

THE ONE NECESSARY ENCYCLICAL— PART II, A DRAFT

[Title]

It is a violation of reason not to believe in the existence of God. It is a violation of our moral sense not to believe that God has revealed himself to man, that the revelation he has given is Christianity, and that Christianity is Catholicism. This paraphrase of words of Henry Edward Cardinal Manning [*The Temporal Mission of the Holy Ghost*, 1865] provides a framework on which to base Our teaching against the curse of the modern age, the systematic rejection of belief in God and of the reasonableness of that belief.

I

It is a violation of reason not to believe in the existence of God.

1. There is no man living free of the demand of conscience to plumb the mystery of his own essence and being, of *what* he is and of *that* he is. No man brings himself into existence : no man chooses his nature, chooses to come on earth as a man, an animal possessed of intelligence, rather than as a brute. His soul and body are a man's most precious possession—“What can a man give in exchange for his life ?” [*Matthew 16 : 26*] Everyone is bound to seek, so far as he is able, an explanation of these mysteries.

The explanation must be adequate. That is, it must answer the questions they pose so satisfactorily as to leave the mind in peace, or in relative peace. The blindness that characterises modern thought over these mysteries, and grounds the folly of atheistic belief, is marked by an explanation so inadequate as to be childish. Men of great knowledge accept the explanation, though their writings betray an unease as to its adequacy.

2. There has never in the history of mankind been an age to compare with the present in abandonment of belief in God. There has never been an age in which men have shown so little regard for their heritage. We refer to the Church that God established on earth and to the culture to which that Church gave rise over fifteen centuries. Circumstances of material prosperity following the moral and psychological harm worked by two world wars and countless lesser wars, perennial disputes between nations, the flourishing of erroneous philosophical systems which advanced the subjective and the material in place of the objective and the immaterial, and the wholesale abandonment of moral principle have cooperated to persuade men to accept facile answers to the great questions. It has persuaded them likewise, in arrogance, to discount the great privileges that have flowed to them via their religious heritage and to abandon the moral principles taught there to the point where the very ground of morality is lacking in many of the posited laws of nations and in the rulings of their judges. Such laws and rulings are, of course, but reflections of the values of a populace whose members have embraced species of gross immorality as if these were for their good rather than their ill, as if deserving of approval rather than of profound condemnation.

The spirit at work is a consequence of errors begun with the revolt in the sixteenth century by certain Catholics against the authority of their Church and against Almighty God Who had established it. The rejection of this authority by Martin Luther, adopted by many throughout the nations of Europe and, in particular, its endorsement with great violence by the tyrant Henry Tudor (King Henry VIII) in the British Isles, produced chaos in men's religious lives and enormous social upheaval. The rejection of God's authority in favour of man's is a grievous sin and brings with it innumerable sanctions, not the least of which is a blinding of the understanding that renders sinners incapable of thinking aright in fundamental matters. The passing of this wrongheadedness to their successors has seen fulfilled the maxim *the sins of the fathers are visited upon their children*.

3. The theological error of Protestantism led to philosophical error. Those who abandoned what God had revealed soon found themselves abandoning common sense and denying the intellect's proper power. In the place of a sound grasp of reality, one that acknowledges the existence of what the senses cannot know but the intellect can, men embraced a simplistic philosophy which rejects all assertion of the metaphysical. They balanced this with an inversion of logical truth—fruit of the thesis on which Protestantism had grounded its rebellion—asserting that what matters is not reality but what men think, or choose to believe, about reality. All the history of modern thought from Bacon and Descartes onward is marked by this flight from reason, though men were so taken with its novelty and the happenstance of scientific discovery that they called the age that followed 'the Enlightenment'. The result for mankind in the twenty-first century is that there is no aspect of man's thinking or doing unaffected by this philosophical blight.

4. Man's intellect is feeble in the extreme. He must gather from many sensed singular impressions the truths that enable him to survive and to flourish, and long is the path he must walk, and difficult the struggles he must face, before he is mature enough to do so. His knowledge of reality, of the intricacy of the world and of the universe, never approaches complete comprehension. Of what one man knows, another is in ignorance. There is no man alive, then, who does not rely on some form of belief. The wise look to objective facts for their support, the foolish accept the assertions of the *philosophes* and the intellectually shallow.

The materialist denies the existence of any cause but the material. His denial of the existence of anything that cannot be sensed renders him blind to the greater part of reality. For its greater part, the formal, is immaterial. He criticises those who believe in God as credulous, quite blind to his own credulity. For he is as much a believer as they but *his* belief, in contrast to theirs, lacks any adequate rational underlay. The greatest lies of the modern age are those that assert that the atheist is not a believer and that the ideology to which he adheres is not a system of belief.

5. To prevent himself being constrained to recognise the possibility of a Creator, the atheist flies to his materialist refuge. Thomas Merton summarised the attitude displayed : “[A]lthough the will cannot force the intellect to see an object other than it is, it can turn it away from the object altogether, and prevent it from considering that thing at all.” [*The Seven Storey Mountain*, Part 2, ch. 2] His atheism inclines the atheist to materialism ; his materialism serves to confirm him in his atheism.

The atheist believes in 'no-God'. His shying away from any notion of the formal—and the essential part the formal plays—in the innumerable species of the things of nature provides him, he thinks,

with a rational ground for his belief that he has no need to look for an adequate cause of his being. He perceives that the underlying rigour of the formal implies a fixed order, where he would have it that such order is haphazard—a series of 'happy' accidents. He grasps, moreover, that the formal (and fixed) implies an end for the sake of which the world and the universe exist. And he fears what follows : if there is order and an end, there must needs be One who ordered (and continues to order) and who intends that end. And since such a Being can only be intellectual, the acknowledgement of his existence must lead to acknowledgement that the atheist is, after all, accountable for the way he uses his soul and his body.

The will is the proper appetite of the intellect so that intellect and will are irretrievably intertwined. If the will chooses to embrace some moral evil and to persist in doing so, the ability of intellect to acknowledge the truth is inevitably compromised.

6. The materialist fears formal and final causality more than he fears the suggestion that the world and the universe had—continues to have—an efficient cause (a maker). For he can hide the truth of its making by ascribing to the instrument what belongs to the principal. But he might as well call the axe the maker of the hearth fire, or saw and hammer the builders of a house. Of this kind is the contention that a man owes his being to his parents. Parents are the *instrumental* causes of their child ; they are not his principal cause. They pass to their offspring his nature, *what he is*, the nature given them at their conception. They do not choose that nature, that gift. A man knows intimately the product of his mind and of his hands ; he may be said—the word understood in a restricted sense—to be 'the creator' of the artificial thing. It is otherwise with the production by parents of a child. Though they contribute their likenesses and certain of their mental and bodily dispositions to the child, neither parent knows in advance his child's personality, talents or character.

7. To make it plain, then, We insist with Aristotle and St Thomas Aquinas that of whatever effects there are in the world, in the universe, whether things or actions, there are four causes. There are no less than four ; there are no more. Two of the causes, the *formal* and the *material* causes, are *intrinsic* ; they remain in the effect or action. The other two are extrinsic, outside it. These are the *efficient* cause (the maker or agent), and the *final* cause, the end or reason for the effect coming into being. [St Thomas, *Commentary on Aristotle's Physics* II, lect. 10, nn. 226-240 ; *Summa Theologiae* I, q. 27, a. 3]

Now, man in his art (his making) imitates nature [*Summa Theologiae*, I, q. 117, a. 1] and so the four causes are seen in operation in all the works and doings of man as, for instance, in a computer. Its *material* cause is patent. The sophistication and intricacy of the order and subordination of its parts reveals its *formal* cause which serves the ends of the designers and of the computer user, its *final* cause. The maker (makers) is its *efficient* cause.

There is an important corollary of this elaboration of the causality of things which provides an answer to the critical question of how it is that (in the first place) we know things. We will return to this towards the end of this first section.

8. The evolutionary theory that so preoccupies the modern mind, is rooted in the materialism and the subjectivism to which the present age is heir. The theory's underlying thesis, that material reality is a process of constant change reiterates, in substance, the thinking of certain Greek

philosophers, notably Heraclitus of Ephesus [c.540-475 BC], rejected by their successors. The modern philosopher Herbert Spencer [1820-1903] gave expression to the thesis underlying the scientific work of Jean-Baptiste Lamarck [1744-1829], Charles Darwin [1809-1882] and Alfred Russel Wallace [1823-1913].

No one could cavil with the testimony of experience that changes occur within species which enable progeny to adapt to changing circumstances (so called 'micro-evolution'). The fact exemplifies the axiom that nature does not default in what is necessary [cf. *Summa Theologiae*, I-II, q. 91, a. 2, obj. 1]. There is an inbuilt intention in nature to preserve each species : “[N]ature does nothing in vain because it acts as moved by God as by a first mover, just as an arrow is not moved in vain inasmuch as it is shot by the bowman at some definite thing.” [In *I De Caelo*, Bk. 1, L. 8] This facility of scope for variation allows men to breed differing strains from parent stock. Experience testifies just as readily to the fact that each species exists within a framework with limits beyond which no individual can go.

However, Darwin argued that variation occurs from species to species ('macro-evolution'). His thesis had immense implications and those driven by the materialist and atheistic spirit were not slow to explore the possibilities to discover, if they could, a rational explanation for their position. But was the thesis true ?

9. Before We consider this extension of the scientific into the realm of the philosophic, let Us quote a critical comment from one of the more forthright of modern scientists. “Neither of the two fundamental axioms of Darwin's macro-evolutionary theory—the concept of the continuity of nature, that is, the idea of a functional continuum of all life forms linking all species together and ultimately leading back to a primeval cell, and the belief that all the adaptive design of life has resulted from a blind random process—[has] been validated by one single empirical discovery or scientific advance since 1859. Despite more than a century of intensive effort on the part of evolutionary biologists, the major objections by Darwin's critics such as Agassiz, Pictet, Bronn and Richard Owen have not been met...” [Dr Michael Denton, *Evolution, A Theory in Crisis*, 1985, ch. 15]

Criticism of Evolutionary Theory

10. We should first observe that, save for the one instance of his own being as a rational animal, man is quite incapable of knowing the essential constitutive of any natural thing. He is well able, however, to identify the external characteristics or properties of each so as to identify it in its species.

Next, We insist with Aristotle and St Thomas that the determining character in any natural thing, the influence that makes it be *what it is* and its unifying principle is its formal cause, its *substantial form* or substance. The principle which exposes this truth is the *Principle of Indeterminacy*. It is simply expressed : *That which can be many is not from itself one of the many*. Since matter can be water, air, rock, a tree, a brute animal or a man, it cannot *from itself* be any of these things. That is, whatever the influence is—and it must be different in each case—that makes a thing be water, air, rock, a tree, a brute animal or a man, it is something *other than* the matter that underlies each. By definition, that influence is not material : *it is immaterial*. St Thomas, following Aristotle, gives to this influence the generic name 'form'.

11. A second principle, the *Principle of Opposite Reasons*, confirms these conclusions : *Not the same is the reason of opposites*. If in any thing there are found opposite inclinations, these must have opposite reasons. Now in every material thing there are found inclinations fundamentally opposed. For, while it *does be* one thing, it *can be* another : while it *is* one whole, it *can be* divided : while it is *specifically* the same as other bodies, *individually* it is diverse from them : while it *does be one*, it happens that there are *many* of the same kind. There must, then, be a reason for the one inclination and another, and different, reason for its opposite.

Let us take the fourth of these instances. The species *dog* can be many individuals, but it is not according to itself that canine nature be *this* canine nature, *this* dog, but by reason of something adjoined which constitutes the individual difference. St Thomas addresses the issue in this way : "If plurality were of the essence [of a nature], it could never be one, whereas it is one according as it is found in Socrates. Similarly, if oneness were of the concept of a nature and of the essence of it, then one and the same would be the nature of Socrates and of Plato, nor could [the nature] be multiplied in many." (*De Ente et Essentia*, c. 4) There must be a reason for the *oneness* and another, opposite, reason, for the *many-ness*. Its *form* adequately explains the thing's *oneness* (unity) as it explains its specific perfection, while *matter*, primary matter, adequately explains its *many-ness*, as it explains its potency for other forms, and its potency for division.

It is to be noted as a truth of great moment, that matter *simpliciter*, primary matter, is beyond the reach of the senses and is, indeed, quite unknowable (undetectable). Indeed, it is impossible that matter can exist save in combination with some form, for of itself matter is pure potency. (St Thomas, *In De Generatione et Corruptione*, L. 7) We see this confirmed in every substantial change where one material thing is converted into another, as e.g., grass is converted by the cow into its own substance and the milk with which it feeds its young ; as oxygen and hydrogen ignited in a mixture are converted into water. In every such change something proper is lost (the *substantial forms* of grass, of oxygen, of hydrogen) and something common, the underlying matter, abides. Science confirms this conservation of matter in its experiments. *Matter* causes by being determined ; *form* causes by determining.

12. In what follows it must be understood that, though an event may occur in a moment of time, there are different orders that respect it. A boy, with the sun behind him, chasing a ball across a field casts a shadow. In the order of motion, his shadow comes first ; in the order of time, the boy and his shadow are together ; but in the order of reality—the ontological order—the boy is prior because the boy can exist without his shadow, but the shadow cannot exist without the boy. In the material thing form and matter coalesce in an instant of time, but in the ontological order form is prior, for form can exist without matter (as in the mind of the maker) but matter cannot exist without form.

There is a further distinction to be noted. The substantial form (*substance*) of any material thing is accompanied by properties called *accidents* which inhere necessarily in the substance. A substance exists in its own right ; its definition is embodied in the expression *be-in-self*. In contrast, no accident can exist save in some substance. Its definition is, then, encapsulated in the expression *be-in-other*. These characters may be seen in their respective names : 'substance' derives from the Latin words 'stand' and 'under' ; a substance stands under its appearances. 'Accident' derives from the Latin verb 'to befall' ; accidents are properties that befall a substance.

13. The *substantial form (substance)* of a thing is the reason of oneness in it. It is an instance of the *essence* of a species. The reason of many-ness—why the individual is divided from, distinguished from, its fellows—is matter, though not matter *simpliciter*. Something more is required, as St Thomas explains : “Since matter considered in itself is indistinct, it cannot be that it individuates form received save according as it is made distinct. For form is not individuated through this, that it is received in matter, but insofar as it is received in *this* matter or *that*, distinct and determined to here and now. But matter is not divisible save through the accident *quantity*, for which reason the Philosopher [Aristotle] says (in *I Physics*) that, *quantity* removed, substance remains indivisible. Therefore matter is rendered *this* [matter] and sealed according as it is under dimensions.” (*In Boethium De Trinit.* q. 4, a. 2)

It is beyond the scope of this document to show how this sealing of matter occurs. It is sufficient to say that in the instant of generation of a corporeal substance primary matter, as yet indeterminately individuated, is ordered through certain dispositions towards the new *substance* and the chief *accidents* of the new compound, *quantity* and *quality*. These properties, which follow necessarily on the substance, are determined by its nature.

14. While it is the accidental form *quantity* which gives to the compound physical extension and parts (*quantity* signifying 'how much'), it is according to the accident *quality* ('of what sort') that there is established the innumerable features of the individual. “[Q]uality among all the accidents,” says one of St Thomas's most able commentators, “properly ennobles and qualifies the subject... [T]o qualify something is reckoned through that which is actual and determining after the manner of form. For on account of this is essential difference said to be predicated *in quale* (unto what sort) because it contracts and determines genus—which is potential—and, by determining, forms and qualifies it. What, therefore, essential difference does essentially, quality does accidentally, namely, to form and qualify that which is potential and formless, and that *primo* and *per se*. For though other accidents also perfect and actuate their subject, nevertheless they do not do so primarily and essentially, but either they quantify matter, or order [the compound] towards something extrinsic, or depend [in their being]... upon something extrinsic...” [John of St Thomas, *Cursus Phil.* I, p. 609b]

As said above, it is patent that there is scope in certain species for specialisation, variation and adaptation, which property, placed in the species by its Author, affects the *substance* (substantial form) of each instance of the species. The same faculty limits the extent to which any such instance may go.

15. How are inherited characteristics conveyed ? Let us take that type closest to our concern, man. A parent generates offspring essentially like to himself in a *substance* made individual through matter sealed by first accident, *quantity*, (*this* man). But how does the child come to have his or her specific temperamental and bodily characteristics ? Via one or other of the modes of second accident, *quality*, whose properties are outlined above. Let us recall that it is *form* that fixes and determines, while *matter* is what is rendered fixed and determinate. Accidental *form*, *quality*, fixes and determines secondary matter, this man, to be *this sort of man*.

The first of such accidental formalities determines the sex of the child as male or female. “God made man in His own image and likeness ; male and female He created them.” [*Genesis* 1: 27] Other of such formalities reflect the racial influences, temperament, psychological and physical

characteristics such as build, physiological make-up and skin colour of the child. Because the order of generation requires contribution in some adequation, if not complete equation, of the genetic inheritance of each parent, the *qualities* of offspring will be a mix of the characteristics of its parents and those inherited from the parents' ancestors, characteristics which may have lain dormant in the parents. In this way the variety of God's creation is manifested, such that every child is unique and never repeated even in the case of identical twins. The laws according to which physical characteristics are passed to offspring were uncovered by the Augustinian monk, Gregor Mendel (1822-1884).

16. Not all such characteristics are beneficial. It is notorious that the children of parents too closely related do not thrive. Not only canon law but the posited laws of states proscribe the conjugal union of such persons. And they do so because the ill effects in their offspring militate against the good of society. Physical and psychological vigour require what modern science is pleased to call a diverse gene pool. But it is not to be thought that the physical means by which inherited characters are transmitted are the cause of that inheritance. They are, rather, the organs by which the formal cause, *quality* in its appropriate modality, is manifested. The relation between *quality* and the relevant organs is as principal to instrument in the genus of *efficient* cause (for causes are causes to each other in diverse orders of causality (*In II Physics*, L. 5, 182). In the same way it is not *as principal* that chromosomal structure determines the sex of the individual human being, but *as instrument* of the accidental form *quality* (in its appropriate modality) inhering in the corporeal substance.

Whatever impediment there may be in any individual deriving from his inheritance, however, nature works to bring to perfection the blending of matter and form, for nature always acts for the sake of the end implicit in the creature [Aristotle, *De Anima*, pt. 4]. Moreover, against those who would assert that the characteristics of the individual derive *materially* We insist that this is impossible, for matter causes only *by being determined* and it can never exceed this office.

17. Promoters of the theory of evolution seek, in lieu of reliance on formal and final causality, to explain the order in reality, in the world, and in the universe, by appeal to chance. "Darwin's theory implies that all evolution had come about by the interaction of two basic processes, random mutation and natural selection, and it meant that the ends arrived at were entirely the result of a succession of chance events." [Dr Michael Denton, *Evolution, A Theory In Crisis*, London, 1985, p. 43] To the element of chance underlying these two processes there should be added another upon which Darwin relied as a sort of directing principle, that of the survival of the fittest. To complete this statement of the Darwinian position, adherents of evolutionary theory appeal to the great passages of time that science discovered had elapsed in the history of the development of the natural world as facilitating the working out of these processes.

Darwinian theory is, thus, grounded in the contention that the essence or nature of every natural thing is sufficiently explained by matter developing under the influence of chance, the operation of the principle of the survival of the fittest, and the passage of time.

18. To address the second of these processes first, it is a fact of observation that conflict between members of certain species of plant and animal favouring the victor assists in promoting the vigour of such species. This fact, as the aggression between members of the same species which grounds it, is readily comprehended within the principle of St Thomas that, with an inbuilt

intention to preserve the species even at the expense of its individual members, nature does nothing in vain.

19. As regards the first process, it must be insisted that chance is not a cause *per se*. Chance is an accidental consequence arising on the effects of convergent causes. It exists only through relation to particular *per se* causes in the mind of one whose knowledge as to such causes is limited. Thus, the man whose digging to plant a tree uncovers buried treasure regards his digging as a happy chance. The fighter pilot who, firing his guns at an enemy aircraft accidentally strikes a parachutist, regards his shooting as an unhappy chance. In the first example the causes are the act of one man in burying treasure and that of another in digging a hole ; in the second, they are the act of one man in descending through the air by parachute and of another firing an aeroplane's guns. In both cases there is ontological convergence ; in the second there is also chronological convergence.

One who knew where the treasure was buried and where the tree planter was going to dig could foresee how the two causes might converge. As could one who had an overview of the trajectories of aeroplane and parachutist. The issue becomes clearer still with the accidental character removed. If instead of digging to plant a tree, the digger follows a plan showing where the treasure is buried, his finding will not be a matter of chance. And if, in lieu of shooting accidentally at the parachutist, the pilot shoots intentionally, the effect is the same. There is no question of attributing the effects to chance in the one case or the other. Chance adds nothing, therefore, to the causes whose accidental convergence gives rise to an effect. In an absolute sense chance does not exist, for nothing follows on the *per se* causes which is not solely attributable to them. [St Thomas, *In V Metaphysics* L. 3, n. 789 : A. M. Woodbury Ph.D, S.T.D., *Ontology*, n. 1303-5, Aquinas Academy, Sydney, 1946.]

20. Evolutionary theorists face a further problem. Chance, by definition, is disordered in its effects; for it can be 'fortunate' or 'unfortunate' depending on perspective. Even the most die-hard of such theorists concedes the wondrous order that exists in the world and in the universe. None has yet been able satisfactorily to explain why the 'chance' on which the theory relies has produced such fortunate results. In truth it is impossible that the order and diversity of things could result from chance.

To the contrary this order and diversity establishes the perfection of the universe for "[God] brought things into being in order that His goodness might be communicated to creatures, and be represented by them ; and because His goodness could not be adequately represented by one creature alone, He produced many and diverse creatures, that what was wanting to one in the representation of the divine goodness might be supplied by another. For goodness, which in God is simple and uniform, in creatures is manifold and divided ; and hence the whole universe together participates the divine goodness more perfectly, and represents it better than any single creature whatever." [St Thomas, *Summa Theologiae*, I, q. 47, a. 1]

21. And so to the third process isolated above : *time* is not a cause of material being but the measure of its successive existence, as a ruler is not a cause of a piece of wood but the measure of its dimensions. The assertion that, given sufficient time, chance will achieve the intricate order found in the world and throughout the universe is driven not by reason but by imagination. It matters not whether the accidental interactions of series of convergent causes were given the scope

of an infinite period of time. Without the intervention of intellect they could never produce order. And intellect does not achieve its ends (*final cause*) by chance, but by *efficient, formal* and *material* causation. [Aristotle, *Physics* II, iii-vi ; *Metaphysics* V, L. 2 ; St Thomas, *In II Physics* 10 & 11 ; *In V Metaphysics* Ll. 2 & 3] Order can only be produced by an ordering cause, that is, by intellect.

Accordingly, the appeal to chance as if to an adequate cause of natural things is ineffectual. It is, however, consistent with the claim implicit in materialism, spawned in the rejection of God's authority at the Protestant revolt, that reality is without reason. In truth the appeal to chance is an endeavour, by sleight of hand, to invoke the influence of causes other than the material—*final, formal* and *efficient*—while denying their existence.

22. Evolutionary theory is caught up with the logical method of science which is *perinoetic*, proceeding from effects to cause, i.e., inductively. This method has inherent shortcomings, for the investigator can never know whether his efforts have uncovered sufficient effects to conclude to their true cause. Far more effective in uncovering the truth is *deduction* which, since it proceeds in the reverse order, from cause to effect, reaches a conclusion as certain as the cause since the effect is contained within the cause. The logical shortcoming of those who subscribe to the philosophy of materialism is an inevitable effect of their refusal to acknowledge the influence of the formal. The blindness that results is well illustrated by their nescience over the infinite gulf that exists between the non-living and the living (*hetero-motive* and *auto-motive*), as over those that exist between vegetative and sensitive life, and between sensitive and intellectual life.

One will hear evolutionists asserting that there are many more classes of living things than the three that common sense acknowledges. The issue is not to be determined by induction from observation, but by deduction from principle. St Thomas demonstrates that there are three, and only three, such classes because there are only three ways in which something can move itself to action, namely, according to *execution* of the act only, according to *execution* and *form* of the act, and according to *execution, form* and *end* of the act. To these three correspond the three forms of living things. [*Summa Theologiae*, I, q. 18, a. 3] Of these, only the second and third are capable of knowing things, whether singulars only, as with the brute animal, or universal realities, in man.

23. As to how a living thing knows, St Thomas following Aristotle, teaches that knowledge is *habere aliquid in se formaliter et non materialiter* [*In Librum de Causis*, L. 18], “[To know is] to have something in self formally and not materially”.

He explains lucidly how the knowledge exercised by the sensitive (brute animal) differs from that exercised by man, the rational animal. “The being of things whose actuality is soul, i.e., of the animate beings that exist on this earth... includes two factors : one, material, in which it resembles the being of all other material things ; and the other, immaterial, by which it has something in common with the world of the higher substances. Now there is this difference between these two divisions of being, that insofar as a thing is material it is restricted by its matter to being this particular thing and nothing else, e.g., a stone ; whilst insofar as it is immaterial a thing is free from the restrictions of matter and has a certain width and infinity, so that it is not merely *this* particular subject but, in a certain sense, it is other things as well... But in the lower terrestrial natures there are two degrees of [such] immateriality. There is the perfect immateriality of intelligible being ; for in the intellect things exist not only without matter but even without their individuating material conditions, and also apart from any material organ. Then there is the half-way state of sensible

being. For as things exist in sensation they are free indeed from matter, but are not without their individuating material conditions, nor apart from a bodily organ. For sensation is of objects in the particular, but intellection of objects universally. It is with reference to these two modes of existence that the Philosopher will say in Book Three [L. 13, nn. 787, 788] that the soul is in a sense all things." [In II De Anima, L. 5, nn. 282-4]

Because they deny the existence of the formal (*immaterial*) as the essential constitutive of material things materialists are blind to these distinctions.

24. It is appropriate for Us to insist with St Thomas that the proper activity of man is not material, but *immaterial*. There is a rigorous proportionality between natures, powers, acts and ends. *Do* follows *be* : what something is determines how it acts. [Summa Contra Gentes I, c. 28, n. 7] Immaterial acts can be done only by a being with an immaterial power for an end which is, likewise, immaterial. All of human doing and making involves the application of order to matter, that is, in directing something, or someone, to an end. Order itself is *per se* immaterial.

Thus intellect and its proper appetite, will, are immaterial powers. Possessed of these, alone among the creatures of the world, man is able to choose the ends of his actions. Though he must use material means (words, oral or written) with which to communicate, *what* he communicates—concepts, or ideas—are not material at all, for “[w]ords are signs of ideas and ideas the similitude of things.” [Aristotle, *Peri Herm* i : St Thomas, *Summa Theologiae* I, q. 13, a. 1] He has a body and must rely on it and its sensed impressions, but man is essentially, subjectively, not a material being at all.

25. The Darwinian contention, accordingly, amounts to this, that matter alone is a sufficient cause for the variety of material things and the intricate order in which they are immersed. But, as said above, *what something is* is determined not by its material substrate but by its immaterial determinant, its substantial form or *substance*, which since it is not material is incapable of alteration. This *immutability* is the reason why, from generation to generation, natural things do not vary except in accidentals. It is the reason why each natural living thing retains its identity even though afflicted with the inevitable consequences of material composition—growing old, infirm, and dying. It is the reason why trees never reproduce anything but trees, dogs never anything but dogs, and men, never anything but men.

Accidental form in the character of *quality* determines the natural thing to be 'of this sort'. There are two reasons why it is impossible that, by its operation, *quality* could cause substance to 'mutate'. First, because it belongs to substance alone simply to be (*substance* = be-in-self), whereas to accidents (of which *quality* is one), it belongs only that they be in some substance (*accident* = be-in-other). Secondly, every accident is subordinate to, and determined by, the substance of which it is an accident.

The radical defect in Darwinian evolutionary theory, then, is its reliance on matter. The formal defect is its implicit attribution to subservient principle, *quality*, of the potency to modify the principle to which it is subservient, substantial form (*substance*).

26. Moreover, the theory ignores (takes for granted) the fundamental distinction in any natural thing between *what* it is, its nature or essence, and *that* it is, its existence (*actus essendi, esse, or be*).

There must be a cause of the one no less than of the other, for *of whatever is, there is a reason of be*. No natural thing can be the reason of its own existence, but Darwinian theory can give no explanation of the *esse* of things.

Hence, Darwinian theory is fundamentally flawed. The lack, as the authority cited above asserts, of any empirical discovery or scientific advance to validate the thesis since it was first mooted simply confirms what philosophical analysis reveals.

Non-Being, Void, Space, Time, & Einstein's Theories

27. The rejection of God's authority led inevitably, as We have said, to doubt over the human intellect's authority to recognise and acknowledge God's surrogate in this world, reality. This doubt manifested itself in the two poles of thought, *subjectivism* and *materialism*.

Subjectivism, whose underlying principle paraphrases the Cartesian error *cogito ergo sum*, may be summarised in the aphorism *that is true which the majority of men assert to be true*. It has another manifestation to which We have already adverted, the elevation of imagination above its proper station. Appeal to imagination as to an adequate principle may be seen in various of the theories which try to explain the immensity and complexity of material reality.

28. Modern science proceeds on the supposition that the universe is predominantly void of material being, *non-being somehow existing*. “[V]oid is nothing but a place which is not occupied by a [material] body.” [St Thomas, *In III Physic*, L. 7. n. 341]. In company with all philosophers whose thought reflects the real rather than the imagined, We insist there is no place in the universe which is not filled by some material body.

Place, Aristotle concluded after close consideration of the possibilities, is *first immovable surface of circumambient body*. [*Physics* IV, c. 5 ; St Thomas commenting *In IV Physic*, Ll. 1-14] Materially, *place* and *space* are the same : formally, however, they differ. *Space* adds to *place* the formal note of the measurement of distances (whether between the surface of the contained and the surface of the containing, or between the extreme parts of the respective surfaces). But *measurement* is a mental relation, albeit with foundation in the real (for it is the real which is measured). Hence, *space* is mental being based in the real. It is not *non-being somehow existing*. [cf. A. M. Woodbury Ph.D, S.T.D., *Natural Philosophy*, Aquinas Academy, Sydney, 1949, nn. 290-2]

That there is no place not filled by some material body is confirmed from the existence of movement. “The propagation of light, or [gravitational] attraction and... the other corporeal forces which appear throughout all parts of the universe would be utterly impossible in a vacuum : because of the default of a subject of inhesion of corporeal forces, which are accidents...” [A. M. Woodbury Ph.D, S.T.D., *Natural Philosophy*, Aquinas Academy, Sydney, 1949, n. 294] To assist in the understanding of the statement of this commentator We reiterate the metaphysical distinction of reality between *substance* and *accident*. To *substance* alone does it belong to be in itself : *accident*, in contrast, can exist only in some substance. The corporeal forces referred to above, and those associated with them—light and all other forms of electromagnetic energy, gravity, circular motion, sphericity of form—are each of them *accidents*. They cannot exist save in some substance, 'a subject of inhesion'. Even in the writings of Sir Isaac Newton one finds confirmation of this need. [Letters to Dr Richard Bentley, 1692-3]

It is not unreasonable to conceive the vast expanse between the heavenly bodies as space provided it is understood that 'space' signifies merely a mental construct to account for the immensity of the distances involved. Modern science's attribution to it of a quasi-reality is nonsensical as may be seen from a consideration of the operation of the sense of sight. Each of the senses, as science itself concedes, involves a species of touch. In order for the light from a distant star (e.g., *alpha centauri*, the closest star, a mere 4.3 'light-years' distant) to impinge on one's sight there must, therefore, be a material continuum between star and the eye. But the bulk of this material continuum is what science asserts to be completely, or almost completely, void of material being, which is impossible.

29. This ontological truth is borne out by the laws of thought. The essential connection between the mind and reality is demonstrated in language in the association of 'think' and 'thing'. In thinking the mind, in a fashion, becomes the thing. As Aristotle says, "[w]ords are signs of ideas, and ideas the similitude of things." The logician, G H Joyce, explains: "Just as there are laws which apply to the whole realm of being... so too there are laws which govern the whole of the conceptual order, and on which [depend] the validity of every judgment, whatever it may be. These are the Laws of Thought... They are three in number :—(1) *The Law of Contradiction*, viz : contradictory judgments (e.g. *A is B, A is not B*) cannot both be true. (2) *The Law of Identity*, viz : Everything is what it is. (3) *The Law of Excluded Middle*, viz : Of two contradictory judgments (*A is B, A is not B*) the one must be true the other false." [G H Joyce SJ, MA, *Principles of Logic*, 2nd Ed. 1916, pp. 67-8.] No one is free to persuade his opponent of the force of his thinking who does not, implicitly or explicitly, acknowledge these principles.

To assert 'being exists' is true : to assert its contradictory, 'non-being exists', is therefore false.

30. No reasonable man denies the achievements of modern science. But this does not mean that one must accept the philosophical premises that underlie its deliberations or its conclusions. With the wilful refusal of its exponents to acknowledge the contribution of the immaterial, *the formal*, and their denial of the existence of what the senses cannot detect, modern science is blind to much of reality. Though many of its theories seem to show, and others *do* show, how the elements of reality interact, the explanations on which they rely are often defective so that their conclusions are incomplete and unsatisfactory.

In the Michelson-Morley experiment conducted in 1887 in Cleveland, Ohio, scientists discovered that it was impossible to detect by scientific instruments the substance to whose existence Aristotle and other philosophers, including St Thomas, had concluded, referred to variously as 'the heavenly body' or *aether*. It was discovered, likewise, that the speed at which light travels does not vary in any frame of reference. The experiment has been repeated many times and with the same results. The conclusion at which the majority of scientists arrived was that an *aether* did not exist. They did not reach that conclusion as a consequence of science but of the tenets of the philosophy of materialism. There was another, and more rational, conclusion open to them, namely, that *aether* does exist but is not scientifically detectable.

From the supposition that the space between the heavenly bodies was an *existent nothing*, they reasoned that light must not need a matrix or medium of propagation. This presented a logical dilemma. If, for the sake of argument, it were accepted that space is constituted of an *existent nothing*, why would not this 'nothing' present an absolute barrier to light's transmission? If the answer should be given, *No, it simply means there is nothing to impede it*, a second question demands

an answer. Why, then, is the speed of light, c , not infinite ? Why is it determinate, fixed in every frame of reference 'in *vacuo*' at 299, 792, 458 metres per second ?

31. Science's subservience to materialism may be seen in its endeavours to discover from experiment how light is constituted, whether of particles or of waves, or (curiously) of a combination of the two. The way in which light manifests itself to scientific instruments is entirely secondary to a grasp of its most fundamental reality, namely, that light is an *accident* ; it cannot exist in its own right, only in some *substance*. Careful observation confirms this truth. One never sees light itself, only ever something lit. It illuminates the surface of any number of substances but, in order that it exist, it must have its own subject of inhesion, its own proper substance. What is that substance ? The importance of the question and of its answer may be seen from this consideration : speed of local motion is principally associated with substances, not with accidents. If science was able to discover light's proper substance it might logically reach two conclusions : 1. c is not the speed of light, but the speed at which *this substance* determines light's propagation ; and, 2. the fixity of c provides evidence that the substance in question is itself fixed and immutable.

What, then, is light's proper substance ? For the reasons elaborated hereafter We contend it is the heavenly body to whose existence Aristotle concluded some 2,400 years ago, confirmed in the thirteenth century by St Thomas, and variously described as 'first body', 'the heavenly body', 'first altering body', or *aether*. The modern world is apt to dismiss the thinking of Aristotle and of St Thomas in the realm of nature because it regards their cosmology as defective. But their cosmology was not so much defective as limited. The profundity of their analyses, grounded in reality rather than modern philosophy's limited vision, more than compensate for shortcomings in their knowledge. The inadequacy of many of modern science's explanations has brought a resurgence of interest in the philosophers' determinations.

32. The *aether* to which they concluded is not to be confused with any of the 'ethers' postulated by scientists since the time of Newton. For each of these was premised, to a greater or less extent, on some element of common material being. The philosophers' understanding of it differs radically.

In their view *aether* shares very few of the characteristics of common material being and would seem, indeed, to be almost its antithesis. It is a simple natural substance, the most perfect of bodies, higher and more noble than any of common material being, in the constitution of which, nonetheless, it plays a part but not as component. It is incapable of generation or corruption ; it moves other bodies, but cannot itself be moved. It has no lightness or heaviness ; it is incapable of expulsion from its proper place. It is prior to other bodies and contains them all, and bears to them the relation of form to matter, of act to potency. Its proper effect is perfect (circular) motion which it induces in the heavenly bodies. Finally, and fundamentally, it is moved by an intellectual substance. [Aristotle, *De Generatione et Corruptione* Bk. 1, Pt. 6 ; St Thomas—setting forth and commenting on Aristotle—*In I De Caelo* Ll. 3,4 ; *In VIII Physics* Ll. 14, 16 ; *In III Physics* L. 4 n. 5. In respect of the last of these attributes, see St Thomas, *In I De Caelo* L. 3, 22. See generally the commentary of Christopher A Decaen in his *Aristotle's Aether and Contemporary Science, The Thomist*, 68 (2004) 375.]

The philosophers grounded their analyses on the metaphysical principle that all motion is founded on something immobile. [*In I De Caelo*, L 3, 36] The discovery of modern science that the speed of

propagation of light '*in vacuo*' is a fixed value in every frame of reference leads Us to suggest that *aether* enjoys this further property, namely, it is immobile in every frame of reference. Whether heavenly bodies are in motion towards, or away from, each other or move in respect of each other at any of the effectively infinite number of angles of the three dimensions, the *aether* in which each is located is immobile as is the *aether* between them. Nothing moves *through aether*, not even light. Rather everything moves, exists, *in aether*. Accordingly, it is not void which is the default value of material being, but *aether*, and the maxim *in vacuo* is better expressed *in aethere*.

Its facility as the material continuum of light over the vast distances of space leads to the reasonable conclusion that *aether* is transparent by essence. No element of common material being approaches its facility for the transmission of light. Though the philosophers did not turn their mind to the issue, it seems to be implicit in their teaching that *aether* is not confined to the heavens but is universal, the matrix of all common material being. Indeed, it seems to Us that a good argument could be mounted that *aether* is universally the medium of light's transmission, as of all electromagnetic energy. It may be that, in due course, scientists will discover in this substance the answer to many questions that have puzzled them over operations at the atomic level. Certainly the contention that a material body is largely comprised 'of empty space', with its implicit assertion that this 'space' is non-being somehow existing, suffers the same logical and ontological flaws as that mentioned above.

33. It is well known that in the formulation of his theses about the motion of bodies Einstein rejected the supposition of an ethereal matrix. This was, doubtless, because none of the 'ethers' aired by his contemporaries had the characteristics to which Aristotle and St Thomas had concluded. Once one understands how far these characteristics are removed from those of common material being it may be understood how *aether* might be mistaken for an 'existent nothing'. Had Einstein understood metaphysical principle he might have adopted Aristotle's *aether* instead of thinking it appropriate to invest space with a pseudo-reality.

34. The mathematician's proper sphere is mental being. In aid of his considerations he rightly calls imagination in aid. Difficulties arise, however, when it comes to applying his science to reality. Einstein's assessment that gravity involved a 'warping' or a 'twisting' of space illustrates the point. Space is only mental being. One can *imagine* mental being existing. One can imagine a warping or twisting of it. But if space is not real being then to assert that it is 'warped' or 'twisted' is nothing more than imagining built on imagining. Similarly, one can conceive, though it is difficult to imagine, a 'space-time continuum' such as Einstein proposed. One can reproduce graphics in an endeavour to illustrate the conceptions and imaginings involved and these may assist in the formulation and, even, in the application of theory. *But they are not the realities they seek to illustrate.*

This is not to deny the value of the achievements of Einstein and other physicists. We owe them a debt for the recognition of a character which Newton, because of the limitations of *his* cosmology, could not have known, namely that the speed with which any change occurs in what science calls 'a gravitational field' is, likewise, represented by c , the speed of propagation of light.

It is not to be thought that, because that which the mind would regard as absolute can be shown in certain circumstances not to be so, reality is not the creation of an all seeing God. The one absolute Einstein recognised is, if our reasoning be correct, the indicator of the one substance which

underlies all the substances and accidents of common material being. The challenge for some future scientist and philosopher is to reconcile Einstein's conceptions with the principles of metaphysics.

35. Science recognises that, save at the molecular level, the motion of the heavenly bodies differs radically from that of the mundane in that some force which, from the effects it produces, we name 'gravity' constrains them to circular motion and sphericity of shape. Notwithstanding Einstein's work, science is yet to identify the instrumental *efficient* cause of gravitational force. We should interpolate here that the other causes are manifest : the *final* cause is the right ordering of the universe ; the *material* cause is the bodies of common material being and their elements ; the *formal* cause is their inclination to the centre of rotation, centripetal force ; and the *principal efficient* cause is the Creator and Conservor of the universe, Almighty God. The special and general theories of relativity may have provided a better means of measuring the motion and conduct of bodies, but they do not answer the question of the nature of the *instrumental efficient* cause.

Cause and effect are always proportionate. Of a more universal effect, then, the cause must be more universal. Gravity is universal. There is hardly anything more so for it encompasses, so far as science is able to discover, every body in the universe. Co-extensive with this effect are those of circular motion and sphericity of form. Now *aether* is, on the hypothesis of Aristotle, at least as universal as are these effects. His conclusions, confirmed by St Thomas, that *aether* operates in a manner radically opposite to that governing common material bodies, opens for the rational mind the prospect that *aether*, the entity whose reality Einstein rejected, is the instrumental efficient cause of gravity.

36. Current scientific theory has it that gravity is a species of attraction of bodies. But, as Newton observed, while one may treat it so for the purposes of calculation of its effects, there is nothing in a body *qua* body which provides a reason of attraction. Like light, gravity is an accident : it does not—*it cannot*—exist save in some substance. In the heavenly bodies—the stars or suns, planets, moons and asteroids—it exists as the accident *passion*, in other words, as receptors of the *action* of that substance which is gravity's proper cause. That each of the heavenly bodies is itself subject to gravitational force is seen most clearly in the motions of twin stars as of those of the planet Pluto and its largest moon, Charon, where the respective bodies are constrained to circle a barycentre between them.

Einstein's field equations which predict with accuracy the relative motions of bodies are premised on the understanding that, like light, gravity—when there is question of some change in its 'field'—operates at the speed designated by the character *c*. This he regarded as the highest possible speed for any interaction in nature. He did not pretend to know the cause of this constant. This insight, shared by other scientists, serves to confirm the view We have expressed that light and gravity are properties of a common substance and that the speed of their propagation is a property, not of these accidents, but of that substance. Nothing which is material, no matter how etiolated, can avoid the burden of matter's inertia. It cannot act with infinite speed.

But, if *aether* is gravity's instrumental efficient cause, how does it operate ?

37. Let us first reiterate the teaching of St Thomas [*In I De Caelo* L. III, 22] that *aether* is moved by an intellectual substance. The key, it seems to Us, lies in *aether's* antithetical character. It acts—

it operates—in a manner completely contrary to that which governs any element or compound of common material being. With their view of reality bound by the limitations of the cosmology of their time, Aristotle and St Thomas attributed the motion they observed, circular motion, to this heavenly body. “Circular motion is proper, and natural, to some simple body which is prior to the elementary bodies that exist here among us.” [In I De Caelo, L 4, 41] Straight motion is imperfect because it involves contraries, for it must cease when it reaches its term, or return by reflex motion to its beginning. [In VIII Physics L 16, 1106] In contrast, circular motion “is more simple and perfect... [It] is not corrupted when it reaches the terminus (since its beginning and end are the same)... The perfect, moreover, is prior to the imperfect... in nature, in *ratio* and in time... Circular motion, therefore, must be prior to straight motion.” [In VIII Physics, Ll. 14-19 ; this from lecture 19 towards the end.]

The motion they perceived was, of course, apparent only, a function of the rotation of the earth upon its axis. Yet, adapting their teaching to the reality, We think it appropriate to contend that *aether* is the instrumental efficient cause of circular, or perfect, motion in the universe.

38. The root problem of the cause of gravitational force is that no medium has ever been detected, or even suggested, whereby the immense centrifugal forces dictated by the innate tendency of a celestial body to *rectilinear* motion could be overridden to compel it to *circular* motion. This is the reason gravity is treated as an innate force of attraction. Newton, however, considered gravity to be a species of repulsion and in Our view he was closer to the truth than modern scientists.

The question of the medium can only be solved if it is understood that the contrariety in the way mundane and celestial circular motions occur corresponds to a fundamental difference in the natures of the relevant acting bodies. *Do follows be* : a thing acts in accordance with its nature. [Summa Contra Gentes I, c. 28, n. 7] Difference in *modus operandi* reflects a difference in *modus essendi*. In bodies of ordinary matter centripetal force *precedes* circular motion ; centripetal force must be secured before circular movement can be achieved. Before a wheel can turn spokes must be in place ; before dancers can spin about a common axis hands must be interlocked. Though the two realities, centripetal force and circular motion, occur together in time, *ontologically*, i.e., in the order of reality centripetal force precedes, as essential to the causation of, circular motion. *The dynamic is from within to what is without.*

In contrast to this, Aristotle teaches that the agent that produces circular motion in the celestial bodies operates not within, but *at the circumference* of their circles of motion. It acts from without. [Physics Bk. VIII ; and St Thomas commenting In VIII Physics, L 23, 1168] That is, in *aether's* realm circular motion is initiated at the periphery of action. This is consistent with the philosophers' teaching concerning *aether's* agency. *It is prior to other bodies and contains them all ; it moves other bodies, but cannot itself be moved.* The ontological order that obtains with bodies of common matter is reversed. Celestial circular motion does not depend on centripetal force : rather, centripetal force depends on circular motion. *The dynamic is from without to what is within.* Circular motion produces centripetal force. It is *aether's* influence that constrains a heavenly body to circular motion, and the force it exercises is a function of the mass of the heavenly body in accordance with Newton's Second Law. This explains why gravitational force is a function of the mass of a heavenly body, and why the phenomenon gives the appearance of a species of attraction.

This thesis seems to be confirmed by the philosophers' teaching that *aether* has itself towards other bodies as act to potency, as form to matter. That which is *in potency* to some perfection can only be brought to act (possession of that perfection) by something already *in act*, something which has that perfection. *Form* causes by acting, by determining, while *matter* causes by suffering that action, by being determined. So, consistent with our argument, does *aether* determine the conduct of the heavenly bodies and their component parts ; and so do they suffer that determination.

39. It may be objected that the rotation of celestial bodies about an axis and the orbiting of satellites about a celestial body each occurs in one plane only, whereas gravity operates in every plane about a celestial body's centre. The answer seems to be—consistent with its character of greater perfection (higher and more noble than any body of common matter)—that *aether* is not constrained by the limitations of bodies of ordinary matter. Whereas *they* operate particularly and in one plane only, *aether* operates universally and in every plane.

In this way *aether* produces spherical form, for a sphere is simply a compound of every possible circle about a centre ; sphericity is the mark of gravity. Nor does it seem necessary that there be actual motion, the potency of common material being to *aether's* agency is sufficient for it to suffer gravitational force.

40. Among his many talents, Einstein possessed a vivid and constructive imagination. Before man had mastered powered flight, let alone ascended above the earth's atmosphere, he imagined the effects on one, weightless in a vehicle in space, subjected to acceleration. Such a man, he reasoned, would feel the force which was changing his inertia. If the vehicle was undergoing acceleration at 32 fps² (9.8 mps²) the man would think the force identical to that experienced on earth at sea level. Thus, he argued, accelerative force and gravity are equivalent.

The corollary of this insight is that we, sitting at home, walking about in the streets, suffer effects *as if we were being accelerated away from* the centre of the planet. The surface of the planet at the equator, we are informed, moves at 0.5 km per second, but because the motion is not rectilinear (in a straight line) but around the curve of its circumference, consistent with Newton's Second Law it is always accelerating. If the earth beneath our feet was to open, we would fall at gravity's acceleration speed. But, consistent with Newton's Third Law, it enables an equal and opposite reaction so that we experience the effects of this accelerative force as *gravity* (*gravitas*, literally 'heaviness'). So, on our argument, does *aether* serve to produce the noble order on which earth and all its creatures depend.

41. *Time* is the number of movement according to before and after. It is the measure of duration, persistence in existing, "for every duration is accounted according as something is in act... and not reduced to potency." [St Thomas, *In I Sent.* Dist. 19, q. 2, a. 1] Time is real being, but imperfectly so, since it relies for its reality (its formality) on the soul numbering. "[Aristotle] says that, if there is no soul, one must say either that time does not exist, or, more correctly, that without soul time is just a kind of being [*utcunque ens*]... [I]f there is motion, it is necessary that there also be time. For before and after [belong to] motion, and the before and after of motion, insofar as they are numerable, [is] time..." [In *IV Phys.* L. 23, n. 629] "That time is something of movement is manifest through this that together we perceive movement and time, and whoever perceives any movement together perceives time." [In *IV Phys.* L. 17] "That which is quasi-material in time is based in movement, namely, before and after ; but that which is formal [in it] is completed in the

operation of the mind numbering." [In *I Sent. Dist.* 19, q. 2, a. 1]

Since man first inhabited the earth, his counting of time has been determined by the regular motion of the sun around the earth—i.e., rotation of earth upon its axis—telluric movement. This primary measure has been reinforced by other circular motions of the heavenly bodies, that of the moon around the earth measuring the month, of the earth around the sun to the same position relative to the stars in the night sky measuring the year. Each of these is attributable, on our argument, to *aether's* influence. That a clock has a circular face testifies to the reality that time is determined by that motion which Aristotle and St Thomas called perfect, as by the fact that the face of a clock imitates (for those in the northern hemisphere) the apparent motion of the sun across the sky.

There has, then, always been a rational connection between man's counting of time and circular motion. Now that scientific method has advanced to the point where time is reckoned in millionths of a second, *aether* continues to provide the standard, its fixity and rigour reflected in the fixity of the constant *c*. The philosophers' analysis of time does not conflict with Einstein's prediction that time may vary in systems moving at different rates with respect to each other. It is not necessary that the numbering of movement by a mind in one system should be identical with a mind numbering in another.

42. If the hypothesis advanced here reflects the truth of the case, the reasoning of St Thomas mentioned above [In *I De Caelo* L. III, 22] supports the conclusion that *aether* is Almighty God's instrument for the ordering of the universe. In the very first words of the Old Testament, the Book of Genesis, He inspired the author to utter this truth : "In the beginning God created the heaven and the earth." [Genesis 1 : 1] We offer as a reasonable interpretation of these words that 'heaven' there referred to refers to the heavenly body, *aether*, and 'earth' to the whole of common material being in all the individual heavenly bodies, stars, planets, moons and asteroids that people the universe, and all the elements and compounds of which they are comprised. If this be the case, it is significant that the creation of 'heaven' should preface that of 'earth'. For ontologically, as We will insist shortly, *aether* must pre-exist the rest of material creation.

As a final comment on the thesis We have advanced here, it is to be noted that later in his life Einstein acknowledged that there must be an 'ether' to allow for the propagation of light and to admit of standards of space and time. [*Ether and the Theory of Relativity*, Speech at the University of Leyden, 5th May, 1920.] He added this profound thought : "But this ether may not be thought of as endowed with the qualities of ponderable media, as consisting of parts which may be tracked through time. The idea of motion cannot be applied to it."

Further instances of Science's Materialism

43. It is impossible for the senses to detect the influence which gives life in any of the three categories of living things, vegetative, sensitive (brute animal), and intellectual (rational animal). One can only know that a thing is living by the signs it manifests, signs that vary with each of the categories. The conclusion of science is that these influences involve some sort of material emanation in the thing whose reality, puzzling for the moment, will eventually be found. Scientists are spurred in their enthusiasm by the discoveries of the material substrate of living things. They are convinced it is only a question of time before the reality that gives rise to the substrate is isolated. They go further : they assert that some time in the not too distant future man

will create life.

Science is not necessarily confined to a study of the material, but scientific instruments are constrained by their materiality. The organs of a living thing are but the means, the *instrumental* causes, whereby it lives : they are not the *principal* cause, the soul, which is the principle of its life. No scientific instrument can detect the soul because it is not material.

Moreover, it is impossible that man will ever create a living thing because only God can create. [*Summa Theologiae* I, q. 45, a. 5] Man cannot create even a non-living thing, and there is an infinite gulf between the living and the non-living, for whereas the non-living is moved by external forces, i.e., *heteromotively*, and tends to entropy, the living is *automotive* and tends to tension. As Aristotle remarked 2,400 years ago, “[F]or living things, to live is [the same as] to be.” [*De Anima*, bk. II, ch. IV ; and cf., St Thomas, *In II De Anima*, L. 7, § 319] Take the life of a living thing and it ceases to exist. The corollary is profound : whatever it is that gives life to a living thing also gives it being or existence. The Author of its life is the Author of its existence.

44. Primary matter cannot be detected by the senses. Its reality can only be arrived at through deduction. As noted above it is impossible for matter to exist save in combination with some form. Modern science has engaged with great expenditure in attempting to discover the ultimate material particle, as if to uncover the basic building block of material reality. But any particle of matter is, as metaphysics proves, matter *under some formality*. It is, if the smallest, still some substantial thing. It is impossible to explore matter *simpliciter* because primary matter cannot be isolated from substantial form. Matter is *per se* unknowable ; indefinable ; undetectable. What follows ? These efforts of science may be of advantage in other areas, but insofar as they are directed to find the ultimate material particle, they are in vain.

Creation

45. The universe and all it contains participates in being in one category or other of the almost infinite variety of natural things, element or compound, mineral or living, vegetative, brute animal or rational animal. “[S]ome things,” St Thomas explains, “are like to God first (and most commonly) because they exist ; secondly, because they live ; and thirdly, because they know or understand...” [*Summa Theologiae* I, q. 93. a. 2] Hence, every creature manifests some perfection contained *virtually* in the Creator.

There is no evidence that there is in the universe any planet but our own endowed with living beings, with beings that know, with beings with intelligence. Nor, such are the distances in the universe, is such evidence ever likely to appear. “The least degree of intellect in one,” Aristotle remarks somewhere, “is greater than the sum of the remainder of existing being.” Through man's ability to know he is enabled, as Aristotle has also said, to become, in a sense, all things. [*De Anima* Bk. III L. 13, nn. 787, 788 ; St Thomas *In II De Anima*, L. 5, nn. 282-4] If, as We contend, this planet is unique, it is because the Creator fashioned it as a fitting abode for the creature He made in His own image and likeness, man.

Thus, against the atheistic tendency which is companion to modern thought and cannot consider the universe save through materialistic eyes, We insist that this earth is the centre of the universe.

In passing it is to be noted that the current opinion stylised 'the big bang theory' by which some

seek to explain the origin of the universe—even as they ignore the need for formal, efficient and final causality, or for an adequate cause not only of its essence (what it is) but of its existence (that it is)—fails in this fundamental, that it offers no source of the material substance that suffered that hypothetical explosion. But the thesis has another and more fundamental flaw. It is driven by an imagined 'existent nothing'. Where is this primeval explosion supposed to have occurred? "Place," as Aristotle explained, "is first immovable surface of circumambient body." In the absence of a circumambient body such as *aether*, there is no place where such an explosion could have occurred. In other words, if such an event did occur *aether* pre-existed it. From which it follows that the initial event in the history of the universe was not some exploding substance but the creation of *aether*.

46. We condemn the outspoken and universal mockery by atheists and materialists of the reality of creation. The incipience of every living thing involves an act of creation, at least indirectly. The means of generation in living things are but the instruments of God's creative impulse. It is impossible they could produce life without the investment by the Almighty of the power they exercise. One might as readily attribute the building of a house to the tools the carpenter uses, or the piano sonata to the instrument on which the pianist plays. This is not to say that the incipience of the vegetative and sensitive involves an act of explicit creation, for at fertilisation their forms are educed from the potency of matter. The issue is that *the forms so educed*, forms which give, at once, life and *actus essendi* (be, or existence), are ordained by the Author of creation. It is utterly beyond the power of man to emulate them.

But with the incipience of the human soul there is an explicit act of creation by God because the *substantial form* of man involves, as St Thomas says above, perfect immateriality, that is, the ability to exist entirely independently of matter, and no material instrument can produce such an effect.

The Author of life has laid down in natural forms the means whereby life may be educed from the potency of matter. His creative influence is at work in the production of every vegetative seed, in the conception of every animal zygote. It is great folly to think that a living thing may arise from non-living stock outside these forms and apart from their instrumentality. But it is greater folly to think that man will ever create a living being, for man is himself no more than a creature.

47. It is part of the mindset that passes for modern educated thought that any assertion of creation is a symptom of credulous religious belief. That the world, the universe, had a beginning and that it was created by God, is revealed by God in the Book of *Genesis* and elsewhere in the Old Testament books. Though long resistant to the suggestion that the universe had a beginning, the atheistic are now constrained by the evidence of discoveries to acknowledge it had. They continue to deny its creation but can offer no satisfactory explanation for its provenance.

Atheism may attempt an explanation—albeit inadequate and unsatisfying—as to how the elements, the compounds, and the almost infinite variety of natural things had their rise. But how explain their *existence*? Various modern philosophers and scientists have advanced arguments in an attempt to show it is possible that something can come from nothing, but these are grounded in imagination rather than in intellect and the deference due to reality. Typically, these attempts address the distant past and ignore the demands of the present, though the potency of any material thing, even the hardest, to lose its hold on existence at any moment is demonstrable. Moreover the case of living things convicts these attempts of folly. Aristotle's remark quoted above

is to the point. Whatever it is that makes the living thing to live in its nature gives it, likewise, existence, and living things come into and go out of existence every moment of every day. These mysteries demand an adequate and proportionate cause *in the present moment*. No thing is the source of itself ; nothing comes from nothing. Any child understands this.

God's Existence

48. Of the various ways there are to prove the existence of God that to which men turn instinctively is the proof from the order found in the world and in the universe. The progress of scientific discovery over the last one hundred years has only exposed in greater and greater detail the intricacy of this order. The merest natural thing is unified, is whole, and has parts each of which cooperates with every other for its good and for the good of the world it inhabits, in an order which is identifiable by any man of common sense. Every natural thing, non-living or living, mineral, vegetative, sensitive or intellectual, has an inbuilt teleology, an order towards an end. To assert that such order, order within order, ordination and subordination, are matters of chance is as fatuous as is the commitment to the ideology of atheism which grounds it.

Should he once recognise the errors of modern philosophy for what they are and devote himself to revisiting scientific discoveries in the light of metaphysical principle, the modern scientist will uncover a universe of understanding which, We predict, will alter radically current perceptions.

49. The only adequate and satisfactory explanation for the provenance of the universe and the world and the intricate order to be found in them is that they were created, and are kept in being, by an intellect of immense power, the one Supreme Being, the One *whose essence is existence*, Almighty God. "Ever since the creation of the world his invisible nature, namely, his eternal power and deity, have been clearly perceived in the things that have been made..." [Romans 1 : 20] The details of the proofs for the existence of God are readily available in the works of the Church's Angelic Doctor and may be studied by those with appropriate intellectual talents. [cf. *Summa Theologiae* I, q. 2, a. 3] These will discover that St Thomas's proofs deal with the present moment. One proves God's existence from some event, some reality occurring, not in the distant past, but *here and now*.

Four hundred and fifty years before Christ, that eminent intellect, Aristotle, reasoned to the existence of the One Great Being upon which all others depend, and deduced that it did not just possess intellect, but that it *was* intellect : "God is understand, the understand of an understand." [Metaphysics, Bk. 12, ch. ix] Man has intelligence, but God *is* intelligence.

50. How can we know this intellectual being, our Creator ? In this life we can know Him by *what He is like*, by *what He is not*, and by *what He is more than*. He is *like* His creatures ; He is *not* His creatures ; and He is *more than* His creatures. [*Summa Theologiae* I q. 12 a. 12 ; q. 13. a. 1] But there is another, and better, way in which we can know God, a way which has been set forth by the Almighty Himself. [*Summa Theologiae* I q. 12. a. 13] It is to this that We now turn.

II

It is a violation of our moral sense not to believe that God has revealed himself to man, that the revelation he has given is Christianity, and that Christianity is Catholicism.

51. Conversation with one's fellows is a signal mark of the possession of intellect. It is reasonable, therefore, to conclude that God, Who is Intelligence, communicates—*has communicated*—with man, His intellectual creature. While man is material as to his body he has constant reminders—if only he will heed them—that he is not material as to his soul, or as to his principal faculties, intellect and will. Man is an immaterial being.

“No man has ever seen God”, and one who grasps the limitations of matter and of material things generally, begins to understand how it is impossible that God could be material. That which cannot be seen, but which the mind can grasp as necessary to explain reality, must necessarily involve belief. And there is, as We have said, no man alive who does not rely to a greater or lesser extent upon belief in what he is told by others. Pre-eminently then, there is need for belief on the part of men in matters that concern *that Being* whom no man has ever seen but on whom every man is utterly reliant. And, indeed, belief in a supreme being is a natural phenomenon found among all the races of men. Even the worst of pagan societies, those given to devilish exercises, realised their need to defer to something greater than themselves. The spirit of the modern age with its atheistic character is quite unnatural in its departure from this common sense of mankind.

Yet there is more to belief in God than the mere assertion of its necessity, as We shall show.

52. How would one expect that God would make Himself known to men ? By some revelation of His being and of His activity to one or more men in a fashion which would leave no doubt as to its provenance. There are many religions and not a few among them claim to be based on a revelation from God. But none save two have had the revelation upon which their founders rely supported by activity or phenomena which could only come from some source beyond the natural, that is, from God Himself. These are *Judaism*, and *Catholicism* the religion founded by Jesus Christ.

53. Jesus Christ, He Whom We represent here on earth, is the crux of these two religions. His coming on earth brought the termination of the one religion even as it marked the beginning of the other. Christ was the culmination of the first, the Messiah for whom the Jewish people had yearned, the fulfilment of the promises made by God through His prophets to them over millennia. Christ claimed He was the Son of God and He proved His claim by miracles, wonders that only God could perform. But, notwithstanding these signs, the ruling Jews refused to recognise Him and, though he was innocent of any offence, they handed him over to be tortured and killed by their Roman rulers.

One of the keys objections of the Jews to Christ's teaching was His insistence that, though a man, He was the Son of God. Here was something novel. God had revealed Himself to Moses and the Jewish prophets as the Creator of the world and all it contains, and that He had created man in His own image and likeness. He had revealed, likewise, that He had intended that man should live happily on earth but that, through the wilful act of Adam, the first man, this plan had been subverted and, in consequence, had lost the state of original innocence in which he and his wife, Eve, had been created.

54. While insisting that He was a jealous God, One who would not tolerate the subservience of men to any but Him, the Almighty had revealed little of His own nature. Christ endorsed the revelation to the Jews—they could not fault Him, try as they might—but He insisted that He was

God's Son. Their opposition to this assertion would have had justification had Christ not by His miracles established the truth of what He had said. To his followers, the apostles and disciples, Christ went further : He asserted that there was a third person in the Godhead, the Holy Spirit. God was one, but the Godhead was constituted of a trinity of persons.

Forty days after Christ had risen from the dead He ascended into heaven in the presence of his apostles, promising them the assistance of the Holy Spirit. The existence of this Third Person was demonstrated by supernatural events just nine days later, on Pentecost Sunday, events that marked the birth of Christ's Church, and the beginning of its salutary influence in the world which has not ceased since that day.

55. The Jews' rejection of Christ, of a piece with the treatment handed out by their forbears to the Jewish prophets, and foreseen by God from all eternity, served the Divine ends. For, "since He is supremely good, God would in no wise allow something of evil to be in His works, were He not good and omnipotent even up to this point, as to bring forth good even from evil." [St Augustine, *Enchiridion* 11, 3] By His suffering and dying at the hands of the Jewish people Christ, the man who was God, made atonement for the sin of Adam and for all the sins of mankind that had followed and that would follow, opening for every man the possibility of union with God in heaven for all eternity.

The gravity of an offence is measured by the dignity of the one offended, so the offence that Adam had committed, with its consequences of suffering and death for all his offspring, was infinitely grievous. No man could hope to make recompense for it, *infinite recompense*, except one who was also God. So it was that the Second Person of the Blessed Trinity become man, Jesus Christ, could make the recompense required. For which reason, every man owes *This Man* an infinite debt of gratitude. *Man is an immaterial being*. But what is immaterial cannot die. Therefore, though his body may be corrupted and die, man's soul yet lives and will live for all eternity either in heaven or, if he rejects God and His revelation, where the separation from God he has chosen endures for all eternity, that is, in hell. No one goes to hell who has not chosen to do so as a consequence of his acts.

56. Many of the Jews accepted Christ's teaching. One of them, Paul of Tarsus, put the issue succinctly many years after his conversion at Christ's hands from persecuting His followers : "In many and various ways in times past God spoke to our ancestors through the prophets. But now, in our own days, He has spoken to us through His Son..." [*Hebrews* 1 : 1] In Jesus Christ, Almighty God ended the various covenants He had made with the Jews in the centuries that had passed and established a new and definitive covenant which was to extend not just to one race of men but to all mankind, a covenant which was to endure till the end of the world. The religion He established, *Catholicism*, is the religion which lays down what God wants of man, that his soul might profit not only in this life but, after death, in eternal life.

57. The events surrounding Christ's appearance on earth are thoroughly documented. There is ample and reliable testimony of His many miracles, including the raising to life of many. There is testimony just as reliable of the chief of His miracles, His own resurrection from the dead. Luke, the evangelist, sets out the amazement of His followers at the occurrence :

"They were still speaking... when he himself stood among them and said to them, 'Peace be with you !' In a state of alarm and fright, they thought they were seeing a ghost. But he

said, 'Why are you so agitated, and why are these doubts rising in your hearts ? Look at my hands and feet ; yes, it is I indeed. Touch me and see for yourselves; a ghost has no flesh and bones as you can see I have.' And as he said this he showed them his hands and feet. Their joy was so great that they could still not believe it, and they stood there dumbfounded. So he said to them, 'Have you anything here to eat ?' And they offered him a piece of grilled fish which he took and ate before their eyes." [Luke 24 : 36-43]

58. It is consistent with the truths Christ taught while He was on earth that He should have established on earth a church and a religion which would embrace all men. Paul, His champion, addressed to his Greek hearers an invitation to accept the tenets of this God-given religion :

"Men of Athens, I have seen for myself how extremely scrupulous you are in all religious matters, because I noticed as I strolled around admiring your sacred monuments, that you had an altar inscribed *To An Unknown God*. Well, the God whom I proclaim is in fact the one whom you already worship without knowing it. Since the God who made the world and everything in it is himself Lord of heaven and earth, he does not make his home in shrines made by human hands. Nor is he dependent on anything that human hands can do for him since he can never be in need of anything ; on the contrary, it is he who gives everything—including breath and life—to everyone. From one single stock he not only created the whole human race so that they could occupy the entire earth, but he decreed how long each nation should flourish, and what the boundaries of its territory should be. And he did this so that all nations might seek the Godhead and, by feeling their way towards him, succeed in finding him. Yet in fact he is not far from any of us, since it is in him that we live and move and have our being..." [Acts 17 : 22-28]

59. It was out of God's superabundant goodness and love that He revealed things about Himself transcending the power of the human intellect to know, that man might have a firmer knowledge of Him than he could ever attain by human reason. [cf. *Summa Contra Gentes* Bk.4, ch. 1, 4] St Thomas explains the importance of faith.

"It is necessary for man to accept by faith not only those things which are above reason but also those which can be known by reason... on three counts. The first is so that [he] may arrive more quickly at the knowledge of Divine truth. Because the science to whose province it belongs to prove the existence of God is the last of all to offer itself to human research, since it presupposes many other sciences... [for otherwise] it would not be until late in life that man would arrive at the knowledge of God. The second is that the knowledge of God may be more general. For many are unable to make progress in the study of science through incapacity of mind, or [pressure of] occupations and temporal needs, or even through laziness in learning. Such persons would be altogether deprived of the knowledge of God unless Divine things were brought to their knowledge under the guise of faith. The third reason is for certitude's sake. For human reason is very deficient in things concerning God. A sign of this is that philosophers in their researches by natural investigation into human affairs have fallen into many errors and disagreements. Consequently, in order that men might have knowledge of God free from doubt and uncertainty it was necessary for Divine matters to be delivered to them by way of faith, being told to them, as it were, by God Himself Who cannot lie." [*Summa Theologiae* II-II, q. 2, a. 4]

60. St John Chrysostom sets out eloquently the effect Christ's resurrection had on His followers

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“Here were men who failed to stand up to the Jews when Christ was alive. Yet when he died and was buried they arrayed themselves against the whole world. How came this if as you say Christ had not risen again from the dead, conversed with them and put heart into them? Would they not have said to themselves: What is this? He had not strength to save himself, will he protect us? He did not defend himself when he was alive; will he reach out his hand to us now he is dead? When he was alive he did not conquer a single nation--shall we convince the whole world by speaking his name? Would it not have been folly even to conceive of such things let alone to do them? Hence it is clear that, if they had not seen him risen and received this mighty proof of his power, they would never have risked such a gamble.” [Homilies on I Corinthians, 4: 3-4]

And Bishop Fulton Sheen summarises what befell them over their commitment to Christ—

“Matthew suffered martyrdom by the sword in Ethiopia; Mark was dragged through the streets of Alexandria unto his death; Luke was hanged on an olive tree in Greece; Peter was crucified in Rome with his head downward; James was beheaded at Jerusalem; James the Less was thrown from a pinnacle of the temple and beaten to death below; Philip was hanged against a pillar in Phrygia; Bartholomew was flayed alive; Andrew was bound to a cross, and he preached to his persecutors till he died; Thomas had his body pierced; Jude was shot to death with arrows; Matthias was first stoned and then beheaded.” [Life of Christ, London, 1959, p. 351]

61. The acknowledgement of God's existence involved in belief in the truths God has taught is not to be compared to mere human faith. It entails a certain *realisation*, the making of God's existence and involvement in one's life and in the world *a reality* in one's life. *This faith* is something not of man but of God for it is God who initiates and who nourishes it. “By grace you are saved through faith, and this not of yourselves for it is the gift of God.” [Ephesians 2 : 8] This faith places the believer in possession of heaven, even in his earthly life.

Those who are baptized and hold to the truths God has revealed, preserved and taught by the Church He founded, and nourished by His priests, have something in comparison with which no other thing, whether material or immaterial, is to be weighed.

“The kingdom of heaven is like a treasure hidden in a field which someone has found; he hides it again, goes off happy, sells everything he owns and buys it. Again, the kingdom of heaven is like a merchant looking for fine pearls; when he finds one of great value he goes and sells everything he owns and buys it.” [Matthew 13 : 44-46]

The reality that this faith comes from God and not from man is demonstrated negatively by the syndrome that affects one who has abandoned it. Not only does he lose all sense of the utter necessity of his deference and submission to God, of his absolute need of God's grace, of his utter dependence upon Him, but *he loses all memory of what it is he once possessed*. Often such a person spends the remainder of his life in a yearning for he knows not what.

62. Faith in God and in His Son, Jesus Christ, is essential for salvation for He is the revelation of God to men. Almighty God requires that Christ's message be heeded and that what He taught should be believed as reasonable. “I am the way, the truth and the life. No man comes to the Father except through me.” [John 14 : 6] His teachings are clear and available to the simplest and

the least educated of men. *This faith* is available to anyone who will submit himself humbly, at least conditionally, to God and pray for its gift, a prayer as simple as this—

“I realise that you must exist, that you are the source of all the goodness in the world and in the universe, that I am reliant on you for every breath I take. Remove from me, then, in your goodness, the blindness that comes with preoccupation with material things, and give me that gift of faith in you as you desire.”

This faith makes everything so much simpler for the man struggling to come to terms with his own being and with reality generally.

63. Now, it will be said that there are many forms of Christianity ; that one may adopt one or another form to one's benefit, and not lose the hope of Christ's promises. To this it must be replied : any body that has separated itself from the One True Church Christ founded suffers in itself and in its members. “[H]e who adheres to the teaching of the Church as to an infallible rule, assents to whatever the Church teaches. It is otherwise if he holds what he chooses to hold of the things taught by the Church and rejects what he chooses to reject, for he no longer adheres to the teaching of the Church as to an infallible rule, but to his own will... It is clear that such a heretic with regard to one article has no faith in the other articles, but only a kind of opinion in accordance with his own will.” [*Summa Theologiae*, II-II, q. 5, a. 3 ; cf. II-II, q. 11, a. 1]

Here St Thomas identifies the critical character of true faith. It is not just belief in God, but belief which acknowledges as true and as mandatory for the direction and welfare of his soul *each and every element that Christ has revealed* of God's inner life, and of the Church He established through the Apostles some 2,000 years ago. Its elements are set forth in the Church's Creeds.

64. This faith, this religion, as is well known, provides its members through its sacraments with the means to address the burdens which are the inevitable concomitant of our earthly existence marked, as it is, by the original fall from grace of our first parents. Chief among these sacraments is that viaticum, that mysterious gift of Himself, Christ left to his followers, the Blessed Eucharist. At each stage of his earthly life from birth to death, Christ's Church provides for the needs of the faithful.

No religion save this is grounded in objective signs that could only have come from God. No religion save this claims God as its founder. No religion save this claims that its head is God Himself, Jesus Christ, the Second Person of the Trinity. This is the only religion which has a Divine guarantee : “The gates of hell shall not prevail against it.” No religion but this, with its persistence in the face of attacks over 2,000 years, *from without as well as from within*, gives testimony of the promise made by its Founder, “Know that I am with you always ; yes, until the end of the world.” [*Matthew* 28 : 20]

65. It is to this faith that Christ calls you who do not believe in God. He calls on you in reason to reject the foolish beliefs of the age, and in particular that utterly irrational belief system of the atheists.

“How foolish men are to be in ignorance of God : that from the good things they see they are incapable of discerning He who is ; from studying the works, unable to recognise the Artificer ; making of fire, wind, the swift air, the wheeling stars, the mighty waters, or sun or moon, gods, rulers of the world. Perhaps it was the beauty of these things that bewitched them to taking the creature for the divinity. But how much

more beautiful He, the Author of all beauty, their Author ? Or perhaps it was their power and energy that woke their wonder. But how much more powerful He Who is their maker ? From the greatness and the beauty of created things one perceives the character of their Author. Their blame is diminished for they desire God and seek to find him, their error only that in their searching they looked among the works, distracted by the creatures. Yet we may not excuse them for if they could speculate about the world, how is it that they could discern no trace of Him who is the Master of it all ?” *Wisdom 13 : 1-9*

These points were reinforced by St Paul in his epistle to the Romans :

“Ever since God created the world his everlasting power and deity—however invisible—have been there for the mind to see in the things he has made. That is why such people are without excuse ; they knew God and yet refused to honour him as God or to thank him. Instead they made a nonsense out of logic and their empty minds were darkened. The more they called themselves philosophers, the more stupid they grew, until they exchanged the glory of the immortal God for a worthless imitation, for the image of mortal man, of birds, of quadrupeds and reptiles...” [*Romans 1 : 20-24*]

66. Yet God knows our frame, *he remembers*, as St Thérèse of Lisieux was wont to quote, *that we are but dust*. [*Psalm 102: 14*] Moreover, His mercy is persistent and all embracing. He will not reject a sinner no matter how grievous his sins. He calls each and every man to turn to Him and to beg His forgiveness for the sins he may have committed, for the evil life he may have lived, that He might give him the gift of eternal life.

It is impossible that an effect not reflect in some way the agent that produces it. We were made in love and that character is to be seen in every element of God's creation. Every creature loves itself and desires the preservation of its being. Every man loves himself and the perfections with which he has been blessed, as he desires their continuance. [*De Div. Nom. ch. 4*] What God demands of a man then is love. St John of the Cross puts the issue succinctly. “Love is repaid by love alone.” And again, “At the last we will be tested in love.” St Augustine, too, expresses it memorably—*Thou hast made us for Thyself alone, O God and our hearts are not at rest until they rest in Thee*. [*Confessions Bk. 1*]

67. We are not alone in this endeavour. Christ has provided us with our chief helper, His mother, Mary. What woman could have merited to conceive and to bear the Son of God ? Only one who had herself been conceived immaculate, free from the effects of the sin of Adam, the sinless virgin. Her title as Mother of God was proclaimed at the Council of Ephesus in 431 AD where St Cyril of Alexandria lauded her agency in the following words :

“Through you is named Blessed in the holy gospel He who comes in the name of the Lord. Hail Mary ! You contained the uncontainable in your holy virginal womb. Through you the Trinity is glorified ; through you the cross is named precious and adored throughout the whole world ; through you heaven exults ; through you angels and archangels rejoice ; through you demons are put to flight ; through you the devil, the tempter, fell from heaven ; through you the fallen creature is taken up to heaven ; through you the whole created world, gripped in the madness of idolatry, came to a recognition of the truth ; through you comes about holy baptism for believers, through you the oil of gladness ; through you churches have been founded throughout the whole world ; through you nations are led to repentance.” [*Homilies 4*]

The denigration and diminution of Mary's place in the economy of salvation was yet another of the manifold evils that flowed from the Protestant Revolt. Every merit, every title she has, derives from her son. With the rejection at that frightful time of God's authority, that is, of the authority of Jesus Christ, it was inevitable that Mary's place in the history of our salvation should have been diminished and that her contribution should have been relegated to obscurity.

68. Against this insult We respond in the words of Venantius Fortunatus which invoke Christ, the Artificer of the world, the universe, and all they contain, yet Who submitted Himself to be born of the humble Virgin for the salvation of all mankind.

*Quem terra, pontus, aethera
colunt, adorant, praedicant,
trinam regentem machinam,
claustrum, Mariae baiulat.*

*Cui Luna, Sol, et omnia
deserviunt per tempora,
perfusa caeli gratia,
gestant Puellae viscera.*

*Beata Mater, munere,
cuius supernus Artifex,
mundum pugillo continens,
ventris sub arca clausus est.*

*Beata caeli nuntio,
fecunda Santo Spiritu,
desideratus Gentibus,
cuius per alvum fusus est.*

*Iesu, Tibi sit gloria,
qui natus es de virgine,
cum Patre, et Almo Spiritu,
in sempiterna saecula. Amen*

69. To Mary, the Holy Mother of God, and to her spouse, St Joseph, and to all the saints We commend the care of all mankind to whom We have addressed this encyclical. May their prayers proved fruitful in turning the hearts of many from the folly of the atheistic creed to true faith in God and in His Son, Jesus Christ.

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Given at Rome this day of