SCIENTISM:
A BRIEF APOLOGETIC RESPONSE

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INTRODUCTORY REMARKS

While western civilization traditionally considered science and theology to be distinct yet complementary domains of inquiry, during the era of late modernity, an epistemological[1] doctrine known as *scientism* gained ascendancy within its leading institutions of academic training, arenas of political authority, and centers of cultural influence. As a result, the enterprise of science is now commonly perceived to controvert religious/theological knowledge, rather than complement it. But is science really the exclusive paradigm of rational thought? In what follows, I will offer a brief apologetic response to the central theses of scientism, as well as scientistic criticisms of religion/theology.

CLAIM I:
"The scientific method is the best way of obtaining knowledge about the world."/"The scientific method is the only way of obtaining knowledge about the world."

The term *scientism* labels two forms of ideologized *scientific realism*.[2] *Soft/weak-scientism* (WS) regards the scientific method as the *best way* of advancing our understanding of the natural world. Proponents of this view grant that knowledge may be derived from other academic fields, though they conceive of science as the most authoritative sector of human learning. Moreover, (WS) is generally associated with an attitude of optimism toward the potential of science to improve the human condition.

On the more radical position of *hard/strong-scientism* (SS), the universe is composed exclusively of matter and energy (the ontological doctrine of *physicalism*[3]); and thus, the scientific method is *the only* way of achieving an accurate awareness of reality. SS defines the nature and limits of knowledge by our faculties of sensory perception and experimental processes. If an alleged item of knowledge was not produced by the recognized research

[1] *Epistemology* is the branch of philosophy that investigates the nature, function, and limits of human knowledge. Epistemology is an essentially normative discipline that critiques and constructs models of knowledge in order to determine how rational agents ought to believe.

[2] *Scientific realism* states that as a matter of philosophical principle, science is a progressive enterprise that yields a true (or approximately true) descriptions of the mind-independent, external world.

[3] *Physicalism* is the metaphysical doctrine that only material/physical substances, properties, and events exist.

strategies of physics, chemistry, and biology, then it amounts to an intellectually inferior state of personal belief, private feeling, or existential conviction.

How should apologetically-minded believers respond to the foregoing theses? Firstly, one can hardly deny that modern science far surpasses alternative modes of probing the underlying structures and causal relations of cosmos. Yet the scope of science is confined to this project alone; its investigative reach cannot exceed the study of phenomena that may be (in principle) empirically detected and measured. Further, Christians should acknowledge that science plays a vital role in our intellectual discipleship and spiritual devotion. Only within a scientifically-informed worldview[4] can the deliverances of reason and revelation be coherently unified. The believer's worship-life is also enhanced by acquaintance with the sciences. By exploring the orderly laws, complex patterns, and elegant designs of creation, we may glorify God through a more profound appreciation of His work. (As the psalmist writes, "The heavens declare the glory of God" Psa. 19:1.)

Secondly, if scientific knowledge is ultimately dependent upon *a priori* sources of knowledge outside of the sciences, then the argument for its epistemic superiority is simply untenable. And indeed, scientific reasoning is anchored in a number of *metaphysical* and *epistemological presuppositions*. Such axioms of science include:

- the existence and knowability of the mind-independent, external world
- the reliability of our cognitive faculties and sensory abilities for gathering analyzing, and evaluating scientifically derived data
- the possibility of truth
- the existence of the canons of logic and first principles of rational thought (especially the laws of causality and con-contradiction)
- the existence of numbers
- the adequacy of our language to convey meanings that accurately correspond to the actual state of affairs in the external world

The *axiological principles* of science also fall under the rubric of philosophy. *Axiology* (sometimes "value-theory") subsumes both ethics and aesthetics—divisions of philosophy that concern moral goodness, truth, and beauty/harmony. The practice of science assumes certain ethical standards and cognitive virtues that are very much subject to moral evaluation. "Good scientists" are intellectually-honest scholars who refuse to misrepresent the data of their research, regardless of incentives to do otherwise. Ethically-minded scientists are also committed to the disinterested search for truth in their fields. They are willing to abandon comparatively inferior hypotheses, and possess the constitution of character to obey Socrates's injunction to "follow the argument wherever, like a wind, it may lead us."[5]

Science is also incapable of producing a rationale for its own purpose; that is to say, it does not and, cannot, tell us *why* we should engage in scientific activity. Science also fails to

[4] A *worldview* is a pre-theoretical, mental-grid that orients an individual (or group) toward the nature of ultimate reality (e.g. the "biblical worldview").

[5] Plato, *The Republic*, trans. Desmond Lee (London: Penguin, 2007), 88.

justify its own worth, since the enterprise of science cannot appraise the value of its outputs by its own devices. Any attempt to assess the value of science by the methods of science would commit the informal logical fallacy of *circulus in probando* (Lat. "circular reasoning") in assuming what is to be proved. It is only within the resources of philosophy that the reasons *for* and evaluations *of* science may be found.

SS also proves to defeat itself. The thesis of "the scientific method is *the only* way of achieving an accurate awareness of reality" is in fact an *epistemological* proposition, not a scientific one. And since epistemology is a branch of philosophy, if the thesis of SS is true, then it is false. Here we see a clear example of a *self-stultifying statement*. (Other such statements include *"Nothing exists"* and *"There are no sentences in the English language longer than four words."*)

A notable occurrence of such illogic may be found in the popular work of Stephen Hawking, whose *The Grand Design* (2010) states, "*Traditionally, these are questions for philosophy, but philosophy is dead…Scientists have become the bearers of the torch of discovery in our quest for knowledge."*[6] If the late theoretical physicist is correct, then "philosophy is dead" and scientists are the new torch-bearers in our search for knowledge. Yet nothing in his statement can be scientifically tested, and we are thus forced to conclude that his words amount to a philosophical pronouncement—but then again, philosophy is supposed to be dead!

CLAIM II:

"Science deals with matters of reason; religion deals with matters of faith."

While scientism rejects the rationality of revelation, Augustine's *crede, ut intelligas* (Lat. "believe so that you may understand") and Anselm's *fides quarens intellectum* (Lat. "faith seeking understanding") evince the antiquity of a *complimentary* perspective on the question of faith and reason. Indeed, many of the most influential thought-leaders of church history held to this principle of religious epistemology.

Augustine of Hippo (d. 430) taught that reason operates before, during, and after faith in the Gospel is exercised. Reason can be said to precede conversion in that the assent of faith is justified by an act of reason; and reason continues to serve the believer as he matures in apprehension of doctrine and moral sanctification. On the evidential basis of Christology, Augustine wrote, "They are very much in error who think that we believe in Christ without any proofs of Christ. For, what evidences are more clear than those which have been foretold and fulfilled?"[7]

Anselm of Canterbury (d. 1109) granted primacy to faith and priority to reason, so that one may rationally assent to the revealed truths of God that are accepted by faith. His *ontological*

[6] Stephen Hawking and Leonard Mlodinow, *The Grand Design* (New York: Bantam Books, 2010), 5.

[7] See Augustine's *Concerning Faith in Things Unseen* (399-430).

argument[8] attempts to demonstrate that unaided reason may derive certain preambles of theology. Still, faith necessarily precedes reason, and a deeper knowledge of God. In his *Proslogion*, Anselm famously states, *Neque enim quaero intelligere ut credam, sed credo ut intelligam* (Lat. "I do not seek to understand in order that I may believe, but rather, I believe so that I may understand").[9]

Thomas Aquinas (d. 1274) distinguished the functions of faith and reason the heart and mind of the believer. His monumental *Summa* (1485) exposits the nature of *fides et ratio* (Lat. "faith and reason") as cooperative, but not coercive. Though reason may incline the will, it does not produce or compel faith, which must be a free act. Reason, for Aquinas, plays a critical role prior to and following faith, which is supported by probable evidence, though not based upon it. As he explains, "Faith does not involve a search by natural reason to prove what is believed. But it does involve a form of inquiry unto things by which a person is led to belief, e.g., whether they are spoken by God and confirmed by miracles."[10]

Philip Melanchthon (d. 1560) is counted among the Lutheran reformers who acknowledged the value of rational arguments for God's existence. His *Loci* (1543) exhorts the reader to "consider the evidences of God which have been left in nature," and argues for the truth of Christian theism by such classical proofs as the orderliness of nature, the rational nature of man, the necessity of a single first cause, and the teleological goal of a final cause. Melanchthon indicates the necessity of both reason and faith in saying, "The human mind is convinced by demonstrations and proofs to confess that this world has been created by God…even though our faith is aroused and strengthened in our hearts by the testimonies of God's Word."[11]

Jonathon Edwards (d. 1758) held that reason serves several functions in support of faith, including knowledge of God's existence, divine attributes, and revelation in scripture. However, reason alone is insufficient to produce a saving knowledge of God. Regeneration requires the subjective illumination of the Spirit through scripture, which is necessary to help "the natural principles against those things that tend to stupefy it and to hinder its free exercise," and to "sanctify the reasoning faculty and assist it to see the clear evidence there is of the truth of religion in rational arguments"[12]

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[8] The first of many *ontological arguments* in the intellectual history of the western church is found in Anselm's *Proslogion* (1078). In this work, he defines God as "a being than which no greater can be conceived" and argues that such being must exist in the mind. From this he infers that if the greatest possible being exists in the mind, it must also exist in reality, since if it existed only in the mind, then an even greater being must be possible—one who exists both in mind and in reality. Therefore, this greatest possible being must exist in reality.

[9] See Anselm's *Proslogion* (1077-78).

[10] See Aquinas's *Summa Theologica* (1273, pub. 1485).

[11] Philip Melanchton, *Loci Communes 1543,* trans. J.A.O. Preus (St. Louis: Concordia Pub. House, 1992), Locus 2: Creation.

[12] See *The Works of Jonathon Edwards Online* at http://edwards.yale.edu/.

B.B. Warfield (d. 1921) saw a need for both reason and the activity of the Spirit in salvation. Warfield spoke of Christianity as "the apologetic religion" and thought that the rational consideration of evidence could prepare the way for theology as well advance the spread of the Gospel:

> Though faith be a moral act and a gift of God, it is yet formally conviction passing into confidence; and…all forms of conviction must reason on evidence as their ground, and it is not faith but reason which investigates the nature and validity of this ground…The action of the Holy Spirit in giving faith is not apart from evidence, but along with evidence; and in the first instance consists in preparing the soul for the reception of the evidence.[13]

C.S. Lewis (d. 1963), perhaps the most popular of Christianity's modern defenders, asserted reason as the basis of faith: "[M]y faith is based on reason. It is my imagination and emotions. The battle is between faith and reason on one side and emotion and imagination on the other."[14] For Lewis, reason does not detract from faith; rather, faith has a reasonable foundation and a moral dimension.

> Now Faith, in the sense in which I am here using the word, is the art of holding on to things your reason has once accepted, in spite of your changing moods. For moods will change, whatever view your reason takes.[15]

How then should we conceive of the relationship between faith and reason in reply to scientism? In the *salvific sense*,[16] faith is not a thesis of religious epistemology that "fills-in the gaps" in our knowledge of God and the natural world. Nor is faith independent of, if not adversarial toward, reason (the doctrine of *fideism*). Rather, *faith should be understood as a rationally-motivated trust in the divine person and atoning work of Christ*.

The 16th century evangelical reformers articulated a tripartite structure of faith vis-a-vis reason:

1. *notitia*: comprehension of the informational content of divine revelation. *Notitia* is comprehension of Christian doctrine and its rational basis.
2. *assensus*: affirmation of the truth-claims of scripture. *Assensus* is a doxastic attitude of assent to the propositional content of the Christian confessions.
3. *fiducia*: contrite confidence in the person and promises of God. *Fiducia* is an act of moral agency, effected by the monergistic activity of the Spirit. By this exertion of

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[13] See *Selected Shorter Writings of Benjamin B. Warfield,* 1851-1921, vol. 2, 1970.

[14] C.S. Lewis, *Mere Christianity* (New York: HarperCollins, 2001), 138.

[15] Lewis, 140.

[16] See footnote for *epistemic faith* below.

the will, the sinner places confidence in the justifying merits of Christ and is reckoned as righteous (Rom. 4:5; Gal. 2:16).

The reader should note that while (1) and (2) are epistemic states, (3) is volitional.[17] The believer's willful reliance (*fiducia*) on divine grace follows his agreement (*assensus*) with a body of knowledge (*notitia*) concerning divine revelation in nature and scripture. This knowledge is derived by reason: the power of mind to reflect on sensory data, apprehend concepts, contemplate arguments, devise solutions, and engage in related intellectual processes. Following a careful contemplation of evidences[18] for the chief articles of the church's historic confession, the Christian believes justifiably that such as propositions as *The God of scripture exists* and *Jesus was raised from the dead by the power of God* are true. Finally, reason is applied to clarify and defend these items of knowledge.

Now, to be sure, this is not to say that saving faith is ultimately grounded in reason. All human reasoning proceeds from a foundation of *non-doxastic justification*,[19] and theological knowledge is as well underpinned by the most basic axioms of our noetic structures. The reliability of our rational faculties must be presupposed from a position of *epistemic faith*,[20] since any attempt to prove reason by exercise of reason would be circular, and therefore fallacious.

CLAIM III:

"Theological truth is encumbered by the overwhelming number of religious denominations and the diversity of their beliefs. Science, in contradistinction, is a comparatively unified system of broadly accepted terms, theories, and methods."

Is it the case, as exponents scientism might suggest, that doctrinal discord inhibits the possibility of obtaining knowledge of objective truth in the arena of religious scholarship? Contrastingly, does a general agreement on the fundamental suppositions of theory and practice enable the scientific community to advance objective knowledge of reality?[21]

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[17] The demons mentioned in Jam. 2:19 have knowledge (*notitia*) of the Gospel and believe its claims (*assensus*), they are recalcitrant in their rejection of God's offer of salvation (*fiducia*). The cognitive and conative dimensions of salvific faith can also be described in terms of the *doctrine of the soul/spirit*. In its various faculties of consciousness, the regenerate soul is in a state of *proper intentionality* toward God and His revealed will. The capacity of *cognition* is disposed toward belief in God's existence and acceptance of Christian truths, while the capacity of *conation* is inclined toward repentant trust in the person and work of Christ, and obedience to Gospel.

[18] It is noteworthy that the author of Hebrews defines *faith* in terms of evidence: verse 11:1 reads, "Now faith is the substance of things hoped for, the evidence (Gr. elegkos) of things not seen."

[19] More of our beliefs derive their epistemic justification from beliefs in more foundational propositions. However, our most *basic beliefs*—being *self-evident*, *sensory-evident*, or *incorrigible*—are not inferred from others. Such self-justifying beliefs are therefore *non-doxastic*.

[20] *Epistemic faith* is often used interchangeably with the term *belief* (i.e. "faith *that*"). This sense of the term should be distinguished from *salvific faith* (i.e. "faith *in*").

[21] Of course, objective truth does not follow from a general consensus, even of academic authorities. The error of reasoning known as *consensus gentium* (Lat. "consensus of the people") occurs when the truth of a proposition is inferred from the fact that a preponderant segment of a group/population believes a proposition to be true. Whether in the arts, sciences, or any area of intellectual activity, the prevailing judgement of experts on a theory is indeed

Even a cursory reading of an introductory text[22] on the second-order discipline of *the philosophy of science* (POS)[23] would reveal that on the foundational philosophical suppositions, methodological assumptions, and published outcomes of empirical research, universal concurrence is absent from science.

Consider a few points of disagreement in the present discourse. General approaches to the POS include *externalism* and *internalism.* Externalism conceives of philosophy as an essentially normative discipline vis-à-vis science. On this traditional view of POS, philosophy determines the assumptions, defines the problems, and evaluates the implications of science. Contrastingly, internalism reduces POS to a type of scientific sub-discipline, or simply subsumes relevant philosophical questions and concerns under science. For the internalist, the chief task of the philosopher is to describe the practice of science and elucidate its language. In this way, the activity of science becomes insulated from critical interaction with the analytic tools of philosophy.

The subject-matter of POS is generally categorized under three headings: the *ontology of science*, the *epistemology of science*, and the *philosophy of nature.* In the first branch, there is an ongoing *realism-antirealism debate*, which centers on two primary questions:

- Do we have sufficient reason to believe in the reality of theoretical entities postulated by modern scientific theories?
- Even if our scientific theories do demonstrate explanatory and predictive power, are we obliged to affirm the truth (or approximate truth) of theories that describe such entities? (Perhaps our scientific theories are just *useful fictions*!)

The prevailing answers to these questions have taken the form of (at least) three positions. The first is *rational realism*, which is the view that science is a systematic, objectively rational project that advances by securing true (or approximately true) and justifiable descriptions of the theory-independent world. According to realists, observational terms correspond to real properties; and theoretic terms refer to actual, mind-independent entities. A second position is that of *rational non-realism* (or *instrumentalism*). Rational non-realists deny that scientific knowledge advances by securing true (or approximately true) and justifiable descriptions of the theory-independent world. There are four sub-positions in the category of rational nonrealism: *phenomenalism*, *operationism*, *pragmatism*, and *constructive empiricism.*

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relevant, and may be statistically determined. However, the truth of that theory does not follow from such a determination.

[22] The author recommends Alex Rosenberg and Lee McIntyre, *Philosophy of Science: A Contemporary Introduction, 4th ed.* (New York: Routledge, 2020).

[23] *Philosophers of science* participate in a second-order discipline that considers questions *of* philosophy *about* science. While a *first-order discipline* explores the essential content of an academic field (e.g. the first-order discipline of biology studies the nature of living systems), a *second-order discipline* studies the philosophically relevant presuppositions and implications of that field.

Finally, there is *non-rational nonrealism*. Those who are persuaded by non-rational nonrealism deny the adequacy of both realism and non-realism. Non-rational non-realists maintain the following:

- No such thing as the "scientific method" exists; rather, there are only scientific methodologies.
- Since all observations are theory-laden, true objectivity is impossible.
- The epistemological authority of science is found in the craft of the scientific community.
- The history of science shows that paradigm shifts prove the dynamic and culturally relative nature of scientific knowledge.
- Science is not a uniquely self-critical or progressive project.

In addition to the foregoing debate, *scientific methodologies* also vary significantly. To name only three, *inductivism*, *hypothetico-deductivism*, and *eclectic models* offer competing frameworks for the procedures of scientific inference.

Of course, even when scientists do find themselves in agreement on preliminary questions of ontology and methodology, rival theories are inevitably formulated! Theoretical physics, for instance, currently recognizes (at least) ten distinct interpretive models of quantum mechanics[24]; and yet, such divergence of interpretation does not justify the conclusion that at the atomic/subatomic scale, nature is epistemically inaccessible to the physicist. The same applies to the epistemic concerns of philosopher of religion/theologian. The truth or falsity of a theory—be it of science or theology—must be determined through critical scrutiny of evidence and intellectually-honest examination of arguments.

CLAIM IV:
"The science of evolutionary theory has explained the origin of religious belief."

The scientistic critique of religion as an essentially psychological phenomenon owes much to the functional analyses of such monumental figures as Ludwig Feuerbach (d. 1872), Karl Marx (d. 1883), Emile Durkheim (d. 1917), and Sigmund Freud (d. 1939). Feuerbach proposed that God is a divinized self-projection of the human psyche,[25] while Marx posited the need for economic control and social order as the animating force of religion.[26] Durkheim held that religion creates a sense of collective meaning, unifies society, and reflects its most sacred

[24] For instance, among prevailing interpretative models of quantum mechanics at present are the Copenhagen, Many Worlds, Quantum Information, Relational Quantum Mechanics, Quantum Bayesianism, Consistent Histories, Ensemble, De Broglie–Bohm theory, Quantum Darwinism, Transactional, Objective Collapse, Von Neumann–Wigner, Quantum Logic, and Modal.

[25] See Feuerbach's *The Essence of Christianity* (1841).

[26] See Marx's *The Communist Manifesto* (1848).

concerns.[27] And for Freud, our conceptions of deity are ultimately grounded in primordial experiences of fear and guilt.[28]

In more recent generations, representatives of scientism have deployed various hypotheses of *evolutionary psychology* (EP) to interpret religious beliefs and behaviors as adaptive outcomes of our socio-biological evolution. As was the case for all organs, the human brain was shaped in structure and function by the forces of natural selection and random mutation. The universal religious impulse of our species is thus attributable to environmental and genetic factors that once favored survival and reproductive success.

For the advocates of scientism, the implications of this Darwinian psychological paradigm are clear: science has shown that it was man who created God, rather than God who created man.[29] And while our innate inclination to venerate the spirits of deceased kinfolk, receive the blessings of a heavenly Father, or transcend the painful cycle or death and rebirth may have been of value in eras of our evolutionary history, it offers not utility in an age of scientific enlightenment. As Richard Dawkins propounds, belief in God is due to "an accidental byproduct—a misfiring of something useful…"[30] The modern theist is thus one whose consciousness has not been "raised" to awareness of this cerebral dysfunction.

The evolutionary approach to the science of mind and behavior is controversial, and has met with strong resistance from both rival schools of thought and the broader academic community. From an apologetic perspective, EP may be countered on multiple grounds:

Disciplinary Purview: If the central aim of psychology is to explore human mental functions and behaviors through a lens of *epistemological naturalism*,[31] then questions of the *supernatural* would invariably exceed its scope.[32] Psychologists who express opinions on the ontological status of a spiritual Being do so as non-authoritative participants in the *philosophy of*

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[27] See Durkheim's *The Elementary Forms of the Religious Life* (1912).

[28] See Freud's *The Future of an Illusion* (1927).

[29] In a *New York Times* op-ed, evolutionary biologist David Barash wrote of a yearly "talk" that he gives to his students. In this piece, he states, "As evolutionary science has progressed, the available space for religious belief has narrowed: It has demolished two previously potent pillars of religious faith and undermined belief in an omnipotent and omnibenevolent God." See David Barash, "God, Darwin and My College biology Class," *New York Times*, Sept. 28, 2014, accessed Aug. 20, 2022, https://www.nytimes.com/2014/09/28/opinion/sunday/god-darwin-and-my-college-biology-class.html.

[30] Richard Dawkins, *The God Delusion* (London: Houghton Mifflin Harcourt Company, 2006), 188.

[31] *Epistemological naturalism* denotes the strict adherence to the techniques and interpretive paradigm of natural science without recourse to supernatural explanations.

[32] This not to say that psychology cannot inform the discourse on some matters of religious discourse, or that the findings of psychologists cannot contribute significantly to the theistic worldview.

religion or *analytic theology*,[33] yet not as scientists. Statements on the existence or attributes of God, the epistemic justification of theological propositions, etc. that issue from the findings of science are in fact philosophical or theological in category.

Methodological Constraints: As for all disciplines of *operation science*,[34] psychology studies present states of affairs in terms of antecedent and causal states of affairs. The boundaries of psychological investigation are thus defined by recurring patterns of the natural world that are subject to observation and experiment. All systems of religion began at some point in the course of human history; and hence, any adequate account of the origin of religious belief would require applicable techniques of *historical method*,[35] rather than psychology. Evolutionary psycho-histories of religion thus inevitably exceed their own methodological limitations.

Fallacious Logic: Efforts to undermine the veracity of a religious belief by appealing to its evolutionary context of origin commit the *genetic fallacy*. This informal error in logic occurs when a proposition is affirmed (or rejected from the outset) upon the basis of its source, rather than its evidential merits. Simply put, no explanation of the origin of a belief could decide the truth-value of that belief.

Flawed Patterns of Judgement: *Cognitive biases*[36] are frequently cited by proponents of evolutionary psychology as further reason to doubt the rationality of religious beliefs. "We should be especially skeptical of theological doctrines," it is said, "because the human capacity to evaluate such teachings is distorted by an underlying desire to survive death, witness a day of divine justice, and enjoy a blissful afterlife." While the role of cognitive biases should not be entirely dismissed, our tendency to deviate from standard patterns of rational judgement is often greatly overstated in polemical treatments of science and religion. (For instance, should a juror in a criminal proceeding be "especially skeptical" of otherwise reliable testimony given by a victim who likely has an "underlying desire" to see justice served?)

What is more, this criticism applies equally to the skeptic. Non-theism may be rooted in a desire for moral autonomy, existential sovereignty, or perhaps, animosity toward the notion of a divine father-figure.[37] If the theist's ability to make a rational assessment of a religious tenet is

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[33] *Philosophy of religion* is the philosophical sub-discipline that examines the primary concepts and dominant themes of religious systems. *Analytic theology* applies the concepts, theories, and methods of analytic philosophy to the traditional foci of systematic theology.

[34] *Operation science* includes such disciplines as physics, chemistry, biology, and so forth. In contradistinction, examples of *origin science* are archaeology, paleontology, and cosmology

[35] *Historical method* refers to the body of research guidelines and analytic techniques used by historians to write accounts of the past. The closely related discipline of historiography studies the development and applications of these methods within their historical contexts

[36] *Cognitive biases* are systematic and unconscious dispositions to deviate from rational patterns of cognition.

[37] Paul Vitz's *Faith of the Fatherless* (2013). In this work, Vitz offers a biographical survey of several highly influential atheists to argue that disappointment in one's earthly father, whether through death, absence, or mistreatment, frequently leads to a rejection of God.

distorted by his own prejudices of cognition, so also is the atheist's ability to make such rational assessments.

EAAN: Alvin Plantinga's *evolutionary arguments against naturalism* (EAAN)[38] is arguably the most sophisticated and widely-known contribution to a family of arguments devised to show that when non-theism/materialism is presupposed, the story of evolution implies a strong *undercutting defeater*[39] of its own justification. Summarized otherwise,

> [T]he conjunction of metaphysical naturalism (N)—namely the view that only natural objects, kinds, and properties are real, and evolution (E) is, according to Plantinga, self-defeating. Those who accept both N and E have a 'defeater' for the belief that human cognitive faculties, so evolved, are reliable. This defeater, according to Plantinga, cannot be defeated and thereby constitutes a defeater for any belief produced by those cognitive faculties, including the beliefs that comprise N&E. Therefore, despite the fact that metaphysical naturalism and evolution are typically thought of as very closely and comfortably connected, taken together, their conjunction cannot rationally be held.[40]

The central purport of Plantinga's formulation is that given that our cognitive mechanisms of belief-formation are generally reliable, the conjunction of biological evolution and metaphysical naturalism proves self-defeating. The human brain and its cognitive faculties were produced by the unguided, non-rational forces of natural selection and random mutation. And if our mental equipment evolved by such Darwinian mechanisms to generate beliefs and behaviors that favor survival and reproductive success, rather than objectively true belief-states, then it would seem that we have sufficient reason to doubt the veracity of theories produced by that noetic equipment (including those of science).

CLAIM V:
"*Science cannot allow for personal explanations of natural phenomena."*

In his 1997 article, "Billions and Billions of Demons," physicist Richard Lewontin wrote, *"Nearly every present-day scientist would agree with Carl Sagan that our explanations of material phenomena exclude any role for supernatural demons, witches, and spirits of every kind, including any of the various gods from Adonai to Zeus."*[41] Scientism follows Sagan in disallowing divine-personal explanatory options. The non-theistic non-negotiables of this

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[38] See Plantinga's *Warrant and Proper Function* (1993) and *Where the Conflict Really Lies: Science, Religion, and Naturalism* (2011).

[39] *Epistemic defeaters* may be categorized as *rebutting* or *undercutting*. A rebutting defeater against some belief *p* is an overriding reason for supposing that *p* is not the case. An undercutting defeater is an overriding reason for supposing that the grounds of some belief *p* are inadequate (i.e., do not provide the appropriate sort of support for the belief p). In the present context, an epistemic defeater would be a new item of evidence or an argument that directly rebuts Paul's claim as logically defective or undercuts its evidential grounds.

[40] James Bielby, ed., *Naturalism Defeated? Essays on Plantinga's Evolutionary Argument Against Naturalism* (Ithaca:Cornell University Press, 2002), vii.

[41] Richard Lewontin, "Billions and Billions of Demons," *The New York Review of Books,* January 9, 1997.

ideology demand that any talk of a metaphysical "who" behind the physical "how" of the universe must be rejected from the outset. A chief task of the scientist is to liberate humanity from his proclivities toward pseudoscience, attachments to superstition, and affections for pre-modern mythology. Even *integrative hypotheses* that propose God as a primary cause who operates through the secondary causes of natural law[42] are seen as derivative of a pre-Enlightenment worldview and, ergo, inimical to scientific progress.

While social sciences such as anthropology *must* posit human agents as causes, divine-personal explanations are, admittedly, inadmissible in the practice of physics, chemistry, and related fields. But this fact does not prevent information from the "hard-sciences" from being appropriated to substantiate certain theological doctrines concerning the natural world (i.e. the doctrines of *Creation* and *Man*). So long as integration of empirical and theological elements is conducted outside of contexts of exclusively scientific scholarship, no violation of disciplines is committed.

A conspicuous example may be found among the classic apologetic "proofs" for theism.[43] Named for the *kalam* tradition of Islamic discursive philosophy in which it was originally formulated, the *Kalam Cosmological Argument* is a linear form of the *Cosmological Argument*[44] that is frequently syllogized as follows:

> All things that begin to exist have a cause.
> The universe began to exist.
> Therefore, the universe has a cause.

Until the later part of the 20th century, the minor premise of this argument (*The universe began to exist*) lacked empirical confirmation. Theistic philosophers relied primarily upon philosophical arguments to support their claim that the universe requires an uncaused First Cause (i.e. an eternal being such as God). But following the near universal acceptance of Big Bang cosmology after 1964, the past finitude of the cosmos became an unavoidable reality. A spaceless, timeless, and immaterial Cause was now necessary to account for the space, time, and material of our world. It was in view of this that the great English scientist-philosopher, Arthur Eddington, admitted, *"The beginning seems to present insuperable difficulties unless we agree to look on it as frankly supernatural*."[45]

Why then does scientism refuse to consider a "God-hypothesis"—even apart from the institutional settings and academic literature of science—in cases when one is clearly warranted by the evidence? Reasons vary, though often it is said that explanatory recourse in theism is unnecessary, or even myopic. Given sufficient time, the scientific community will account for the phenomena by strictly natural mechanisms. But given the potential viability of an integrative

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[42] This *integrative model* of science and theology is the *complementarity view. Theistic science*, a competing option, proposes empirical and theological knowledge directly interact in epistemically meaningful ways.

[43] Other arguments of this category would include the *Teleological* and *Contingency.*

[44] The term *Cosmological Argument* designates a category of arguments that seek to demonstrate the existence of a First Cause of the cosmos.

[45] Sir Arthur Eddington, *The Expanding Universe* (Cambridge: Cambridge University Press, 1933), 125.

hypothesis, this line-of-thought is surely misguided. An expression of hope in the potential of science to produce an adequate explanation cannot compare to *any* explanation, whether it be natural or supernatural in category.

Let us imagine a thought-experiment. Two forensic investigators, Smith and Jones, arrive at the scene of a suspected homicide. Upon inspection of the body, the investigators discover several puncture wounds in the victim's thorax. Having made a careful inspection of the evidence, Smith says, "Well, we can safely conclude that the victim was murdered with a sharp object." Jones replies, "Murdered? Don't be so hasty, friend. As scientists, we should resist the urge to posit a personal explanation of our observation. In the future, science will be able to describe a strictly natural mechanism that causes wound-channels to spontaneously emerge in human tissues under certain conditions. Until that discovery is made, we should withhold judgement and prefer no explanation to a potentially misguided, personal one."

In this situation, Jones's reasoning is of course fatuous. Given the physical evidence and background knowledge of forensic pathology, Smith was perfectly justified in inferring that the observed effect was most likely produced by a personal causal agent! What is more, it may be argued that Jones makes an *ontological category mistake*[46] in asserting the absence of a hypothesis as superior to his colleague's hypothesis. A statement of faith in the future capability of science to describe the cause of some observation does not qualify as a causal description; and it cannot be weighed against a statement that does offer a causal description of that observation.

[46] A *category mistake* is a semantic or ontological error in which one presents a thing that belongs to a particular category as if it belonged to another, or when one ascribes properties to a thing that could not possibly possess those properties.