The Philosophy and Natural Theology of Religion

By

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Preface

Many descriptors have been used to define *Homo sapiens* (e.g., *Homo* economicus, Homo sociologicus, Homo duplex), among which is Homo religiosus. This descriptor recognizes that from the earliest days of the human species we have attempted to cultivate a sense of the transcendent, to construct meaning in life, to explain the unknown, to find value in life in the face of all its pain, and a way of relating to a world of baffling uncertainties. The philosophy of religion is the examination of the issues and concepts of religious significance such as the existence and characteristics of God or gods, the religious significance of the origin of the universe and our existence in it, and miracles. It also includes investigations into deep theological issues such as the problems of evil, hell, and the truths of sacred writings, the relation between faith and reason, and the assessment of secular worldviews as alternatives to theism. Philosophy of religion thus draws on all major areas of philosophy as well as other relevant fields such as biology, chemistry, physics, theology, history, and the social sciences, which is indicative of the broad scope of this fascinating field of study.

The first section of the book contains four chapters devoted to how philosophy and science arrive at their conclusions, the origin and evolution of the religious impulse, the religious philosophy of Plato, Aristotle, and Darwin, and ontological and cosmological arguments for God's existence. I then engage the interplay between science and religion, asking first if they are conflicted, compatible, or incommensurate. This is followed by a chapter on the religious significance of the Big Bang and the incredible fine-tuning of the universe for life. Because the values of the fine-tuned parameters vastly exceed the probability boundary, many have viewed them as evidence of a designer God. The final chapter in this section counters this position by positing the existence of a multiverse consisting of multiple trillions of universes and we just happen to have won the ultimate Powerball game and live in the one with all the right parameters.

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The next section turns to biology, first engaging the problem of abiogenesis—how lifeless chemistry could have evolved into the Darwinian world of the living. As with the fine-tuning of the universe, many first-rate biologists, chemists, and physicists have calculated probabilities that lead them to conclude that abiogenesis is ruled entirely out of court. This has also led many who reject the religious implications to turn again to a multiverse, or to extraterrestrial accounts for life's origin on this planet. The incredible complexity of the human cell, DNA, and protein synthesis are then addressed. This is followed by a chapter on evolution. I emphasize that religious fundamentalists must rid themselves of the idea that evolution is "just a theory" and accept its truth as mainstream Christian traditions have. Mainstream Christian traditions have embraced the notion of theistic evolution which accepts the science of evolution but denies that it is unguided.

The next section consists of three chapters examining the atheistic worldview focusing on the claims of the New Atheism movement led by the "Four Horsemen" of atheism: Richard Dawkins, Daniel Dennett, Sam Harris, and Christopher Hitchens and their philosophical precursors such as Georg Lukacs and Herbert Marcuse. These claims include that theists are more antisocial than atheists, that atheists are happier, healthier, and more charitable, and that a secular worldview is best for the economy. These claims are interrogated using social science and historical data. I also take note that famous atheist philosophers such as Friedrich Nietzsche and John Marks have stated that objective morality is only possible with a belief in God. I also look at the philosophies of moral relativism and absolutism in terms of the Judeo/Christion-inspired idea of universal human rights.

The final section consists of six chapters devoted to the philosophy of purely theological issues from the Judeo/Christian tradition. The first chapter looks at biblical literalism versus allegoric-metaphoric interpretation. There are more than 1,000 different Christian denominations in America alone that profess diverse and often conflicting beliefs, what then of the claim of the inerrancy of the Bible?

I then address the reliability of the Bible in comparison to other ancient texts, and what the archaeological record has to say, and conclude with a section on the nature of faith and reason.

The next chapter looks at the problem of evil; a problem that has been called "the rock of atheism." The problem is: How can we believe in a benevolent God in the face of so much evil in the world? Various theodicies of moral evil are examined, all of which appear to posit a libertarian free will, which I examine and critique. This is followed by sections on natural evil (natural disasters), but natural disasters are all the result of natural processes that are vital to making the world livable. This is followed by the problem of hell, which asks: How can such a hideous place exist if God is a God of love? Five of the six early Churches of Christianity did not believe in a place or everlasting torment. The first theologian to write about eternal hell was Septimius Tertullian and St. Augustine cemented hell into traditional Christianity some 200 years later. The majority of Church fathers were universal salvationists—the belief that all people will be saved. Various arguments for and (primarily) against the traditional view of hell are examined.

Next is a chapter on supernatural miracles. Are they "violations of natural law," as David Hume proposed nearly 300 years ago, or are they God "intervening" in those laws as many theologians claim? Why don't we see spectacular miracles today? I look at the view of the miraculous contained in Fyodor Dostoevsky's novel *The Brothers Karamazov*, and how we might evaluate it from the point of view of natural theology.

The final two chapters examine the resurrection of Christ and the Shroud of Turin. The resurrection is the bedrock of Christianity; without it, there is no Christianity. The nature of historical explanation and the "minimal facts" approach to Jesus' resurrection are addressed first. The transformation of the Apostles from cowards to fearless carriers of the Christian message within days, and their subsequent martyrdom, is offered as proof of the resurrection. Many people have died for a cause they believed in, but not for something they knew to be

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a fiction of their own making. Secular hypotheses relating to the empty tomb and the Apostles' sudden transformation, such as the stolen body, legend, fraud, and mass hallucination are addressed.

The Shroud of Turin is either the tangible proof of the resurrection or the most ingeniously faked product of the human mind in existence. It has undergone rigorous scientific testing for over 125 years, but we still cannot say how the mysterious image of a crucified man, with wounds that are consistent with Gospel accounts of Jesus' suffering, got onto it. When examined with a VP-8 image analyzer, the image was found to contain 3D information, which cannot be duplicated with any other 2D image. No combination of physical, chemical, and biological methods known to science can account for the totality of secrets that the Shroud has revealed, and the numerous scientists who have examined it conclude that the image could not possibly have been made by human hands.

Chapter 1 Philosophy, Science, and Religion

What is the Philosophy of Religion?

Humans have always tried to harness reality (whatever it is conceived to be) under the control of reason, and have delighted in going beyond it into the unknown. Scientists and philosophers are slaves to curiosity, which is a good thing because without insatiable curiosity there is no progress. Philosophy was born and nurtured when human beings first asked questions about why things are and what their purpose is. Philosophy is a formal system of intellectual inquiry in which everything is open to criticism and scrutiny and thus subversive, which is a big part of its value. It is a game played with language and is limited by the restrictions of language. Philosophers pick sides and argue interminably about perennial issues. If they ceased to do so, philosophy would be done for. Philosophy is thus a combination of the love of wisdom and the love of argument; a language tournament that has lasted for centuries in which points are won for cogent arguments and then subtracted by cogent counterarguments.

The philosophy of religion is no exception. Unlike theology, the philosophy of religion concerns itself with religious issues without the presumption of the existence of a deity, although the existence or non-existence of a deity has always been its major focus. It is not concerned with religion as a social or cultural phenomenon, which are in the realms of the sociology and anthropology of religion, but rather it is concerned with reasoned arguments about the construction and assessment of religious truth claims, worldviews, and issues associated with the spiritual life.

The term "religion" is itself problematic because it is defined in many different ways. Chad Meister (2009, p. 6) proposes that: "a religion involves a system of beliefs and practices primarily centered around a

transcendent Reality, either personal or impersonal, which provides ultimate meaning and purpose to life." We proceed with this succinct definition but note that it only applies to the monotheistic Abrahamic religions-Christianity, Islam, and Judaism-and not to systems of belief such as Confucianism, Daoism, Buddhism, and Hinduism, although they provide their adherents with meaning and purpose. Then there is deism which posits an impersonal God who created the whole shebang and then left on permanent vacation. All religions provide an interpretation of the world and humanity's place in it, and how life should be rightly lived. Many Christians define Christianity as a relationship with God, and that religion and its practices are ways of defining and cementing that relationship in fellowship with others. James 1-27 notes what Jesus tells us what religion is: "Religion that God our Father accepts as pure and faultless is this: to look after orphans and widows in their distress and to keep oneself from being polluted by the world." This is a way of saying that the Christian religion consists of the commands that we love God, love people, and serve the world.

Philosophy of religion is a flourishing branch of philosophy today, but 70 years or so ago philosophers of religion were a rare breed. This was so because much of academia was under the sway of the doctrines of logical positivism, which set itself up as a beefy epistemological bouncer at the door of intellectually respectable conversation. Logical positivism held the strong epistemological view that reductionist empirical science was the only kind of factual knowledge worthy of our attention and that everything else is mere metaphysical musing. Accordingly, intellectual positions such as those held by philosophers of religion and theologians must be rejected as unanswerable by science, and therefore meaningless. Logical positivists had a pure and absolute view of objectivity and claimed that science is the only way of knowing since it consists of verifiable statements, which is true up to a point because science still rightly insists that its theories must be falsifiable. Reductionism is valuable because we can't understand wholes without understanding their constituent parts, and reductionist accounts are generally more open to verification. But while

reductionism provides satisfactory explanations of phenomena, their *meaning* is found in more holistic territory. There is no denying that empirical science is humanity's greatest intellectual achievement, but the claims of logical positivists notwithstanding, it does not exhaust all ways of knowing. If it does, then we should put up the shutters on all university departments save those nestled under the STEM umbrella.

Many cogent arguments against logical positivism by both scientists and philosophers led to its demise. It is not yet in its grave, but "it has no follower who adorn the name" (Onipede, 2022, p. 86). While still alive but on its deathbed, in a 1980 *Time* editorial titled "Modernizing the case for God," the author(s) noted that the philosophy of religion is enjoying a renaissance because many of the brightest contemporary philosophers are theists: They wrote:

In a quiet revolution in thought and argument that hardly anyone could have foreseen only two decades ago, God is making a comeback. Most intriguingly, this is happening not among theologians or ordinary believers—most of whom never accepted for a moment that he was in any serious trouble—but in the crisp, intellectual circles of academic philosophers, where the consensus had long banished the Almighty from fruitful discourse (*Time* Editorial 1980, p. 65).

Philosophers may have banished the sub-field of the philosophy of religion in the mid-20th century, but now there are some who to want to banish philosophy altogether. Physicists Stephan Hawking and Leonard Mlodinow tell us that humans are creatures of curiosity who ask endless fundamental existential questions such as what is reality, where did the universe come from, how does it behave, and did it need a creator, but go on to pronounce: "Traditionally these are questions for philosophers, but philosophy is dead" (2010, p. 5). Like the logical positivists before them, they claim that science is the only bearer of the torch of discovery, knowledge, and truth. However, all the questions except how the universe behaves Hawking and Mlodinow pose are

metaphysical ("after or above the things of nature") and are thus in the realm of philosophy.

Hawking and Mlodinow's snub of philosophy ignores the fact that the robust sub-field of the philosophy of science aims at providing unity and system to all sciences by critically examining their fundamental concepts, convictions, prejudices, and beliefs. Notwithstanding their brilliance, the prejudices and beliefs of Hawking and Mlodinow led them to also disregard the fact that many of the finest minds in physics, such as Albert Einstein, Niels Bohr, and Erwin Schrodinger, Nobel laureates all, were steeped in philosophy. Einstein, the greatest of them all, believed that all scientists should cultivate a philosophical frame of mind or be contented with being mere bean counters unable to see the forest for the trees: "So many people today-and even professional scientists—seem to me like somebody who has seen thousands of trees but has never seen a forest. ...the mark of distinction between a mere artisan or specialist and a real seeker after truth" (in Smolin, 2007, pp. 310-311). Modern science has become so specialized that scientists spend their whole careers boring holes in minutia, very important minutia, but minutia nonetheless, and have precious little time to ponder the big question of existence.

Philosophical and Scientific Ways of Knowing

Science and philosophy seek knowledge in their own manner. Science may be succinctly defined as an intellectual endeavor that uses systematic methods of acquiring knowledge about the universe and offers naturalistic/materialistic explanations. This does not mean most scientists reject the supernatural. According to a large survey of American scientists conducted by Gross and Simmons (2008), only 9.8% described themselves as atheists and 13.1% as agnostics. Another survey of over 22,000 international scientists found that over 50% described themselves as "religious" (Ecklund et al., 2016). In their professional lives, all scientists must employ naturalistic/materialistic methods, because natural and material phenomena are what they study, and they never introduce a "God term" into their equations. This

is known as methodological naturalism/materialism, a working assumption. Ontological naturalism/materialism, on the other hand, asserts that there is no supernatural reality. Methodological naturalist/materialist scientists operate without the assumption of a supernatural realm but do not necessarily deny it, while an ontological naturalist/materialist scientist denies the supernatural wholesale.

Science seeks objective testable knowledge about the "hows" of the physical world for which there is universal agreement. To do this, scientists use complex and expensive equipment to conduct experiments and perform calculations while philosophers rely only on the tools of the mind. Philosophy ventures into areas where cold science can't or won't go, such as "Does life have meaning"? and "Is there a God"? Questions such as these enrich the imagination, but no amount of experiment and calculation can provide answers to them, which must either be accepted or denied as one's intellect, knowledge, and temperament dictate. Most people are not concerned with scientific questions such as how atoms are held together but are very concerned about the whys of their existence that can only be probed imperfectly, or not at all, by the methods of science. How the universe works is fascinating, but why there is a universe at all, and the question of humanity's place in it, are far more meaningful questions to most people. Philosophy picks up the burden of investigating such questions, which is why metaphysics is arguably the most interesting and challenging branch of philosophy.

The search for knowledge gets us into the issue of how philosophers and scientists arrive at their conclusions and into a branch of philosophy called epistemology. Epistemology is the philosophy of how knowledge is acquired, the nature of knowledge, and how it relates to concepts such as truth and justified belief. It has long been debated in philosophy whether knowledge comes primarily from sensory experience (empiricism), or primarily from reason (rationalism). Rationalism maintains that we can best obtain knowledge *a priori* (independent of experience), while empiricism avers that it is best

acquired *a posteriori* (through experience). Philosophers value empiricism and take note of empirical findings, but by necessity rely mainly on the *a priori*. For their part, scientists value rationalism (as expressed in their mathematical equations), but insist that what their equations reveal about the universe must be put to the empirical test.

There are three interrelated ways of obtaining knowledge: deduction, induction, and abduction, all of which are based on the Latin *ducere*, "to lead." The prefix *de* in deduction means "from," which indicates that knowledge is obtained *from* generally accepted facts that lead to a conclusion. In induction, the prefix *in* means "toward," which means that some series of facts lead the inquirer *toward* a generalization. In abduction, the prefix *ab* means "away," and denotes a conclusion that inquirers take *away* that which they consider the best explanation from the totality of the facts gathered in their inquiry. To put it another way, deduction deals with what is obviously the case, induction deals with what is highly likely the case, and abduction deals with the most reasonable explanation of a phenomenon based on many sources of factual information.

Knowledge is arrived at in philosophy via abductive and deductive reasoning. Science uses all methods of reasoning, but it mostly relies on induction. Deduction is the most reliable of the three methods because it maintains a necessary relationship between the antecedent and its consequent. It is a "top-down" method that reasons from a self-evidently true general premise or axiom ("All men are mortal.") to a minor premise ("Socrates is a man."), and to a specific and irrefutable conclusion ("Therefore, Socrates is mortal."). Extreme rationalism contends that the world can only be understood as *it is* through the intellect because the senses allow us only to see it as *it appears*. They say that the phenomena of the world come to us through the buzzing confusion of sense perceptions and must be filtered, organized, and understood by the intellect. It is true that our perceptions are organized by the mind and that our senses can and do deceive, but so does the mind. Our senses tell our minds that it the sun moves across the

heavens from east to west and that it is it and not the Earth that is moving. This led the great minds of the past to erroneously posit the geocentric (earth-centered) model of the universe. Nothing in their unaided perceptions told them that our planet is on a wild cosmic voyage as it spins on its axis at about 1,000 miles an hour and travels around the sun at about 67,000 miles an hour, or that the entire solar system is orbiting the center of the galaxy at about 500,000 miles per hour (Riddle, 2018).

Extreme rationalists idealize mathematics as the only true system of acquiring knowledge because mathematical thinking rests on *a priori* knowledge that is true by definition: if one angle of a triangle is 70 degrees and another is 50, then the third angle is 60 degrees in all possible instances. Deductive reasoning from truths considered self-evident has been taken as the ideal path to knowledge ever since Plato. It is considered ideal because it guarantees the truth of the conclusion given that it is already present in the premise, and any denial of it would be nonsensical. However, once we leave the certainty of mathematics and enter the empirical world, we run into trouble because except in the most trivial sense (all mothers are female), we have precious few premises that are self-evidently true. We could not rationalize ourselves from the error of the geocentric model into the heliocentric model; we needed the observation accouterments of science, beginning with Galileo Galilei's simple telescope, to do that.

The observational and experimental methods of science are "bottom-up" forms of reasoning from the specific to the general, which is the method of induction. A conclusion in a philosopher's deductive mode is a hypothesis to be tested in a scientist's inductive mode. A valid inductive argument is one in which the conclusion tentatively confirms the premises—makes them statistically more *probable* than not. Deductions are made by scientists before conducting experiments guided by theories from which their hypotheses are logically deduced. If their hypotheses are validated, they are considered only probably true because the theories on which they are based are also considered

only provisionally true. Unlike mathematical axioms, theories are not true by definition, and must be falsifiable; if a theory cannot be falsified it cannot be tested and is useless as a scientific theory. Hypotheses deducted from theory presuppose the validity of prior inductions from previous scientific work, and must be tested. Empirical science cannot produce the absolute certainty demanded by those who identify all true knowledge with mathematics, but the experimental-observational inductive method is the bedrock of all scientifically justified knowledge.

The third method of reasoning is abduction, which is a kind of syllogism in which the major premise is evident from as much information as possible that is already known, but the conclusion is only "probable." Abductive explanations yield conclusions that are difficult to doubt even though they lack the certainty that accompanies the logic of deductive arguments from self-evidently true premises. Abductive reasoning thus starts with all available empirical observations relevant to a particular phenomenon and offers the most reasonable conclusion (explanation) for it, but leaves space for other possible explanations. Abduction is thus a retroductive explanation of the totality of what we observe about a particular phenomenon and the result is plausible without necessarily being fully justified. Abductive reasoning is the method detectives when working a homicide case. They gather information such as fingerprints, blood stains, and DNA, and interview people and eventually arrive at a suspect and infer (not deduce because it is not arrived at from a self-evident premise) that the suspect is the culprit. They then charge the person with the crime because their inference best explains all the evidence gathered. However, although all the evidence points to the suspect's guilt, there always remains the possibility that someone else could have been the perpetrator.

Scientists and philosophers engage in abduction when pondering the big questions of existence when they are beyond the reach of experiment and observation. For instance, theism postulates God to explain the incredible fine-tuning of our complex, ordered universe, whereas others postulate that the fine-tuning of the universe is the result of a series of coincidences, which is not a very satisfactory explanation. Some have proposed the existence of a multiverse that is beyond discovery, even in principle, to explain away the incredible improbability that a life-sustaining universe exists. That is, they say that given an infinite, or at least a near infinite number of universes, there had to be one (ours) that won the jackpot because it contains all the mind-boggling "just right" parameters that led to the existence of intelligent creatures. Because both God and the multiverse are beyond the reach of scientific experiment and observation, they are metaphysical entities, and one must reason abductively to the best explanation for the existence of our wonderful universe.

Religion, Science, and the Anthropic Principle

While it is true that God's existence is beyond the reach of experimental evidence, He is not beyond the reach of the "cumulative case" method of abductive science. Albert Einstein has said: "Everyone who is seriously involved in the pursuit of science becomes convinced that a spirit is manifest in the laws of the Universe—a spirit vastly superior to that of man, and one in the face of which we with our modest powers must feel humble." (in Jammer, 1999, pp. 86-87). He did not deduce this notion from his magisterial theory of general relativity that undergirds modern physics, or propose an ingenious experiment to affirm his belief. Rather, he arrived at it by philosophically pondering the wonders of the universe abductively.

The pairing of scientific observations with philosophical reasoning evolved into what is called the Anthropic Principle, a phrase coined by physicist Brandon Carter. The Anthropic Principle is seen as controversial because it implies a purposeful link between the structure of the universe and the existence of humankind and human specialness. However, in recent years scientists have been shocked by their discovery of how complex and precise the nexus of conditions must be to permit the origin and evolution of intelligent life. If there were even the slightest variation in any of the fundament forces and constants of

nature at the moment of the Big Bang, no life of any kind would exist. The numerous features of the universe that are so freakishly fine-tuned for the existence of intelligent life that many physicists are beginning to come to grips with the notion that our universe is profoundly "unnatural." As physicist Nima Arkani-Hamed declared in a talk at Columbia University: "The universe is inevitable," and at the same time "The universe is impossible" (in Wolchover, 2018, p. 3). How can something be both inevitable and impossible? The Anthropic Principle explores this apparent contradiction.

There are three original anthropic principles, the first being the Weak Anthropic Principle (WAP). WAP is defined by Carter as: "we must be prepared to take account of the fact that our location in the universe is necessarily privileged to the extent of being compatible with our existence as observers" (1974, p. 293). Some dismiss WAP as not at all surprising that we see this compatibility since if it were not so we wouldn't be here to discuss it. This is obvious, but it does not inform us why we are here to discuss it because it is overwhelmingly more likely that we should not be given the numerous highly improbable finetuned parameters of the universe. John Leslie (1989) rebutted the "unsurprising" objection to WAP with his "firing squad" analogy in which he imagined a condemned man facing a firing squad of 100 marksmen who fire at him, but the man walks away unscathed. One may claim that it is not at all surprising that they all missed, since if they had not, the man would not be alive to walk away and tell the tale. However, why he walked away demands an explanation. It is possible that one man missed, but highly improbable that they all did. It is more sensible to conclude that something intentional was afoot; that is, the firing squad was designed such that the condemned man should go on living. WAP applies the same reasoning to the universe-there is something intentional afoot.

Why would physicists find such an apparent truism as WAP useful? Physicist Frank Tipler replies: "But the Weak Anthropic Principle is not trivial, for it leads to unexpected relationships between observed

quantities that appear to be unrelated!" (1988, p. 28). Physicist Andrei Linde opines: "Those who dislike anthropic principles are simply in denial...One may hate the Anthropic Principle or love it, but I bet that eventually everyone is going to use it" (in Susskind, 2005, p. 353). It is a short step from the Anthropic Principle to a design argument for the universe, as physicist Josip Planinić points out: "The anthropic principle, or the fine-tuned universe argument, can also be put forward as a design argument...It seems that the universe is arranged (tuned) exclusively to be agreeable to man. This thought on the notion of purposefulness implies the existence of a Creator of the universe" (2010, p. 47).

The second principle is the Strong Anthropic Principle (SAP), which asserts: "The universe (and thus the fundamental parameters on which it depends) must be such as to admit the creation of observers within it at some stage" (Carter, 1974, p. 294). SAP takes note of the many astonishing coincidences between different branches of physics that work together against mind-frying odds to make intelligent life possible. Carter's statement strongly implies purpose and deliberate design behind the universe, and as physicist Freeman Dyson notes: "As we look out into the Universe and identify the many accidents of physics and astronomy that have worked together to our benefit, it almost seems as if the Universe must in some sense have known that we were coming" (1979, p. 250). Atheists recoil at the notion of a purposeful universe, but no less a mind than Albert Einstein believed in one: "The religious inclination lies in the dim consciousness that dwells in humans that all nature, including the humans in it, is in no way an accidental game, but a work of lawfulness that there is a fundamental cause of all existence" (in Isaacson, 2007, p. 20). All other explanations of why the universe had to "admit the creation of only observers" offer an endless trail of monstrously improbable "fortuitous coincidences." Physicist Paul Davies makes this point strongly:

I cannot believe that our existence in this universe is a mere quirk of fate, an accident of history, an incidental blip in the great cosmic drama. Our involvement is too intimate. The physical species Homo may count for nothing, but the existence of mind in some organism on some planet in the universe is surely a fact of fundamental significance. Through conscious beings the universe has generated self-awareness. This can be no trivial detail, no minor byproduct of mindless, purposeless forces. We are truly meant to be here (1992, p. 232).

The Final Anthropic Principle (FAP) says: "Intelligent information-processing must come into existence in the universe, and, once it comes into existence, it will never die out" (Barrow & Tipler, 1986, p. 23). The FAP is consistent with a basic tenet of many religious faiths—eternal life. This is anathema to the committed atheist, but atheist scientists have to occasionally bump into the Anthropic Principle in their work. When they do, they may ignore it or attempt to explain it away. As physicist Heinz Pagels puts it: "Faced with questions that do not neatly fit into the framework of science, they are loath to resort to religious explanation; yet their curiosity will not let them leave matters unaddressed. Hence, the anthropic principle. It is the closest that some atheists can get to God" (1985, p. 38). Several former atheist scientists have become theists after contemplating the mysteries of the universe, including Frank Tipler, who wrote:

When I began my career as a cosmologist some twenty years ago, I was a convinced atheist. I never in my wildest dreams imagined that one day I would be writing a book purporting to show that the central claims of Judeo-Christian theology are in fact true, that these claims are straightforward deductions of the laws of physics as we now understand them. I have been forced into these conclusions by the inexorable logic of my own special branch of physics" (1994, preface p. i).

A fourth principle—the Participatory Anthropic Principle (PAP)—has been proposed by physicist John Wheeler (1994). PAP is a more

controversial principle because it posits that observers are necessary to bring the universe into existence, which sounds altogether too weird, but it is consistent with the standard interpretation of quantum mechanics. In the strange world of quantum mechanics, all subatomic matter is in a state of wave-like "superposition;" that is, in all possible states at once. The uncertainty principle states that it is impossible to know both the position and momentum of say, an electron, at any point along its wave-like trajectory around the atom. When a wave function "collapses," it reduces to a single particle-like state with a definite location. In this view, there is no quantum reality until an intelligent observer witnesses the collapse, and thus, as the reasoning goes, intelligence is necessary to make the universe real and to produce intelligent observers. Of course, the physical universe must first exist to provide the necessary elements of life for observers to exist, but the idea behind PAP is that the intelligent observer imparts meaningful reality to the universe. If the pre-human universe is "observed into being," the only candidate for the job must be the Ultimate Observer. Quantum physicist Robert Russell (2008) makes this point in his NIODA theory (non-interventionist objective divine action).

Chapter 2 The Evolution of Religion

Homo religiosus

Many descriptors have been used to define the primary characteristic of Homo sapiens. For economists, it is Homo economicus, for sociologists it is Homo sociologicus, and Homo emovre (emoting man) for neuroscientists. In her book, The Case for God, philosopher Karen Armstong (2009), a prolific historian of religion, a former atheist, and now a fellow of the Jesus Seminar, notes that indications of religious rituals are found in caves dating back 20,000 years, and adds Homo religiosus to this list of descriptors. She notes of the early religious impulse that: "Religion was not something tacked on to the human condition, an optional extra imposed on people by unscrupulous priests. The desire to cultivate a sense of the transcendent may be the defining human characteristic" (2009, p. 9). For Armstrong, religion is an attempt to construct meaning in life, to explain the unknown, to find value in the lived life in the face of all its pain and uncertainties, and a basic way of relating to a world of baffling uncertainties. In short, Armstrong believes that the religious impulse is in humanity's DNA (not that we expect to find a stretch of DNA coding for a "religion gene" by rummaging around among our chromosomes).

Our stone-age ancestors had not yet arrived at the concept of a being of ultimate reality, a great being superior in every way to mere morals and their creator whom later we would call God. Anthropologists tell us that the foundational element in the development of ancient human spirituality was animism. Animists believe that all things, both animate and inanimate possess a spirit or soul. It is considered the most rudimentary form of religion and still exists in Shintoism, the traditional polytheistic religion of Japan, in which *kami* (spirits) exist in all things. A study of 33 modern hunter-gather cultures such as the Khoisan of Africa, the Negritos of Malaysia and Philippines, and the

Eskimo-Aleut of Canada and Alaska found that 100% of these cultures are animist, 79% have a belief in an afterlife, but only 39% have a belief in higher gods (Peoples, Duda, & Marlowe, 2016).

Matt Rossano (2006, p. 359) presents a useful three-stage model of the evolution of religion. The first stage is Upper Paleolithic (UP) proto-religion dating roughly from 300,000 years ago "and involving ecstatic states/rituals for social bonding." The second is transitional religion dating from roughly 150,000 years ago, "involving pre-UP religion plus shamanistic healing rituals." The third is "UP religion dating from roughly 35,000 [years ago] "and involving all past forms plus elite rituals and ancestor worship." Karen Armstrong (2009) also posits an evolutionary development of religion from animism to polytheism, to henotheism (worshiping one supreme god while asserting the existence of other gods) which eventually developed into the monotheism of the Abrahamic faiths. Whatever the religion, all stress the need to strive toward becoming a better human being, to be honest and peaceful, to empty themselves of selfishness, to give to the poor, and to love their fellow humans.

Armstrong points to evidence that the earliest intuitions of an animating power were decidedly feminine. She points to a small stone relief dated from prehistoric times in Laussel, France, depicting a pregnant woman, and some ancient reliefs in Turkey showing a woman giving birth surrounded by relics of a successful hunt, and says they may be seen as symbolic of constantly regenerative life. She explains: "Everything could so easily lapse into nothingness, yet each year after the death of winter, trees sprout new leaves, the moon wanes but always waxes brilliantly once more, and the serpent, a universal symbol of initiation, sloughs off its old withered skin and comes forth gleaming and fresh. The female also manifested this inexhaustible power" (2009, p. 11). Archaeologists have found countless stone figurines of pregnant women with exaggerated breasts, vulva, and buttocks from around the world dating back as far as 25,000 BC, but do these always point to the worship of the divine feminine, or are they simply early pornography?

The fact remains, however, that many female goddesses such as Astarte, Isis, and Ishtar reigned supreme in the Near and Middle East, and the cult of the goddess Cybele, the "Great Mother" of the Greeks and Romans recognized the feminine regenerative power. A modern example is the Catholic veneration (albeit not as a goddess) of the Virgin Mary as the mother of God incarnate.

Plato

Very little modern philosophy has not been said before by the ancient Greek fathers of Western philosophy, Plato (427 BC-347 BC) and his star pupil and greatest critic, Aristotle (384 BC-322 BC). Their thoughts on human nature, the family, religion, economics, education, ethics, law, society, government, and just about everything else, have provided grist for philosophers for centuries, and scientists for at least two centuries. Plato's and Aristotle's philosophy has much in common, but they also differed greatly on many things of fundamental importance. It has often been said that: "Aristotle is 'the master of those who know,' as Plato is of those who dream" (Porteous, 1934, p.105). Plato is widely considered the father of left-wing dreams of social perfection and Aristotle the father of right-wing pragmatism (Williamson, 2010). Herman (2014, p. 412) says of Platonism and Aristotelianism: "The creative drive of Western civilization has arisen not from a reconciliation of the two halves but from a constant alert tension between them." Both men assumed that rational thought is a sine qua non of human existence, and that philosophy was not merely an intellectual pursuit but rather a profound activity of spiritual transformation toward the virtuous life and inner peace in preparation for eternity with the gods. Here we see the obvious correspondence with the Christian notion that this life is to be led righteously in preparation for the next. Consistent with the polytheistic culture of ancient Greece, Plato and Aristotle embraced the existence of many gods, one of whom is supreme.

Plato may be considered the first systematic theologian in Western thought and the pagan precursor of Christianity (Ursic & Louth, 1998).

His theology dwells more on subordinate gods, who are humanlike, created, and morally imperfect than on a supreme God, whom he called the "One," who was ineffable, perfect, and uncreated (Ring, 1987). He provides a foundation for an intuitive knowledge of the One, as the Abrahamic tradition thinks of God, in his theory of the *forms* or ideas. For Plato, things of the phenomenal world we perceive with our senses are imperfect, unreliable, and subject to change, but behind this imperfect, unreliable, and changing world of appearances is a perfect world of permanence and reliability—the *forms* or ideas of these things. These forms are items in the divine mind, they always are, neither coming into being nor passing away, and are absolute, pure, perfect, and eternal, and reside in the noumenal divine realm "in the heavens beyond the stars." There is no perfect material (e.g., a horse or tree) or abstract (e.g., love or justice) thing in our imperfect world of change and decay, but if we can conceive the form of any of these things in our minds, then they must exist, and so it is with God. This notion provides the grounding for later ontological arguments for the existence of God.

Plato's distinction between the phenomenal and noumenal worlds is perhaps the greatest of his many gifts to philosophy. Marsilio Ficino notes that Plato had a deep interest in the One as the ultimate reality:

Whatever subject he deals with, be it ethics, dialectic, mathematics or physics, he quickly brings it round, in a spirit of utmost piety, to the contemplation and worship of God. He considers man's soul to be like a mirror in which the image of the divine countenance is readily reflected; and in his eager hunt for God, as he tracks down every footprint, he everywhere turns hither and thither to the form of the soul (2001, p. 9).

Plato believed that contemplating the forms of truth, beauty, and moral virtue would elevate the mind to ascend to God. We all have innate archetypal intuitions of the forms, for how could we have knowledge of what is true, beautiful, or moral without them? Truth, beauty, and moral virtue, as ordinary people perceive them are flawed representations of their forms. The forms of these things are eternal,

changeless, and perfect, and taken together, this triad of forms constitutes the form of the Good, which some have called God with an extra o because it is absolute and the source of all morality and all righteous actions. The idea of the Good is the greatest of the forms, but according to Ursic and Louth (1998, p.87): "The Good is understood by Plato primarily in an ontological and epistemological sense, and only secondarily in an ethical sense. On the other hand, it is precisely virtue that opens up to the one who knows the way to true knowledge."

So, how is one to gain knowledge of this great form of the One? Plato noted that the form of the One is most difficult to find, and: "it is the one and only begotten (monogenes) heaven whose divine father is so recondite that it would be impossible to declare him to all men" (Voegelin, 2004, p.37). It would be impossible to declare it to all men because Plato saw the great mass of humanity as ignorant. This view is depicted in his famous allegory of the cave, which represents many of the core ideas of Plato's thinking and conveys his image of the unenlightened condition of humanity. In the allegory, Socrates asks Glaucon to imagine people living in a huge underground cave (symbolic of our world of the senses) open to the outside only at the end of a steep and difficult climb. The vast majority of the people in the cave are prisoners who have been chained to the back wall of the cave all their lives and have never seen sunlight (symbolic of limited chained minds). A huge fire burns behind them, and all the prisoners can see are the shadows of objects and other people in the cave walking behind casting shadows on the wall in front of them. They also hear people above and behind them (the enlightened philosophers?) speaking, but the cave's echoing makes their words difficult to understand. Those shadows and those words constitute the only reality the prisoners have ever known. If one of the prisoners were to ascend to the upper world, he would be dazzled by the sunlight (symbolic of the Good) and the complexity and vibrance of the world. He may be so confused as to whether he wants to return to his twilight existence or remain in the light, but he must return to his former seat in the cave to share the knowledge he has acquired with his fellow prisoners.

The ascent from the cave is the process of philosophical awakening, which delineates the distinction between the knowledgeable and the ignorant; the bright light of the sun versus the dim, shadowy light of the fire and the mysterious enigmatic echoes of the people walking above. Gaining enlightenment is understanding the truth of the forms. This is only attained by Plato's "philosopher kings," a minute few who had to undergo a long (about 30 years) and arduous apprenticeship, which includes training in the Socratic method of reasoning, 10 years of mathematics, sundry other intellectual endeavors, as well as gymnastics and military service. Ultimately, the goal is to discover the form of the Good. For Plato coming to know the Good as the Good knows itself is beyond the pale for almost all people. For Christians, God is indeed a profound mystery, but they insist that they can come to know Him in the personage of Jesus Christ, who may be analogized with the prisoner who came "from above" and descended in human form into the darkness of the world to save the ignorant. The former companions of the enlightened prisoner would resist his attempts to free them of their ignorance, would mock him, and would sooner kill him than be brought out of the cave of their ignorance, just as the Athenians killed Socrates and the Jews and the Romans killed Jesus. Ursic and Louth (1998, p. 92) also see the similarity between the allegory of the cave and Christian iconography: "A cave is also, in Christian iconography, the underworld, the pagan Hades becomes limbo, from which Christ, risen from the dead, liberated the souls of the just, born before the Christian era. Each Christian church is also a cave, its dark interior lit up by an unearthly light from above."

The Good is the transcendent God for Plato, but he was committed neither to monotheism nor to a personal God. For Plato, it was a subordinate god called the Demiurge that fashioned a universe from the eternal forms and provided its order and purpose. However, he was limited by the imperfections in the material from which it is fashioned, which is why everything we see is only a pale reflection of their essence contained in their forms that only exist in the mind of God. The Demiurge is a fabricator, not a creator, and is subordinate to the One.

Plato thought of the One as a being that always is (existed always) and never becomes and can only be apprehended by the reasoning mind. He opposed this to something physical and perceivable by the senses that becomes but never is. By asserting that something becomes but never is, Plato is not denying the reality of material things, but rather, he is saying that, unlike a changeless and eternal God, all things eventually perish, and for him that meant that they never really existed. The One is a being so perfect and powerful that it is impossible to imagine a more perfect and powerful being—He is the "form" of these things. The One had to be the self-existent first cause of everything if we are to avoid an infinite regress of causes. The problem of an infinite regress will later move theistic philosophers to develop ontological arguments for the existence of God.

Aristotle

As a naturalist concerned with the everyday world and its workings rather than with a Platonic ideal world, Aristotle's search for God began with the practical problems of motion, change, and cause. His concept of God develops from his desire to account for motion and cause. He took note of the obvious fact that every motion or cause in the world depends on some other motion or cause to actuate it, and that motion or cause requires yet another motion or cause to actuate it, and so on. Aristotle reasoned that this cannot go on forever (the infinite regress problem), so he reasoned that there must be an unmoved prime mover, an unchanging entity that always existed, and an uncaused first cause. Having posited such a being, he reasoned that such a being must necessarily exist to get the whole show on the road, and being the grand initiator, there cannot be a greater being.

As an empiricist, Aristotle denied Plato's rationalist theory of the forms because they assert the superiority of abstract universals over empirical particulars. Plato argued that a particular instantiation of, for instance, beauty, exists only because it participates in the universal archetypal form of Beauty. Aristotle argues contrarily that our universal concept of beauty is derived from the things that are pleasing to the eye

that we perceive, and that the form of beauty has no existence beyond that. In common with Plato, Aristotle saw the Demiurge as subordinate and created by the One, and that all things seek divine perfection. Since God is the highest being, he knew the universals *prior* to their instantiation in the material of the universe. Since he is the unmoved mover, he must be changeless, immaterial, perfect, and self-sufficient. Being perfect, God is unchanging since he cannot become more perfect. He is the Form of the Good which always is and has no becoming.

Aristotle argued that everything existing in nature is always changing; that is, in a constant state of becoming. We can perceive and understand this through our senses, but God can only be known through reason. Since He is immutable (only material things change) and perfect, He must be eternal. Aristotle also noted that a being that imparts causes in nature must be uncaused itself, and must exist necessarily. Runia (1989, p.1) views Aristotle's god as both an advance and a retreat from Plato's view: "Technically Aristotle might seem to represent an advance, for at least he regards God as a person. But at the same time he denies the possibility of a relation between God and man. In fact, compared with the deep spirituality of Plato a regress has taken place."

Why does Runia say that Aristotle did not believe that we cannot have a personal relationship with God? Perhaps because Aristotle's god is perfect reason, has perfect knowledge, and is the ultimate philosopher, and the goal of every philosopher is perfect contemplation of the worthiest things. Since Aristotle's supreme being is the highest of beings, he must engage in perfect contemplation of the worthiest object that exists, which is himself. Since this god is a perfect being, a perfect being can only think perfect thoughts, and the only thoughts worthy of a perfect being would be thoughts of itself. This god does not think of us because thoughts about imperfect beings would be unworthy of him (thus he is an impersonal deistic god). Commenting on this notion, Robert Norman opines that it suggests "that the Prime Mover is a sort of heavenly Narcissus" (1969, p.72). A god who knows all, by definition, knows other things besides himself.

Aristotle saw his supreme being as pure *nous* or intellect, but it has been claimed: "Aristotle takes both 'the Good' and *nous* to be names of the essence of God" (Menn, 1992, p. 545). This would mean that he invested his god with virtue, which is a part of the essence of the good, and virtue is necessarily directed toward beings beyond oneself, so perhaps Aristotle had some inkling of a personal and good God who cares for us. Kofi Ackah (2010, p. 109) believes so when he writes: "In identifying God with the good Aristotle implies that God is essentially good—some assurance, that as the cosmos depends on God's causality it benefits from God's goodness. In the [Nicomachean] *Ethics* God's providence is taken for granted: 'for if the gods have care for humans, they would reward those who love and honour reason most and such people would be the happiest.'"

Aristotle, Darwin, and Teleology

Aristotle's doctrine of the Four Causes by which a thing is brought into being underlies much of his empirical philosophy (Hennig, 2009). The four causes provide an analytical scheme of general applicability, and are material, formal, efficient, and final causes. The material cause refers to the physical matter of the universe; that which a thing is made of. Matter is a potentiality out of which an actuality can become, such as wood becoming a chair due to the movement of a carpenter's hands, who represents the agent, or the efficient cause of the effect. The formal cause is the design or pattern for making a chair, which belongs to the genus "chair." The material and formal causes are intrinsic causes because they deal directly with the object; the efficient and final causes are extrinsic, existing as they do external to it. The final cause is the goal or purpose of the thing actualized.

The final cause represents Aristotle's teleological view of the universe: "Aristotle posits directedness toward ends as inherent in nature: 'Nature is a cause that operates for a purpose'" (Wattles, 2006, p. 449). Teleology thus offers accounts of purposive or goal-directed activity. Teleological arguments for God are concerned with the existence of a designer with the requisite properties of perfect knowledge, wisdom,