

Article



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God in Cosmic History: Responding to my Critics

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Abstract | Here is the key question around which this Author-Meets-Critic revolves: can we raise the question of God's existence or God's grace in a meaningful way while studying a combination of natural history and human history? No, say big historians; we cannot ask the God question. Religion maybe, but certainly not God. It follows that we need more than just Big History which looks at nature through scientific lenses. We need Cosmic History to pose the God question, and even to discern human meaning within an otherwise impersonal universe. In this article, I entertain criticisms of my book, *God in Cosmic History*, raised by Lowell Gustafson, President of the International Big History Association; Ann Milliken Pederson, Professor of Theology at Augustana College in Sioux Falls SD; Nancy Howell, Professor of Theology at St. Paul Seminary in Kansas City; George Murphy, physicist and pastor in Akron OH; and distinguished evolutionary biologist and winner of the Presidential Medal for Science, Francisco J. Ayala. I offer responses to each critique.

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Introduction

The combination of compliments and criticisms of the book, *God in Cosmic History*, provide a welcome contribution to a significant ongoing conversation. Here is a compelling question: can we decisively rule out or rule in the presence of a creating and redeeming God who is responsible for the past and the future of the cosmos within which we exist? Here is a corollary question: can a review of nature's history combined with human history strictly through scientific lenses provide a meaningful story? No, if we want to be coherent. The standard methods employed by research scientists and now by big historians unnecessarily preclude asking either about God or meaning. To raise the meaning-question let alone the God-question requires a leap beyond Big History to what I call, *Cosmic History*.

I initially applauded big historians when they decided to nest World History within Natural History to build Big History. There is only one history of our cosmos, to be sure; so this seemed like such a reasonable thing to do. But, not only did big historians decide not to ask questions about transcendent reality, they neglected even to report on the history of our ancestors who did in fact ask the question of transcendence. Why?

An explanatory gap has opened up (Peters, 2017c). It is a gap between historical reports of a transcendent divine reality, on the one side, and the big historian's attempt to provide a strictly secular explanation based in large part on evolutionary theory, on the other side. The result is that a significant chapter in human history has not been sufficiently accounted for by the big historians, namely, the Axial Breakthrough (Bellah 2011, 2012; Jaspers; Voegelin; Peters 2017a,b). By

Axial Breakthrough or *Axial Threshold* I refer to events shocking the human psyche that occurred in different parts of the world during the first millennium before the common era.

Here is what I am referring to. After the rise of city-states and during the early stages of empire, a transcendental insight dawned on certain individuals in China, India, and the Middle East. This transcendental insight shed new light on the human condition in the recorded ruminations of Confucius, Lao Tzu, the Upanishadic Brahmins, the Buddha, Zoroaster, the Hebrew prophets, and Plato. Whether theists or non-theists, these thinkers cultivated belief in a transcendent moral order and a transcendent ground for human reasoning that is trans-tribal and universal in scope. In some instances this breakthrough became the basis upon which whole cultures were constructed with local ethnic identities placed within a growing sense that there exists a single universal humanity. This ancient history gradually morphed over two and a half millennia into contemporary beliefs in universal human dignity complemented with respect for ethnic and religious diversity. In order to study the Axial Age, the student must graduate from Big History and take up Cosmic History.

To eliminate the axial breakthrough from either World History or Big History would be like telling the story of *Alice in Wonderland* without Alice. Our axial ancestors are the very ones who gave birth to modern historiography and historical consciousness. Therefore, I am electing the term, *Cosmic History*, to include the content of Big History along with the God-question. I choose this term for three reasons. First, scholars can distinguish two forms of pre-modern human consciousness, the intra-cosmic and the supra-cosmic. The divine figures in the myths of hunter-gatherers, early agricultural communities, and some city-state societies were intra-cosmic, part of the world order. For axial seers, however, the divine reality became transcendent, supra-cosmic. The term, *Cosmic History*, opens the door to this historical retrieval.

The second reason for using the term, *Cosmic History*, it that I wish to re-evaluate the world picture painted for us by contemporary cosmologists, astrophysicists, evolutionary biologists, astrobiologists, and other scientists. I want to open the door for us today to peer beyond the horizon of physical reality projected by science and ask whether or not there might be

more. Rather than accept as literally true what non-scientists are told by scientists, I want to pose an ideology-critique of the scientific worldview in light of the question of transcendence.

A third reason for this critique is the observation that both the scientific worldview and that of big historians who depend on it are unable to explain a most important daily reality, namely, human subjectivity. For us in the modern world, historical meaning and even history itself reside in human subjectivity. In subjective consciousness we find a window open to transcendental awareness. Cosmic History puts both subjectivity and transcendental awareness back into the human psyche.

Make no mistake, I applaud the achievements of the big historians (Brown, 2007; Christian, 2014, 2017; IBHA, 2014) for providing what every university curriculum needs: a synthesis of the new knowledge of nature's history from the Big Bang to the present with World History augmented with the moral resolve to heal Earth's threatened ecosphere. *God in Cosmic History* is intended to supplement, not replace, Big History.

Lowell Gustafson on the Movement from Big History to Cosmic History

I am so pleased to see how big historian Lowell Gustafson, President of the International Big History Association, is inviting the kind of interaction I propose. "Our over-arching narrative has many gaps and questions. Much remains to investigate and ponder, share and debate" (Gustafson, 2017, 2). I am also pleased by Gustafson's generous and perceptive review of *God in Cosmic History* in this issue of *Science, Religion and Culture*.

Peters' "goal is to expand a secular view of Big History to one of Cosmic History that includes a view of God as its author or co-author," observes Gustafson. Yes, asking the question of God is my goal. And this marks the pivot from Big History to Cosmic History. Asking the God question--even if the answer remains elusive--warrants such a move.

Gustafson grants that the scope of current Big History excludes the God-question. "But his [Peters'] question about if God is the author or co-author is history is not a question big historians would know

how to answer with available evidence. Peters does indeed take his discussion beyond what most big historians find evidence to discuss. He asks a question that they would not know how to address.” Cosmic History must augment Big History’s method with a gate open toward philosophical and theological questions of transcendence.

Gustafson poses what he dubs, “quibbles.” One quibble he takes up deals with the matter of meaning. Gustafson contends that I fail to recognize how big historians and scientists already tell us what is meaningful. I have asserted in *God in Cosmic History* that the question of meaning cannot be rightly asked within a historical method which defines itself within the strictures of a scientific worldview. Gustafson quibbles by pointing out how certain big historians and certain scientists refer repeatedly to meaning; they even manufacture their own meaning. Therefore, meaning already adheres to their interpretation of history viewed through a scientific lens.

My response is this: big historians and scientists who attempt to take ownership of meaning suffer from incoherency or, worse, delusions of intellectual imperialism. What is presumed to be the scientific method among practicing scientists and philosophers of science is self-restrictive--that is, science denies itself the privilege of asking about meaning along with asking about design, purpose, direction, or *telos* in nature. University of Chicago evolutionary biologist Jerry Coyne has recently made this point with force: “Meaning and purpose are human constructs, products of intelligent minds, and ‘purpose’ implies forethought of such minds, either human or divine. These are teleological ideas that are not part of science” (Coyne, 2015, 228). For more detail, see Francisco J. Ayala’s article on evolution and teleology in this series. This is why Cosmic History must open a gate to both subjectivity and transcendence, a gate closed by any method claiming to operate within a scientific description of nature.

Are the personal proclivities of big historians a factor in the method of Big History? “Big historians as a rule do fall into the atheist or agnostic camps,” observes Gustafson. “They do not deny that religion is interesting and important; they just do not assume that God exists or that they know how to find evidence for God’s effect on matter, stars, galaxies, evolution, and so on.” Let me offer an interpretation. The research

interest of non-believing scholars, according to Gustafson, is directed toward a historical assessment of why people in the past held the religious beliefs they did. This is a humanistic study. As a study of religion, this is all well and good.

Yet in response, I would like the cosmic historian to ask something in addition: might any of these religious beliefs be confirmable or disconfirmable? And, because the beliefs exploding during the Axial Age still influence today’s understanding of both nature and history, we should ask: how have past religious claims influenced the very assumptions made by today’s historians? Religious consciousness implies beliefs about reality, including our own contemporary perception of reality; and such beliefs should be open to examination by methods derived from philosophy, theology, ideology critique, and the history of ideas including especially the history of the transmission of traditions (*Wirkungsgeschichte, Überlieferungsgeschichte*). These methodological supplements would be advisable whether the scholar is an atheist or an adherent to one or another traditional religious belief system.

With regard to the Big Bang origin of the universe within which we now live, Gustafson rightly reports that physical cosmologists are still searching for an adequate scientific explanation. Gustafson asks: Why not simply leave this as an unsolved mystery? Here is my answer: because the initial conditions at the Big Bang raise the question of the divine within the scope of physics. Physicists ask the God question because their equations require that it be asked. This in itself does not validate the cosmological or *kalaam* arguments for God’s existence, what we frequently call the “God of the gaps” arguments. Rather, it simply yet dramatically demonstrates that posing the God question is rational and, further, that affirming the existence of a divine creator is just as plausible as denying a divine role in creation. To pretend that the Big Bang has no potential theological implications is just that, pretend. I recommend that the cosmic historian spell out the possible theological implications raised by physical cosmology.

Gustafson asks: “Is the universe a story or an equation?” I like this question. It gets us into the indispensable domain of ultimacy. It should be clear that I assume the universe is a story. I assume history is reality both objectively and subjectively. It is the story dimension

of nature which draws me so enthusiastically to the Big History project. If viewing the universe as a time-independent equation would dissolve the temporality and contingency of story, my view of reality would dissolve. A successful elimination of story from reality would falsify my apprehension of reality.

Gustafson spins from this most interesting challenge to make a different point, namely, that hubris or pride adheres to those who make universal or totalistic claims about ultimate reality. "Claims to full knowledge of ultimate reality have a taste of hubris. In religious terms, we need to beware of the idolatry of unfounded claims. Religion's untestable claims to a total account of ultimate reality – or scientists' claims that they might find a theory of everything – are equally arrogant and unsupportable. One lesson of religion and science is humility; both know at their best that God and reality are always beyond them." Yes, those who believe in God can avoid idolatry only by recognizing that God even in revelation is revealed as mystery.

To this I simply wish to say, "yes, of course, Professor Gustafson." Science at its best and theology at its best proffer visions of reality which are then subject to future confirmation or disconfirmation based upon experience. I belong among those theologians for whom theological claims about ultimate reality function like hypotheses in science—that is, they may be broad and encompassing but they require future confirmation or disconfirmation. Speculative projections about the whole of reality are now measured according to the criterion of explanatory adequacy, not by objective verification. Faith is based on hypothetical belief, so to speak. But this hypothetical trait ought not discourage religious faith from proffering a vision of the whole of reality within which all things are oriented toward the God of grace.

I do not expect Gustafson and the International Big History Association to follow me as I move from Big History to Cosmic History. Nevertheless, I genuinely appreciate that Gustafson's windows are open more than a crack to allow the breeze of transcendent questions to blow into his living room.

Ann Milliken Pederson on Vocation in Location

Ann Milliken Pederson makes us feel at home in

this expansive cosmos. The cosmos is impersonal, at least the way it's portrayed by scientists. The cosmos is also big, unimaginatively big. It's impersonal bigness could so overwhelm our miniscule subjectivities that we could feel as disposable as a dry leaf in an October forest. Yet, says Milliken, each of us has been called by God to a vocation, to a life of meaning and significance. Regardless of the impersonal character and gigantic size of our cosmos, each student in her university should feel at home, she coaxes. This is because the God of the cosmos calls each of us to a vocation.

On the one hand, Pederson lauds *God in Cosmic History* so effusively that the author risks being lulled into euphoria. On the other hand, Pederson also offers a critique which could lead to amendment. When it comes to assessing the value of postmodern thinking on the topic of cosmic history, she fears that the bigness of the subject matter may obliterate the importance of particularity, locality, and each tradition's integrity.

To illustrate Pederson reports on the current drama playing out in South Dakota's Black Hills between Sanford Underground Research Laboratory or SURF and the Native Americans who live there. SURF had planned to study the cosmos from the perspective of this geographical location, but not from the perspective of the Oglala Amerindians who have lived on site for centuries. Despite a local history of tension, injustice, and hurt, Oglalas visited the SURF site and experienced in an unpredictable way a rebirth of their sense of autochthony (the sense of belonging to the land). The cosmic scope of the scientific vision synthesized with traditional beliefs in a most meaningful manner. Pederson's point is poignant: the embedded nature of our social location must be connected to our cosmic location.

Pederson asks: how can Big History help Local History? She wants to avoid the deconstructive postmodernist danger of focusing only on the local, because that would exclude the inclusive scope of cosmic history. Even so, the historical reality of the bigness of history must coincide with the particularities of the local culture and its traditions. Holding these two together would deepen the critical perspective. Pederson believes this dialectic between the cosmic and the local might expand my notion of critical thinking. Critical thinking holds two pictures of the world together simultaneously, in this case both

the local and the cosmic, both the particular and the universal.

In her article here in *Science, Religion, and Culture*, Pederson writes: “I could well imagine that this text [*God in Cosmic History*] might be used in an interdisciplinary course in which someone from the humanities, social sciences, and natural sciences would teach together to create an integrated experience for the undergraduate.” Imagining just this classroom scenario is why I wrote the book, *God in Cosmic History*.

Nancy R. Howell on Particularity and Panentheism

Like Pederson, Nancy Howell raises up the question of particularity. The question of particularity for Howell arises specifically within my treatment of ecology and eco-ethics. My book chapter on our Anthropocene period confronts the ecological crisis with a criterion “for prophetic judgment against the injustices within history,” which is derived from “axial awareness of a transcendent order of justice” (Peters, 2017b, 313). I propose an ethic that is proleptic in character, relying on its anticipation of a future vision of a “just, sustainable, participatory, and planetary society” (Peters, 2017b, 312, 320ff). So far, so good. At least according to Howell.

But Howell proceeds to emphasize that ecology as a science defers to the particular in nature. She cites examples: monitoring kestrel behavior in ecological context, examining chemical signals between plants and predators, or studying the acoustic interactions between insects and bats. Even though important generalizations arise from particular empirical investigations, it remains the case that eco-scientists are often knee-deep in bogs, caves, and forests looking specifically for someone or something in particular. This particularity issues an invitation to theologians such as Howell and me, an invitation to allow our theological imaginations to be nosy about the lives of nature’s neighbors. Howell argues that the big picture of Gaia is one approach that should be supplemented by the detail work accomplished with sharp eyes like those seen in essayist Annie Dillard’s *Pilgrim at Tinker Creek* or scientist Barbara McClintock’s “feeling for the organism” (to use Evelyn Fox Keller’s language). Then, says Howell, we can approach this subject matter with critical self-awareness about what is just

for the kestrel, what is participatory in relationship with chimpanzees, and what is sustainable for the bioregion of the Pando aspen grove within the divine creation.

Much of Howell’s critical review of *God in Cosmic History* makes a case for the panentheistic model of God explicated by process theologians in the Whiteheadian tradition. She objects to my defense of classical trinitarian theism. I embrace theism on the grounds that it better protects divine transcendence than does panentheism. Howell, in contrast, sides with the panentheists, praising their articulation of both divine transcendence and immanence.

The cosmic historian should take out membership in the club of panentheists, Howell avers. She offers four arguments. First, the reason my version of Cosmic History is compelling is because God is drawn into the historical drama of human and nonhuman events, just as panentheists claim. Second, my own language evokes a version of panentheism when I say such things as, “the universe, together with all things founded in it, happen in God.” Third, a providential vision of God is common to Peters’ and panentheistic theology. Fourth, “Peters seems to call for a relational worldview that neither divorces humans from nature (Peters, 2017b, 312) nor God from the cosmos. Process theology agrees.” In sum, I should take out membership in the club of process panentheists.

Thank you, Professor Howell, for this tempting invitation. Every attribute of the panentheistic model you lift up admittedly does apply to the kind of God I think about when asking the God question within Cosmic History. Yet, there is one matter that leads me to hesitate to take out membership in the society of panentheists. Yes, it has to do with transcendence. God, according to classical theists, creates the world from nothing, *creatio ex nihilo*, whereas for panentheists the world is God’s body. God is involuntarily stuck in the world, so to speak, from everlasting in the past to everlasting in the future. Yes, indeed, the panentheist affirms divine immanence just as coherently as I do. Yet, from the theistic perspective, the transcendent God is immanent voluntarily, motivated by love for a creation that is other to God. Trinitarian theism maintains this relational otherness more sharply than does panentheism, in my judgment. Trinitarian theism is just as relational as process panentheism, to be sure; yet theism reminds us that this relationality

is the result of God's choice motivated by divine love.

Nevertheless, if I'm ever expelled from the club of classical theists, I'll come running to the panentheist door and ask for admittance.

George Murphy on the Cosmos in Light of the Cross

Physicist and theologian George Murphy points out a common error made by non-scientists attempting to interpret the Big Bang. The "singularity" with which the cosmic story begins is not a space-time event. It is not an object. "Classical general relativity, on which our model universe is based, breaks down. Proposals to avoid this and perhaps get back before the Big Bang have not yet gotten observational support." The idea of the singularity before the Big Bang is just that, an idea. It is derived from the mathematics applicable to what must have been the initial conditions at the onset of our universe. Murphy's point is reminiscent of Book XI in Augustine's *Confessions*. "There was therefore no time when you [God] had not made something, because you made time itself" (Augustine, 1991, 230). In short, the singularity with its initial conditions was not itself a space-time event. Non-scientists should get this through their noggins, insists Murphy.

It is not my intention to violate either physics or Augustine's insight. What I argue in *God in Cosmic History* is that physical cosmology points us to a beginning of time, to an edge beyond which there is no time. Our temporal cosmos appears to have had a beginning, an onset, an *αρχή*, an origin. This origin has been followed by a subsequent history, a single history that continues in the present moment. Big historians along with physical cosmologists try to chronicle this history of post-origin contingent events. It is decisive to note that historical events are contingent, not predetermined. It is contingency which makes history history. Was the Big Bang itself contingent? Or was it predetermined? Just how far can the scientist go in posing such questions?

Science has been able to reveal the evolution of the universe back to the first moment of its coming into existence, but cannot offer any explanation for what Fred Hoyle derogatorily called the "big bang," other than it might have been a random and meaningless quantum fluctuation. What this "fluctuation" was supposed to have taken place in,

since neither space nor time, as we understand it, had yet come into existence, is left unanswered. The problem is that the universe's coming into existence is a *sui generis* event, which places it outside the domain of the scientific method. (Marsh, 2016, 52)

A critical analysis of discussions of the Big Bang among scientists cannot but help raise the question of God, whether the scientists themselves elect to pursue theological questioning or not. The initial conditions which must have obtained at the Big Bang have astounded cosmologists and driven them to speculate on various hypotheses to explain the beginning edge of time.

I take the transparent thinking of Martin Rees, renowned British physical cosmologist, as an illuminative example. Rees can list the lucky coincidences that imply an Anthropic Principle, that imply the possibility if not inevitability that the history of the cosmos would eventually lead to the evolution of living creature such as us humans. When evaluating the facts describing the role of the Anthropic Principle in making our biophilic universe, Rees considers three alternative explanations: happenstance, God, or the multiverse (the sum of all universes). Which of these three explanations is the most adequate?

Rees says he finds the first option unreasonable and the second one unnecessarily religious, so he opts for the third. "We can conjecture that our universe is a specially favored domain in a still vaster multiverse" (Rees, 2002, 66). I call attention here to Rees' logic. Happenstance or chance cannot provide an explanation; because happenstance is not a scientific concept. What about appeal to God's design as an explanation? No. The idea of God's design would lead us from physics to metaphysics. The God hypothesis must be rejected because it connotes religion, not science. Therefore, Rees argues, we have to look for another explanation.

Among the three options, Rees elects the multiverse. The resulting hypothesis of a multiverse posits that all mathematically possible universes become actualized. Wherever we find a potential event, it happens. If every potential does not get actualized within our universe, then there must exist another universe or an array of universes where this actualization takes place. The multiverse is the club to which an unfathomable

number of individual universes belong.

I would like to draw out the implications of selecting this option. The idea of multiple universes is based on a philosophical presupposition that denies the finality of contingent events for defining nature. In *God in Cosmic History*, I point out how this presupposition revives the medieval *principle of plenitude*. Basically, the principle of plenitude says that every potential becomes actualized. On a forest hike, if the hiker comes to a fork in the path, he or she has a choice. He or she can take the one on the left or the one on the right. If he or she takes one and not the other, this action is contingent on the hiker's free decision. According to the principle of plenitude, in contrast, the hiker takes both. In one universe the hiker takes the left fork. In another universe the hiker takes the right fork. If we have enough universes, every possible decision will be actualized in one or another universe. No potential will go unactualized. By multiplying universes, the scientist can eliminate contingency, happenstance, and even design. Everything looks determined, in this view. What we lose is contingency, unpredictability, newness. In short, nature loses its history.

Let's go back to Rees' three options: happenstance, God, or the multiverse. I merely wish to draw attention to the God hypothesis. Yes, of course, Rees rejects this one. Had he opted for the God hypothesis or even the happenstance hypothesis, he could have accounted for what is observable to us: in our universe we see that natural and human events are contingent. But, by opting for the multiverse, Rees ends up with a completely determined cosmology. This preferred hypothesis appears to be the product of a mechanistic or Newtonian assumption regarding determinism in nature.

My critical analysis of scientific reasoning provides plausibility for entertaining the God question within the context of physical cosmology. To rule out the God question methodologically on the front end, which big historians tacitly do, betrays an uncritical acceptance of a materialistic worldview or ideology rather than an honest examination of the science itself. Cosmic historians, as distinct from big historians, must absorb their science critically rather than merely use science to tacitly justify a presupposed materialistic worldview.

Now, George Murphy has much more to contribute to this discussion than merely to warn us about

getting clear on Big Bang science. This physicist is also a theologian. Murphy sees a pattern in, with, and under the course of contingent events in nature. He perceives a direction, a *telos*, a manifestation. What he perceives is the inner workings of the cross. He perceives the divine plan for cosmic redemption. He perceives this divine plan for redemption because he looks at evolutionary history through lenses prescribed by the death of Jesus Christ on the cross. It is the cross which reveals the compassionate presence of a gracious God sharing in the suffering of creatures. "The crosslike pattern of creation means that Christ crucified has cosmic significance" (Murphy, 2003, 33). It is the cross which sets the stage for resurrection, for an eschatological new creation that will be cosmic in scope.

Francisco J. Ayala on Evolution and Teleology

Renowned evolutionary biologist Francisco J. Ayala is not likely to see the cross of Christ written into the history of evolving life on Earth. At least, Ayala could not see this cross pattern when looking through a microscope or a telescope. Methodologically, science cannot see transcendent reality at work within material nature.

Ayala's article here in *Science, Religion, and Culture* parses with precision just what is scientific and what is extra-scientific when it comes to teleology in evolution. Scientifically speaking, we can perceive a modest level of design in nature. But it is design without a designer. Ayala testifies that there is purpose within nature. Human eyes, for example, are designed for seeing. Such a teleological explanation is required in biology for (1) goal oriented behavior; (2) self-regulating systems; and (3) the function of organs and limbs. Nevertheless, the natural history of evolution does not require a Creator or a planning agent external to the organisms themselves. There is no scientific perception of a vital force or immanent energy directing the evolutionary process toward the production of specified kinds of organisms. Even if a scientific account of natural history might be open to the God question, it will take a theologian just to propose the question let alone an answer.

Ayala complains that in *God in Cosmic History* (Peters, 2017b, 285) I offer a partial rather than full quote of his own work. My partial citation accidentally implies that all teleology is rejected by evolutionary

biologists, whereas Ayala emphasizes that he is rejecting specifically the teleology of creationists and intelligent designers who are attributing the design of organisms “to a Creator or a planning agent.” I apologize if my citation is misleading, even though I am well aware of Ayala’s position here: local purpose is discernable in living organisms but a comprehensive purpose directing overall evolution is denied for being unscientific.

On the one hand, I begin my treatment of evolutionary history where Ayala draws a line between what science can and cannot do. “The scope of science is the world of nature, the reality that is observed, directly or indirectly, by our senses....Outside that world, science has no authority, no statements to make, no business whatsoever taking one position or another. Science has nothing decisive to say about values, whether economic, aesthetic, or moral; nothing to say about the meaning of life or its purposes; nothing to say about religious beliefs....Science is *methodologically* materialistic or, better, methodologically *naturalistic*” (Ayala, 2007, 172). On the other hand, I press further. I critically analyze scientific reasoning and, on occasion, locate just where the God question arises from within science itself. In *God in Cosmic History*, I point this out.

Finally, it is Ayala who makes the decisive point relevant to our entire discussion here: “The message has always been twofold: (1) evolution is good science and (2) there need not be contradiction between evolution and religious beliefs” (Ayala, 2007, 5). Ayala offers my conclusion: “Yes, one can believe in both evolution and God....evolution is not the enemy of religion but, rather, its friend” (Ayala, 2010, 82–83; see Peters, 2006; 2017a,b).

The Problem of Meaning in History

Ayala’s take on evolution and teleology helps us see more clearly the incoherencies within the Big History project. If the big historian plans to tell the story of nature’s history through the lenses of evolutionary science, then this requires the elimination of purpose, design, direction, *telos*, and even meaning. To provide meaning for students or other adherents to the vision of reality promulgated by the big historian, some extra-scientific resource must be added. This extra-scientific resource could be transparently incorporated. Or, it could be smuggled in. If the latter, then we end up

with an ideology that should be exposed.

Here is an example of ideological smuggling, of slipping meaning into an otherwise meaningless scientific framework. According to big historian Ken Gilbert, our human civilization today is the product of “an evolutionary force in nature analogous to the force of gravity” (Gilbert, 142). Today’s civilization has the meaning it does, says Gilbert, because it is the fruit of an evolutionary force.

Really? Physicists know only four forces: gravity, electromagnetism, the strong nuclear force, and the weak nuclear force. Biology adds no forces to these four. Evolution obeys the same four forces that non-living physical entities obey. So, like a crooked police officer planting incriminating evidence in a crime scene, Gilbert invents a new force--*an evolutionary force*—and then plants it in evolutionary history. Gilbert then finds it. With this planted evidence he now can perceive meaning already at work in pre-biotic physical and chemical evolution. And he moves it forward to apply to human cultural evolution. All things pre-human and human now find one convenient explanation: evolutionary teleology.

Gilbert’s enthusiasm for evolution might be tolerable; but his rewriting the science textbooks in order to ground all that happens in Big History in an imaginary evolutionary force is nothing but fiction. Or, more precisely, ideology. The otherwise nude ideology comes to us dressed as science doing history.

This ideology has a name: *scientism* (Roy, 2005). But Gilbert’s version of scientism is itself incoherent. Let me explain. When the scientific gaze turns science into scientism--that is, when science becomes a worldview or ideology--then, a trap-door drops us into nihilism. The nihilism built into scientism finds a dramatic voice in evolutionary biologist Jacques Monod: “The ancient covenant is in pieces: man at last knows that he is alone in the unfeeling immensity of the universe, out of which he has emerged only by chance. Neither his destiny nor his duty have been written down” (Monod, 167). If one tries to construct a worldview framed solely by science and then interpret Big History through the lenses of this worldview, nihilism is the logical consequence. So, if a big historian claims to be selling us meaning for modern civilization deriving from evolution, we should beware of misleading advertising.

My proposed Cosmic History incorporates scientific knowledge critically without smuggling in the ideology of scientism. Incorporation of extra-scientific inquiries such as philosophy, theology, and history of ideas provides the intellectual shopper with critical acumen. Big History advertising need not be believed until subjected to scrutiny.

Conclusion

The book, *God in Cosmic History*, tries to open the shutters blocking the windows of the modern worldview presupposed by those who work strictly within the halls of science, even the best of science. Science produces new knowledge, but it is a particular type of knowledge. Science is not omniscient. Science does not ask all the questions we human beings would like to ask. By washing our window with a solution of philosophy, theology, and the history of ideas we can see reality more broadly and ready ourselves to ask the God question.

Before advancing to the God question directly, I ask about the roles of subjectivity and meaning in history. Neither science nor a history restricted to science can honestly and coherently account for either of these. Both subjectivity and meaning underwent a leap in being, so to speak, during the Axial Age about twenty-five centuries ago in China, India, Mesopotamia, Israel, and Greece. Axial insights are still at work in contemporary consciousness, albeit in presuppositional form. Most importantly, our presupposed belief in a universal humanity replete with dignity inhering in each individual arose during the Axial Age as a result of being shocked by awareness of a transcendent reality which, in turn, redefined human beings as a class of equals over against the divine. Even those among us today who reject the God supposition usually retain belief in a universal humanity at the level of presupposition. Today's historian cannot look at the past with pure objectivity, because that very past is already at work in the historian's subjectivity. Lodged in the historian's subjectivity is the God question, regardless of whether it gets objectively asked.

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