we have implied, self-evident, *i.e.*, it is seen to be true on analysis of its meaning. To say that a thing has had a beginning is to say that it once did not exist. Therefore, it must have been given existence by some other thing, as existence is a necessary preliminary to action.

The second premiss—that the Universe is not eternal—is admitted by most competent scientists, both believers and materialists. Thus Huxley speaks of the visible Universe as "Phenomena, the very nature of which shows that they must have had a beginning and that they must also have had an end."<sup>2</sup> And Lord Kelvin

<sup>1</sup> When some of Napoleon's generals were uttering infidel opinions, the Emperor addressed them to the following effect: "You believe in my genius, but which of you have seen it? You know of its existence by my victories." A thoroughly reasonable inference, yet, if one *wished*, one might credit Napoleon's victories to chance or good luck.

<sup>2</sup> *Lay Sermons*, p. 13.

says: "Regarding the Universe as a candle, that has been lit, we become absolutely certain that it has not been burning from eternity, and that a time must come when it will cease to burn." The scientific law of the *Dissipation of Energy* makes it clear that if the forces of Nature had started working in eternity they would long have been exhausted.<sup>1</sup> The same argument may be suggested with equal cogency as regards a single aspect of the Universe, *sc.* the presence of life. Science teaches that in the first stages of the existence of the Universe the temperature was such as to preclude the possibility, even in germ, of life as we know it, *i.e.*, the power of self-motion. Whence then did life originate? Not from anything lifeless, for "you cannot get more out of a sack than there is in it." And therefore from some living Being outside the Universe—*viz.*, the First Cause—God.

#### 9. Creation cannot at any rate be Proved from Causality.

*David Strauss denies the validity of all proofs of God's existence, because it is impossible to get beyond the series of natural proofs. If every single thing has its cause in another, this is a universal law which must hold good always and everywhere, thus making it impossible to reach an exterior cause.*

An objection which denies the validity of rational inference! A train passes before my window. It is so long that I cannot see either the beginning or the end. I can only see that every carriage is drawn by another and that evidently there must be some motive power, and I naturally conclude that there is an engine in front of the train. My conclusion goes beyond what I can see. Strauss would say that my conclusion is wrong

<sup>1</sup> Once we grant a First Cause, self-existent from eternity, the eternity of the created universe becomes conceivable, for the First Cause may have been eternally creative. It is not easy to arrive at a clear conclusion on such matters as these, for by a necessity of our minds we cannot think of eternity except as infinite time, whereas it does not involve succession, as time does,

for that very reason. He would admit that each carriage was pulled by another, but would deny the necessity of a locomotive. Is it credible?

Others, again, affect a childish precocity, and assert that as we seek the cause of all things, so we should go further back and seek the cause even of God Himself. But this is absurd. The law of causality only says: "Every effect must have a cause," or, in other words: "That which is not self-existing must have the cause of its existence in something else." Does it not clearly follow that a First Cause must exist, One whose essence includes His existence? This Being—God—exists necessarily of Himself and of no other; to demand a further cause for the self-existent is nonsense.

#### 10. Belief in a Creator is traceable to Fear.

*The only scientific way to investigate this question is to go back to origins and study development—the positive, historical method. According to ethnographers, religion took its start from the fears of primitive man, excited by the terrible phenomena of nature. As Horace says even of the Romans of his time: "When Jove thunders in the sky we believe in the fact of his sovereignty." †*

As usual, we are met by an unverified assumption. There is no evidence in history for a continuous evolution of man from a lower to a higher moral and intellectual level. Indeed, what evidence we have tends to prove that the human race started in a "Golden Age" of some sort, from which it afterwards degenerated. The Biblical narrative, containing the first revelation, is confirmed by the oldest literature in the world. The only inference to be drawn from the fact that savages attribute natural phenomena to their gods, is that they believe those deities to be immensely superior to men. We cannot "scientifically" conclude that belief in the existence of the gods actually arose from the phenomena, whether formidable or beneficent. It is much

† *Odes*, iii 5.

truer to say that fear (fear, that is, of an omnipotent judge) causes *disbelief* in God. "No one denies God's existence unless he has an interest in doing so," says Bacon. "There is no God" might often be paraphrased "I wish there were no God, for I have reason to fear Him."

II. Belief in a Creator is due to Ignorance.

*The riddles of Nature gave rise to a belief in God. It seemed simpler to seek their solution in a personal agent than to account for them otherwise. But the growth of science has explained things fully, and experience has banished mere speculation. As a general rule such credulity disappears with the advance of learning. It was but natural in the savage, of whom Pope writes :*

*"Lo, the poor Indian whose untutored mind  
Sees God in clouds or hears Him in the wind," &c.  
Essay on Man.*

This argument is characteristic of the methods of certain modern scientists who hope by repeated unsupported assertions to give currency to their own peculiar views. It also illustrates the inspired saying of St. Paul: "Scientia inflat"—"Knowledge puffeth up." It is full of an arrogance which is quite alien to the spirit of true learning. The real wise man is too conscious of the narrow limits of his own knowledge to despise the ignorance of others. To these self-sufficient sciolists may fitly be addressed the words of Job: "Are ye, then, the only men that there are, and shall wisdom die with you?"<sup>1</sup> As a matter of fact, whether we count names or weigh merits, the witness to God's existence among men of science is overwhelmingly great. Let us mention but a few of the more prominent modern English-speaking scientific men, who, in spite of their great learning, have retained their religious beliefs.

Amongst *Physicists, Chemists, &c.*, we find Lord Kelvin, Lord Rayleigh, Sir William Ramsay, Sir Henry Roscoe, Sir William Crookes, Professor Balfour Stewart,

<sup>1</sup> Job xii 2,

Professor P. G. Tait, Sir William Abney. Amongst *Mathematicians*, Professors H. Lamb, A. C. Dixon, George Chrystal, M. W. Crofton, G. M. Minchin, Sir Oliver Lodge. Amongst *Geologists and Palæontologists*, Professors J. Geikie, W. Boyd Dawkins, H. G. Seeley, Sir Joseph Prestwich, E. Hull, W. J. Sollas, Sir Archibald Geikie. Amongst *Biologists, Physiologists, &c.*, Professors G. J. Romanes, Augustus Waller, W. Stirling, L. S. Beale, Sir Douglas Galton, Sir Jas. Crichton-Browne, Sir Victor Horsley, J. Butler Burke, Gerald Leighton, B. Windle. Amongst *Astronomers*, Sir David Gill, Dr. E. W. Maunder, Professor H. H. Turner, Dr. A. C. Crommelin, Professor Ellard Gore, Sir Robert Ball, Professor S. Newcomb. In the *Medical Profession*, Lord Lister, Sir Thomas Barlow, Sir Patrick Manson, Sir James Y. Simpson, Sir Lauder Brunton, Sir Samuel Wilks. Amongst *Zoologists*, Professor A. Sedgwick, Sir Richard Owen, Professor G. H. Carpenter, Dr. S. O. Harmer, Professor H. Macintosh. Amongst *Psychologists*, Professor James Ward, Dr. J. C. Schiller, Professor J. C. Murray, Professor H. L. Orchard.

We have not given all possible names ; we have not included all the branches of Science ; we have not mentioned men of past generations or of other countries, or clergymen eminent in scientific research ; there are enough and to spare here to give the lie to the constantly repeated assertion that real learning is incompatible with belief in God.<sup>2</sup> One believer of commanding eminence in Science would sufficiently disprove it, and there are hundreds.

In strong contrast to the dogmatism of many pseudo-scientists is the caution of the genuine pioneers and discoverers. With few exceptions these realize the limits of their subject and the inadequacy of their

<sup>2</sup> See, for further treatment, *Religious Beliefs of Scientists*, by A. H. Tabrum ; *Catholic Churchmen in Science*, 1st and 2nd series, by J. J. Walsh ; *Christianity and the Leaders of Modern Science*, by K. A. Kneller, S.J., translated by T. M. Kettle, M.P., and any full biographical dictionary.



methods. Romanes declares (*Nineteenth Century*, June, 1888), the theory of evolution has done nothing but "throw back the question of design from the facts immediately observed to the causes subsequently discovered. And there the questions must be left by science, to be taken up by philosophy"—for which latter pursuit most "popular scientists" are singularly ill-equipped. Speaking merely as a scientific man, Du Bois-Reymond, who is an avowed materialist, has the honesty to confess that, after all that science has done, its verdict as to ultimate truths must be, "We do not know and we never shall." Still more explicit is the testimony of the late Lord Kelvin, one of the most eminent physicists of the 19th century. He, if any one, had penetrated into the deepest secrets of nature, yet this is how he sums up his life-work, even within the domain of science itself:—

"One word characterises the most strenuous efforts I have made perseveringly during fifty-five years: that word is *failure*. I know no more of electric and magnetic force, or of the relation between ether, electricity, and of ponderable matter, or of chemical affinity than I knew and tried to teach to my students fifty years ago in my first session as Professor." <sup>1</sup>

In the light of such testimonies, the absolute dicta of Haeckel and his English *vulgarisateurs*, Clodd, McCabe, Hird and the rest, may be rated at their true worth. So far from belief in God resting on ignorance, it is more imperatively demanded by every advance in human knowledge.

## 12. Many eminent Scientific Men reject Creation.

*No doubt many learned men have been believers, but there are, and have been, many who are atheists. If knowledge leads to belief in God, why do not they believe? No one can dispute the profound knowledge of a Darwin, a Spencer, a Huxley, a Haeckel—yet their great intellects and eminent talents left them, perhaps even made them, creedless.*

As we have just seen, the pursuit of Science, even when attended by the greatest success, so far from

<sup>1</sup> Speech on the occasion of his Jubilee, 1896. See *Life*, vol. ii, p. 984.

leading away from God, is quite compatible with full acceptance of the supernatural. So the atheism and agnosticism of many scientific men must be ascribed to some other cause or causes. Some of these are undoubtedly moral—belief in God implies recognition of His claims, acknowledgement of certain limitations to human liberty, and due responsibility for human action. Some, again, are intellectual—every one has some philosophy, practical or speculative, and if his philosophy is false, if it denies, for instance, the existence of absolute truths, or the invariability of metaphysical laws, it may easily blind him to the cogency of the proofs for God's existence. Add to this, that God has designedly left those proofs such that, unlike mathematical truths, they can be denied without obvious self-stultification; in other words, that good-will must enter into the act of faith—and we have enough to account for the undoubtedly disquieting phenomena of many powerful intellects arrayed against the truth. If the boasted methods of science were applied rigorously all round and its due weight given to every form of evidence, reason alone would lead to God. As Lord Kelvin said to some University students in 1903<sup>1</sup>: "Do not be afraid of being free-thinkers. If you think strongly enough you will be forced by science to the belief in God, which is the foundation of all religions. You will find science not antagonistic but helpful to religion."

Long ago Bacon expressed the same thought: "A little philosophy inclineth man's mind to atheism; but depth in philosophy bringeth men's minds about to religion."<sup>2</sup> But to start, as many sceptics do, with assuming as an axiom that there is nothing beyond nature, is to close one's mind to all possible evidence of the supernatural—surely not a scientific proceeding! The scope of science proper—physical science—is the material universe, but its methods are applicable and should be applied to all reasoning processes on what-

<sup>1</sup> *Life*, ii, 1099.

<sup>2</sup> *Essays*: Of Atheism.

ever subject. A sincere acceptance of the inexorable and self-evident law of causality—"Nothing can begin to be without a cause independent of itself"—would go far to upset all the theories of the materialists.

13. Science alone gives certitude, so Creation remains a hypothesis.

*After all, "seeing is believing." As a matter of fact the man of Science, as Huxley says, "has learnt to believe in justification, not by faith but by verification." We believe what has been experimentally proved. All the rest is the creation and, perhaps, the mere figment of the brain.*

This is the common talk of half-educated scientific smatterers. Such men do not realize that a great deal more than fact verified by experiment enters into their knowledge. They talk glibly of the laws of nature—which of them has ever seen such a law? These "laws" are, to quote Huxley again, "the product of a mental operation upon the facts of nature which come under our observation, and has no more existence outside the mind than colour has."<sup>\*</sup> They discourse learnedly, once more, about atoms, molecules, ether-waves of light, but all these things are mere postulates of the reason. None of them has been seen or measured. Disciples of Haeckel should remember, though he himself frequently forgets, their master's descriptions of "purely scientific investigation," viz. "firstly, experience; secondly, inference."<sup>\*\*</sup> We must insist again upon the reality of our purely inferential knowledge. Philosophy is as truly a part of "science" as is the study of natural forces, &c.: they differ only in the fact that the former deals with ultimate causes of phenomena, and the latter with proximate causes and the phenomena themselves. The logical process that determines the existence of the electric fluid is exactly the same as that which demonstrates the existence of God. To question the validity of our mental operations

<sup>\*</sup> *Pseudo-Scientific Realism*, p. 77.    <sup>\*\*</sup> *Riddle of the Universe*, p. 6.

or the power of our mind to acquire certain knowledge is to destroy the possibility of Science itself.

14. **Creation depends for proof on Philosophy, a system now discredited.**

*At one time Philosophy was all in all, and Science was hardly thought of. But since the time of Bacon these positions have been gradually reversed, until in most scientific circles Philosophy is only mentioned to be laughed at. But without Philosophy there can be no real proof of God's existence.*

In order to criticize this statement properly we must determine what is meant by philosophy. It is the application of mind to the facts of experience with a view to discovering their ultimate nature. Just as Mathematics has its axioms, so Philosophy must have its principles, certain assumptions, for instance, about the power of the intellect to ascertain absolute truth, or about the laws which govern the right use of the mental processes. One system of Philosophy differs from another according to the principles it starts with or the processes it sanctions. If any philosophical system has been discredited, it is important to discover which it is. The only systems which are known or studied nowadays in "scientific circles" are those which arose after the general abandonment of Catholic philosophy by those who left the Church at the Reformation. These, therefore, being the only ones they know, are the only systems scientific men have a right to laugh at, and we may well grant them that right. Since Descartes and Kant, the so-called modern philosophy has let the solid ground of reality slip from under its feet, sinking deeper and deeper into the mire of scepticism and pure idealism. In Germany it was Kant (1724-1804) who loosened philosophy from the moorings of reality, and embarked on the sea of scepticism, by the publication of his *Critique of Pure Reason*. Kant begins by telling us that all human knowledge is entirely devoid of trustworthiness, because our knowledge is limited by

our sense-experience, and our deductions therefrom have no correspondence with reality. There are two orders, of thought and of thing, but there is no means of uniting them. On this assumption he undertakes to investigate our knowledge and intellectual powers; but with what instrument? With his own intellect, of course, which, according to him, is completely unreliable. What result can we expect from such an investigation? Kant tells us that we have certain mind-forms, *a priori* cognitions, such as those of space and time, by which our sense-experience is necessarily modified. But those "forms" have no existence outside the mind, so that we have no knowledge of things as they are. How, then, can he expect us to accept his opinions as true? Must he not admit that he too is the victim of illusions, and that he cannot know whether he tells the truth or not, whether he explains human knowledge rightly or wrongly? Kantian Dualism is weighed and found wanting.

Fichte (1762-1814) went still further, and denied the reality of sense-perceptions, explaining them as creatures of the Ego which alone possesses any reality. So that the world does not exist outside consciousness. This is idealistic Monism, and is equally unsatisfactory.

We need not further examine the later philosophy of Hegel (1770-1831), which is more purely arbitrary than its predecessors. Everything is an expression of Absolute Thought; we are all part of God, &c. This is Pantheistic Idealism. That such philosophical systems should fall into discredit even in the land of their origin is not surprising, but rather quite natural. What foundations remain if this huge visible world of matter and force, of light, colour, and sound, is nothing more than a mere projection of my inward sense, or, if the whole world of thoughts and ideas is nothing but a phantom of the "Ego," a creation of the mind without any true objective equivalent?

The reaction from such spinning of cobwebs has

naturally taken amongst unbelievers the form of Materialism. In this system, which is also monistic, instead of everything being Mind, everything is Matter. Comte (1798-1857), the inventor of Positivism, or the Religion of Humanity,<sup>†</sup> was a Materialist, in that he limited all valid knowledge to sense-perception, for the senses can only tell us of the existence of matter. The chief modern exponent of Materialism is Haeckel, who, while professing to keep within the limits of pure Science, is as speculative as the veriest Idealist of them all. If this form of Philosophy is not also derided by men of Science it is because it masquerades under another name, and thus conceals its non-scientific character. We need say no more of it here.

To such depths has modern philosophy sunk. But it would be a great mistake and a sign of a very limited knowledge indeed if one confounded these vague and arbitrary systems with the true, sound, always valuable "philosophia perennis" which was founded by Aristotle, adopted by Christianity, and marvellously developed by the Scholastics, especially by St. Thomas Aquinas, and which even nowadays is in full harmony with the results of the natural sciences, and gives us the only consistent explanation of the world.

But it needs the humble repentance of the Prodigal Son and a "Pater, peccavi," to find God, and this the poor, hungry, and naked so-called modern philosophy has not got the courage to say.

#### 15. Amid rival theories, Scepticism is the safest course.

*After hearing of all these different opinions and systems of the philosophers, one is finally driven to the opinion: "Nobody knows anything for certain; one person denies what another asserts." Therefore, the only thing left for the man who has not the time or the ability for personal investigation, is to remain in an*

<sup>†</sup> Said, in allusion to the fewness of its adherents, to consist of three persons and no God!

*attitude "of honest doubt." Scepticism becomes the only rational policy.*

Scepticism, in its full sense, holding nothing as certain, is not only not rational, but is also not possible. For as soon as a sceptic makes an assertion, he contradicts himself and admits at least something as true. He either maintains the incertitude of all cognition, and claims that assertion and the arguments which support it to be true ; or, he doubts that assertion, in which case he still holds several things as true ; for instance—that true and false are not the same, that certitude and doubt differ from each other, that one cannot acquire certitude, that he himself has that opinion, and that he himself is existing. "But I doubt even that." "Do you doubt the difference between true and false?" "Yes." "Why, then, do you contradict me? For it does not matter to you whether it is so or not! Do you also doubt the difference between your opinion and mine?" "Yes." "Then you have no reason whatever to say anything. Moreover, you have just now asserted two things, and even if you were to say again, 'I do not know,' you would at least affirm your ignorance. In short, if you wish not to contradict yourself you must never express yourself."

It is clear, then, that as long as a man uses his reason at all he cannot doubt everything. By its very constitution the mind is bound to admit facts which are based on evidence, just as a healthy eye must see, if the necessary conditions are at hand. And there are a number of truths which are self-evident. Thus he must admit the fact of his own existence, for if he doubt it, his doubt supposes it already. The same with the principle of contradiction, *i.e.*, that the same thing under the same aspect cannot exist and not exist at the same time ; for every denial and every doubt presupposes the principle. Even in mathematics the first general and fundamental propositions, that the part is less than the whole. for example, are taken as self-

evident. They may be explained but not proved, for they are self-evident and fundamental truths.

From the existence of unchangeable truths like these, moreover, the existence of a real primitive truth—that is, the existence of God—follows as a logical sequence.

Accordingly, although “doctors disagree” very frequently and fundamentally in this modern world, the business of the learner is to discover some logical system which makes no arbitrary demands, which acknowledges the soundness and, at the same time, the limitations of natural faculty, which gives an answer to all the puzzles of life, or at least gives reasons why the answer is not yet possible, which, logically pursued, does not issue in immorality or inhumanity. There is only one system that does all that, the system which is based on the fact of a Personal Creator to whom the Universe belongs and to whom man is accountable.

## APPENDIX

### BOOKS AND PAMPHLETS FURTHER DEVELOPING THE PRECEDING ARGUMENTS

#### PAMPHLETS—

- The Existence of God*, by Mgr. Canon Moyes. Sands, 6d. net.  
*Science and Faith*, by Rev. Dr. Aveling. Sands, 6d. net.  
*The Church versus Science*, by Rev. J. Gerard, S.J. Sands, 6d. net.  
*Modern Free Thought*, by Rev. J. Gerard, S.J. Sands, 6d. net.  
*Why I Believe in God*, by A. E. Proctor. C.T.S., id.  
*Agnosticism*, by Rev. J. Gerard, S.J. C.T.S., id.  
*Modern Science and Ancient Faith*, by Rev. J. Gerard, S.J. C.T.S., id.  
*Science and Scientists; Science or Romance?; Evolutionary Philosophy and Common Sense*, by Rev. J. Gerard, S.J. Three Volumes. C.T.S., 1s. each.

#### BOOKS—

- Natural Theology*, by Rev. Bernard Boedder, S.J. Longmans, 6s. 6d.  
*What is Life?* By President Windle. Sands, 3s. 6d. net.  
*The God of Philosophy*, by Rev. Dr. Aveling. Sands, 3s. 6d. net.  
*The Old Riddle and the Newest Answer* (Criticism of Haeckel), by Rev. J. Gerard, S.J. Longmans, 2s. 6d. net; paper, 6d.  
*The Reign of Law*, by the Duke of Argyll.  
*Agnosticism*, by Prof. Robert Flint. Blackwood.