

# *God in Cosmic History: Where Science & History Meet Religion*

by Ted Peters

Anselm Academic, Winona, Minnesota, 2017

and

## *New Cosmic Story: Inside Our Awakening Universe*

by John F. Haught

Yale University Press, New Haven, Connecticut, 2017

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These two books seek to establish “cosmic history” by adding religion to big history. There is much to be said in favor of the attempt. Karl Jaspers remains famous for his term: the axial age. The philosophies and religions that appeared in Persia, India, China and the Greco-Roman world from the 8th century BC to the time of Mohammed continue to hold the allegiance of billions of people. These are the axles around which many cultures turn.

It may be that we are in a second axial age. We live in a time of economic globalization, transcontinental air travel, and instantaneous digital communication. We also live in a world defined in many ways by science. These two books seek to integrate the traditions of the axial age with the narrative of our universe’s entire known past as substantiated by the sciences. This is an important and worthy effort. Thousands of years of human experience as expressed in the written texts and artistic works that we have inherited provide insights that deserve our serious reflection as we consider the meaning of scientific findings.

It is also an extraordinarily complicated and contentious effort. The principal value of these books is not that they are the last word on the topic; they are not. I will be quibbling with the authors a good deal below. But they set us off on a pilgrimage that calls on others to join as a path forward is gradually developed with many fits and starts through murky terrain.

### **Science’s Effects on History and Religion**

In *God in Cosmic History: Where Science & History Meet Religion*, Ted Peters makes an important contribution to our thinking about a crucial set of dialogues among science, history, and religion. His 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.

He reviews the evidence based narrative of the entire past within which the human experience is a most recent part. Traditional historians who limit their research to the great books of the past and other archival materials were not the ones who revolutionized our idea of the past. They restrained their analyses to the human experience over recent decades, centuries, and millennia.

The past of traditional historians was similar to the past of traditional Judeo-Christian religion. Traditional religious calendars were consistent with traditional history. The Jewish calendar starts with the creation of the world and finds us living now 5779 years later. The Christian calendar locates us now living 2018 years after Christ’s birth, with earlier events some number of years before Year 0. Dating events with years Before Christ, or B.C., was manageable if the time between Christ’s birth and the

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\*I appreciate that David Blanks suggested revisions of this review. Of course, I am solely responsible for any inaccuracies or other faults in it.

creation of the world was a few thousand years. Both religious traditions placed humans in a past of 6,000 years or so. Traditional history and Judeo-Christian religion gave much of humanity its sense of when it had lived in time. Reading archival materials and sacred texts gave no hint that time was much longer than had been thought.

It was the geologists first, and then biologists, astronomers, and others who found the evidence that blew up this sense of where we are in time. Their analyses of light, stones, bones, and blood established a past that reaches back millions and billions of years. Peters takes the scientific narrative of the past as a given. His view of religion has nothing to do with Young Earth Creationism. His view of history shares with big history the realization that the known past does not begin with the written record of humans some thousands of years ago, but with the origin of our known universe 13.82 billion years ago. He then goes through the major developments between the big bang and our own time: the origins of stars and galaxies, our solar system, Earth, life, the evolution of complex life forms, and eventually the evolution of hominins and humans. He accepts that human nature comes out of the fuller story of nature. The story of the entire past can be studied only with the help of the sciences. All of this is familiar territory for big historians, if not traditional ones.

### **Myth, Symbolism, and the First Axial Age Religions**

Peters follows his review of the evidence based narrative of the entire known past with a discussion of myth and symbolic thinking by hominins and humans before the development of writing. Exactly how consciousness and self-consciousness, language, purpose, and symbolic thought developed – or even exactly how to define them – is not yet clear to anyone. From the time around 3.8 billion years ago when the first prokaryote cell used its flagellum to move towards the light or away from danger to

a time just hundreds of thousands of years ago of coordinated human activity, when did consciousness and purpose develop first? When and why did religious thought and practice develop first? There is considerable evidence that our early ancestors thought about and practiced religion for tens of thousands of years before there were any sacred texts. They often buried their dead with grave goods, suggesting views of an after-life. Their artwork deep in caves from tens of thousands of years before any sacred texts were written suggest religious ritual. The human religious experience before any of the great current world religions were developed is part of the archaeological and historical record that big historians well recognize. The insights of our ancient forbearers continue to merit reflection.

Following this discussion, Peters then examines the two Biblical Genesis creation accounts. He usefully reminds us that the first creation account may have come from a Priestly tradition that was told to ancient Hebrews who were in captivity in Babylon in the sixth century BCE. This suggests to me a political reason for the creation account in Genesis. If the belief was that Yahweh or El, two names for the Hebrew god, was powerful and promised the Hebrews their land in Canaan, then why were they held in captivity in a far-away empire? The answer they seemed to have given themselves was that their God created all the world, controlled their captors, and used the Assyrians and Babylonians to punish themselves for their own wrongdoings. The Hebrews' captivity proved to themselves that their captivity was a sign of their god's power. Their account empowered themselves as captives. The lesson they drew was not to repeat the mistake of disobedience but in the future to scrupulously follow the law. When they wrote this into their religious texts, it was a case of the losers writing, if not history, then what would become very influential ideas. They used their best understandings of nature to express a deeply felt need for meaning and identity in a hostile setting. The creation account may not

now be useful as a literal account of exactly how nature emerged, but it is inspiring in the social and political message it developed in the face of hostile conditions. Even in the absence of evidence that the near-term future would be better, the authors or editors seemed to tenaciously hold on to their identity and their hope.

Peters then widens the discussion by covering the cosmologies of Daoism, Confucianism, Hinduism, Buddhism, ancient Greek philosophy, and Islam, in addition to Judaism and Christianity. It is useful in our globalized era to consider what we can draw from all of humanity's profound expressions and insights over the millennia. It is helpful not only to think about what various religious traditions meant to those who practiced them in the past, but also for what we might learn from them now. Peters contributes to our efforts to learn from all past cultures and to see what resonates now in our own time. The attempts to integrate science with what is still true about all religions that originated in the first axial period make our own time something of a second axial age.

Peters then reviews various models of God. He discusses a range of ideas about what or who God is or is not. We may still need a fuller discussion about what "God" means in our scientific and global age. We need the humility of the sciences in not saying anything too confidently about God when we really just don't know. There could be an arrogance in asserting that God is this or that way because we assert it. And there is reason to wonder if we know who God is because a group of men got together and agreed about a definition or if statements are found in texts. At least religion needs to find ways to discuss God now in a time when increasing numbers of people question claims about God based exclusively on evidence found in sacred texts and the writings of great thinkers. Once we stray from measurable evidence, religion finds many less interested in dialogue about God. Assertions about God's existence or nature by citing tradition or sacred

texts for authority do not serve dialogue. We are still searching for how we can best talk about creativity, what is beyond current evidence, love, being faithful, hope, the relationship between the universal and the personal, ethics, and other topics in ways that are consistent – or at least not inconsistent – with religious traditions and science.

Peters concludes his book with a discussion about what finding extraterrestrial life might mean for religious traditions, and how his topics may affect the sustainable common human good. How can we draw on our traditions to imagine what is not yet, but what we may be able to create, and then be able to say that it is good? There may be room for dialogue between cosmic historians and big historians within the idea of emergent complexity. Beginning with relatively simple plasma and then over time in some areas going through a process of increasingly complex relationships among parts within new units is a story of natural development. Nature shows us that not only are there new things under the sun, but that suns and stars were (and still are) themselves something new. Nature can move beyond what there had been evidence for beforehand. Can we say that nature transcends itself? Is transcendence part of nature? Is nature sometimes inherently creative? Can we find a process of increasingly complex unities among much that had not been unified? Does this process of self-organization or self-creation need an external author?

Do traditional historians say that God authored this or that event in history? Humans' beliefs may have a good deal to do at times with what motivates them to act, but does this show that a God was the author of this legislative bill or that judicial decision? Do we need a God to be involved in the Krebs cycle in order to find religious traditions of value? Are there better questions about God than if nature has an author?

### **From Big History to Cosmic History**

Throughout, Peters works to integrate science, a number of great religions and philosophies, and big history in what he calls a cosmic history. The

difference between big and cosmic history is that the latter considers what he calls the God Question and how this can improve the human condition. This is an important effort and Peters contributes much to the discussion among those who share an interest in religion, science, and history. A slogan of the Augustinians, who founded and continue to run the university where I work, is “Ever Ancient, Ever New.” Every age must reinterpret the traditions they inherit and express what they draw from the past in ways that resonate with contemporary culture and knowledge. Peters is seeking to do that here.

But his question about if God is the author or co-author is not a question that 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.

There are a few points to quibble with regarding how Peters’ defines cosmic history and then a larger issue to consider. First, the quibbles. Peters contends that cosmic history differs from big history in three ways: 1) cosmic history raises “the question of human meaning through remembering the past,” 2) it traces “the differentiation of human consciousness,” and 3) it raises the “question of God” (page 18). I see no difference between big and cosmic history in the first two cases. When I search for “meaning” in Christian, Brown, and Benjamin, (2014), I get 107 matches. On page 2, they write, “And mapping our world like this can give us a powerful sense of meaning.”<sup>1</sup> Books by secular scientists include such examples as *The Big Picture: On the Origins of Life, Meaning, and the Universe Itself* by Sean Carroll, or *The Meaning of Human Existence* by Edward O. Wilson. Meaning is not unique to religion. A quick bibliographic search on science and the evolution of {human} consciousness will also yield many results. Cosmic history has no monopoly on an interest in consciousness. Even in

1 Christian, David; Benjamin, Craig; Brown, Cynthia. *Big History: Between Nothing and Everything* (Page 2). McGraw-Hill Education, 2014.

the third case, big historians do indeed raise a God question. A search of “god” in Christian, Brown and Benjamin’s big history textbook yields 85 results; a search of “religion” yields 51 matches. The authors discuss god and religion quite a bit. Admittedly, they do not ask the same God question that Peters does. Big historians ask when, where, and why in history do people leave evidence of thinking about gods and religion. Some big historians are interested in religion as an emergent cultural phenomenon, but they are not very interested in questions about God. It is true that they do not begin by assuming that there is a God or ask if God is the author of history. But asking if God is the author of cosmic history is not the only way to raise a God question. Big historians often do fall into the atheist or agnostic camps. 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.

There is the old problem of the “God of the gaps” argument, or using God to explain whatever we do not yet understand. For example, Peters refers to an argument on page 156 that goes like this:

Whatever begins to exist has a cause.

The universe began to exist.

Therefore, the universe has a cause.

This cause is God.

Scientists who do not yet know the cause of the big bang usually leave it with that they do not yet know. They don’t give what they do not know a name, like mystery. They just say they do not know yet. (Admittedly, there is some talk about a theory of everything, which is a very long way off and probably always will be). Lawrence M. Krauss, in his book *A Universe from Nothing: Why There Is Something Rather than Nothing*, argues that there is indeed a scientific explanation for the origins of everything. If it is God who caused something in nature, many scientists and big historians would want

to know the evidence for this claim beyond asserting that it is so. How do we know that the God who transcends nature forms it? Is the question central or even pertinent to what religion can contribute in our time?

### Authoring Reality

The question about if God is the author of cosmic history does intrigue me. It sees natural development essentially as a narrative. Nature is a story. It is a little bit like the idea in Max Tegmark's book, *Our Mathematical Universe: My Quest for the Ultimate Nature of Reality*. Tegmark finds ultimate reality to be about computing information or equations; Peters' Ultimate Reality is about authoring nature. Is the universe a story or an equation?

Peters' idea of God authoring nature may have come from the Genesis story in which God speaks and that brings nature into existence. "God said, "Let there be light," and there was light." Nature is the embodiment of God's words. It is the spoken word here though, not the written word. To be consistent with Genesis, perhaps the question should be if God is the Speaker of Ultimate Reality. I remember hearing a rabbi saying once that a good reason to study Hebrew is that this was the language God used to bring the universe into existence by speaking.

What strikes me as important about the idea of God's (written or spoken) words being the source of reality is that whoever first spoke or wrote the Genesis story was impressed by how imagination and discussion could then lead to planning and building something new. There were no cities, and then people talked and worked together to carry out plans to build them. Maybe the context for Genesis is that people said, let there be art, architecture, agriculture, and other things – and then they existed. Language is indeed powerful. Words can turn sticks and stones into civilizations and fearsome armies. That is worthy of marvel, awe, and fear.

Still, I do not see a way to find evidence that will support dialogue in our era in ways that will

answer the question if God is the author or at least co-author of history – or even what "ultimate reality" is. How do we know when we have moved from reality to its ultimate version? We seek our best approximations of reality through analysis of evidence and our best conceptual systems. 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. The reluctance by some to even name G-d is based on the understanding that to name is an attempt to control, and that G-d is beyond our full understanding or control. Of course in practice, while many in religion and science are often wrong in their claims, they are seldom in doubt.

### Unanswered questions

Does the value of religion rest on whether or not there is a transcendent person who sets stars in the sky, puts together every molecule, or causes every mutation? What can we learn from our religious traditions that is not inconsistent with what else we now know? What can we draw from them that resonates in our own time? What in them should be left behind as of historical interest but not of current instructive value? How can we avoid the hubris of thinking that only our own age exhibits brilliance and insight? What can we say that satisfies us as being as true as we can know it now, expecting that it may well change as we learn more? How can we integrate what is both ancient and currently instructive? How can all this lead to us imagining, planning for, and helping to create a future that is sustainable, empathic, caring, inclusive, and good?

Ted Peters adds to a discussion that is taking place along our current pilgrimage, but he would be the first to say that is not the final word about ultimate

reality. It does not answer the question about God, or maybe even ask it well enough. But his effort to struggle with these huge issues, and our willingness to listen to him and then try to respond as best as we can, may eventually make our era a great second axial one, if we don't cause our own extinction first.

***New Cosmic Story: Inside Our Awakening Universe*** by John F. Haught is a sophisticated book. John Farrell, who contributes on science and technology to Forbes magazine, names it as his book of the year.<sup>2</sup> In it, the author explores a series of topics by drawing on great religious traditions to interpret contemporary, scientifically-substantiated narratives. He does not merely repeat specific stories or propositions from earlier historical periods, but recasts discussions about rightness, transformation, interiority and subjectivity, transcendence, symbolism, purpose, obligation, happiness, and prayerfulness. Clearly, he is deeply influenced by his Roman Catholic education, but he strives to incorporate other Abrahamic and non-Abrahamic religions and philosophies. And he takes for granted the contemporary, scientifically substantiated narrative of universal development. As with Peters, Haught is no young Earth creationist. He states that “religion all over the world needs now to come to grips with the new scientific understanding of the natural world.” (Kindle Locations 415-416). In this, he sets off on the right path.

Also, like with Peters, Haught finds big history accurate as far as it goes, but seriously lacking by leaving the “interiority” of religion out of the account. Scientism and big history examine the external behaviors of religion, but not the “interior” of the universal narrative, or even what a universal interior would be. They will analyze why people have expressed religious beliefs through art, architecture, and sacred texts, but do not see anything

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<sup>2</sup> John Farrell, “[Book Of The Year: The New Cosmic Story](https://www.forbes.com/sites/johnfarrell/2017/12/31/book-of-the-year-the-new-cosmic-story/#420cbe8f478b).” *Forbes*, December 31, 2017, <https://www.forbes.com/sites/johnfarrell/2017/12/31/book-of-the-year-the-new-cosmic-story/#420cbe8f478b>, last accessed, December 31, 2017.

inherently religious within the progression from the big bang through today and into the future. This failure has caused, Haught argues, some serious effects, discussed below.

Haught begins his book by contrasting cosmic history with big history. He accepts how “over the past two centuries scientists have found out that the universe is a story still being told. During the past hundred years they have learned that our Big Bang universe began billions of years before life appeared and even more billions before humans arrived on planet Earth. New scientific awareness of the long cosmic preamble to human history has inspired attempts recently to connect the relatively short span of our own existence to the larger cosmic epic. Sometimes these efforts are referred to as Big History. Big History seeks, as best it can, to tell the story of everything that has taken place in the past, including what was going on in the universe before *Homo sapiens* arrived.”

He finds that big history is pretty thin gruel. It takes the already well known human story and staples it onto earlier cosmological and biological chapters, which do no more than repeat what is already in popular science books. There is no interlacing of the various periods. Most importantly, there is no account of the universe’s “interior” or inside story. By restricting itself to scientific evidence, it fails to observe that the universe “includes subjects, hidden centers of experience whose significance cannot be measured by science or captured by purely historical reporting.” He continues, “Startlingly absent from Big History so far, for example, is a sense of how religion fits into the cosmic story. This book is an attempt to address this omission.” Haught will tell a narrative that “tells the whole cosmic story, inside as well as outside.”

That whole story highlights “the interior striving of life that reaches the summit of its intensity in humanity’s spiritual adventures. . . . {The} emergence of religious subjectivity, though hidden, is just as much part of the universe as is the formation

of atoms and galaxies.” (Kindle Locations 41-58). Unlike big history, cosmic history tells a story about the “dawning of rightness. . . .” This dawning “was not just a set of interior human intuitions but also a great event in the history of the universe” (Kindle Locations 241-242).

### **Archaeonomy, Analogic, and Anticipatory**

The book is organized by three main viewpoints: archaeonomic, analogical, and anticipatory. The archaeonomic is a narrowly scientific viewpoint, into which big history is said to fall. It is interested only “in outward, measurable events and qualities, it passes over the inside story” (Kindle Locations 556-557). There is nothing inherently meaningful nor purposeful in the universe as a whole, in this view. Religion is a human-made construct that is not rooted in the long universal pre-human past. Scientific naturalism sees matter and energy as all that exists. It understands the more complex units by their elemental parts; it is reductionist. Haught writes that David “Christian fails to look beneath the outward flow of events to the momentous drama going on inside” (Kindle Locations 1174-1175). Haught contends that “archaeonomic assumptions govern most versions of Big History, including its understanding of religion” (Kindle Locations 738-739).

The analogic viewpoint is a common religious viewpoint. It sees the changing, imperfect, material world as analogous to an eternal, invisible, and more real world. Haught sees this viewpoint as having been nurtured by his own tradition of Roman Catholicism.

He does not explore the Gnostic viewpoint, but that too emphasized how we each have a glimmering spark of the real world in us. Knowledge of the real and good world is hidden from most of us, who are usually blinded by our imperfect, evil material world created by a malevolent deity. For the Gnostics, if we can strip away the masks of the evil material world and gain a true knowledge of the real and good

world, we can escape materialism and evil. When we die, that eternal spark, the unmeasurable soul, can go to live with the eternal good God.

Gnosticism aside, what Haught emphasizes is how the analogic viewpoint seeks to awaken us to the whole world; science only to the material world. Haught sees the archaeonomic as dangerously lacking insight into the “inside story” of the universe. Haught respects the analogic viewpoint, but finds it far too binary. There are not two separate worlds for Haught. He does not see terrestrial battles on Earth mirroring metaphysical battles in Heaven. He seeks a unity that holds diversity within it.

Haught argues for “anticipation” as the best way to read the cosmic story. Time is real and not merely a school for eternity. When we look back to the past, we see the emergence of what is more good, true, beautiful over time. As we look to the future, we anticipate and actively wait for the fuller emergence of rightness, including right knowledge (truth). The universe has in the past awakened to life; this took place on Earth about 3.8 billion years ago and perhaps on other planets as well. Through a very long process of evolution, which Haught accepts, there is not only a development of highly complex brains that process information and regulate biological functions. The universe brings forth consciousness and the mind, which permits at least humans to become God-conscious. The universe continues to awaken to greater forms of rightness. This is not just a human construct; it is rooted in the nature of the universe, Haught asserts. Our anticipating it, our waiting for it, our praying for it, all participate in the emergence of greater universal rightness.

This is the interior of the story that the scientific method cannot discover. Scientific measurement cannot discover the interior experience of persons nor of the universe. It only can measure the external, objective behaviors of people and the universe. The religious person can sense the interior story not only of a person, but of the universe. The dawn

of religion is “a new stage in a gradual cosmic awakening. It looks toward a universal religious meaning arising obscurely on the future horizon of cosmic becoming” (Kindle Locations 753-754). “Religion in this perspective is the universe in a whole new era of awakening” (Kindle Location 766). “By the “inside story,” then, I have been referring to all the events that occur in the hidden world of subjectivity. It includes sensations, moods, cognitions, desires, enjoyments, and—in the case of humans—moral and religious awareness, aesthetic sensitivity, and the longing for understanding and truth” (Kindle Locations 1187-1188). Even before humans, the universe has an interior story including “sensations, moods, cognitions, desires, enjoyments.” The universe is a community of subjects with interior stories, not merely lifeless and mindless objects without purpose or striving. In human religious consciousness, the universe is able to reflect on itself. The dawn of religion on Earth somehow has significance for the universe, presumably including for stars in galaxies billions of light years away.

At best, “the virtual elimination of subjectivity from the cosmos by modern and contemporary thought renders most contemporary versions of Big History intolerably thin” (Kindle Locations 1305-1306). But thinness is the least of its problems. The objectification of the universe that the archaeonomic and big history viewpoints have fostered have had profoundly insidious effects.

“{The} explicit denial of subjectivity has contributed at least indirectly, I believe, to the formation of intellectual and cultural beliefs that have in turn facilitated the mass killings of the twentieth century. It is still impossible for most of us to get our minds around the specter of many millions of people being slaughtered during this period as inconvenient objects standing in the way of the implementation of the economic and engineering visions of a handful of men such as Hitler, Stalin, Mao, and Pol Pot” (Kindle Locations 1272-1275).

When there are accusations of others being the

cause of Nazism, Stalinism, and genocide, you know that discussions are not going well. It is hard to put dialogue back on track after such a train wreck. It may be that Haught read one too many criticism of religious wars and decided to respond in kind.

Once we do clear that wreckage away, we can get back to Haught’s anticipation. We can read his views that human art is an awakening of the universal striving towards beauty. The human intellect is an awakening of universal striving towards mindfulness and right knowledge. Human ethical thinking is an awakening of the universal striving toward the good and obligation. After billions of years of development, “Thousands of years ago it {the universe} embarked on a process of transformation that eventually gave rise to religion, and along with it a sense of the reality of rightness” (Kindle Locations 967-968). Universal transformations are a form of religious conversions or awakenings. The religious developments among people within the past thousands of years is a significant universal awakening, Haught asserts.

### **Places for Dialogue**

Haught fails to see where in big history there may be a place for dialogue with a view of anticipation. He argues that the archaeonomic viewpoint, including big history, “denies, in effect, that anything genuinely new can ever happen in the cosmic story” (Kindle Locations 1012-1013). He continues that in the archaeonomic and big history viewpoints, “there is no room in this metaphysics for the universe ever to become more than what it has already been. Real cosmic transformation in the sense of bringing about something dramatically new and remarkable is therefore altogether impossible” (Kindle Locations 1041-1043).

He does recognize finally that “We live at a time in intellectual history, it is true, when physics itself has begun to vanquish materialist and deterministic concepts of nature, when the notion of emergence is struggling to replace mechanism, when the

analytical illusion is giving way to a more ecological understanding of the cosmos, and when time is beginning to be taken, once again, as real” (Kindle Locations 3120-3122). What he never recognizes is that this is a central part of big history, which emphasizes emergent complexity with new levels of complexity exhibiting new properties. The whole thrust of big history is that it starts with an account of simplicity and then presents what becomes more and more complex.

With the story of human collective learning, it emphasizes how human agency has transformed the Earth. Humans imagine, plan, and build. In this, they not only anticipate and wait, they create new realities. Not all of these new realities have been good, to be sure, but many have been. Medical science and the welfare state’s public policy often reject evolution’s “wrongness” that most mutations should just be permitted to cause death and misery. Instead, humans often seek to help those with various disabilities to survive and thrive. Many humans try not to emulate some animals in pushing smaller or deformed youngsters out of the nest to a fatal fate. People can search for this increased rightness through religious or secular motivations. The big history theme of emergent complexity is a place for dialogue with anticipation.

Similarly, there may even be a place for dialogue regarding the idea of transcendence. The idea of anticipation tries to avoid the analogic view that there is a wholly separate, metaphysical, eternal world that is distinct from, but somehow interacts with this changing, imperfect, even evil material world. Big history’s theme of emergent complexity suggests that natural processes of self-organization have often moved what exists in nature to a new level of complexity. First there was only protons and neutrons; then there were atoms. There were no stars and then there were. There were no terrestrial planets and then there were. There was no life and then there was. Can we say that nature has often transcended itself? Does not the experience of the

past suggest that there may again be the formation of new levels of complexity that do not now currently exist? This process is not caused by outside forces, but is part of how the universe has worked for billions of years.

In general, religious people need to find places for dialogue with science. Ignoring where there can be dialogue, or condemning it as the cause of genocide, fails to enrich the understandings of each set of discussants.

### **Awakening to Analogic Viewpoint?**

Haught’s view of anticipation intends to move beyond the analogic viewpoint without falling into pantheism. He does not want to view the universe as an imperfect mirror or school for eternity. He wants to avoid the binary thinking of Heaven and Earth, of this world and the next. In life and in death, he sees us as part of a universal emergence towards rightness. Still, he does not want to deify nature, or suggest that God-consciousness is merely the love of nature. But is there in this a hold-over from the analogic viewpoint? If the universe is awakening, is it awakening to something that is already there? Is it being led by a telos, a purpose, a direction for the future? Big history emphasizes the past; cosmic history emphasizes the future to which we and the rest of the universe are being awakened.

Haught insists that the process of being awakened to rightness is inherent in the universe. It is not just human imagination. Human imagination, waiting, and anticipation are the outcomes of universal emergence. To a degree, I agree. I have argued myself that human art is the self-conscious creativity that emerges from nature’s emergent complexity. But this is no uniform process. The future, like the present and the past, seems often to be right, wrong, or indifferent. First of all, will it be right or wrong as we anticipate the Milky Way and the Andromeda galaxy running into each other in the future? What is the more right way of galaxy formation? Species evolve and go extinct. The death of the dinosaurs

opened up the way for mammals and humans to thrive. The death of a huge star 5 billion years ago made the formation of the Earth possible. Big history is an account not just of death, but of death and life and rebirth and death and . . . . Is it wrong that trilobites are no longer with us? Would the universe be at a loss if humans and human religions no longer survived? It is hard to see how the universe is striving only for rightness, or striving for anything in particular.

The long term future of Earth is indeed death. Five billion years from now, once the sun becomes a Red Giant, Earth will be a cinder. One view of the long-term future that we can anticipate is the big chill, or the dissolution of the universe and the victory of entropy. That is not big history's fault, it is just our best current understanding of where the universe is ultimately headed. Will other universes emerge? Have they already? Maybe the multiverse is teaming with universes the way our universe is teaming with galaxies and stars. Maybe science will find evidence for views that the multiverse is teaming with life. What I anticipate is what science will discover about these possibilities in the future.

### God-Consciousness

Can there be dialogue between religion and science about God-consciousness? Probably not if God is said to be a spirit who flies around creating stars and humans and such, as God does in much popular consciousness. If God-consciousness is an awareness that we have not made ourselves, but that forces that far predate us led to our having arms and legs and brains, then there is place for dialogue. If we are awed by the immensity of the universe and the complexity of life, if we strive to leave our world a bit better than we found it, if we seek to help create even more complex and sustainable relationships, if we are grateful that we can even try – then there might be common ground for dialogue.

The root word of religion may derive from Indo-European *ligājō* and the Latin word *religare*, both

of which mean to bind together. It may be that the natural sciences examine in part how atoms and amino acids and cells are bound together in increasingly complex relationships. The social sciences, humanities, arts, and religious imagination may express the most complex ways in which humans bind themselves together in larger and sustainable communities. Complex relationships did emerge in a few places out of simpler units.

Most of the time, there was no emergence. Vast clouds of hydrogen that are billions of years old still float in space, largely unchanged since the big bang. Prokaryote cells that are no more complex than they were 4 billion years ago still thrive on Earth. The universe has led to great complexity in a few places; most of the time it does not become more complex. But history is made possible by where there is emergent complexity; hope can be found from the imagination and anticipation that can create new properties within even more complex relationships than what we see now.

Perhaps science and religion are both best when they remain humble. Scientists should avoid making claims about a theory of everything, admit that there is just an awful lot that they do not yet know, and accept that a full understanding of reality will probably always be beyond our grasp. Religious people should be careful about naming and thereby trying to control what they do not fully understand. In the spirit of these two books by Peters and Haught, we need to continue to draw from the brilliance of our human cultural and religious traditions as we reflect on the evidence that the sciences have given us to substantiate a narrative of universal development. Both authors deserve our praise and gratitude for inviting us into struggling with these great topics.



## **Big History and Cosmic History:**

### **A Response to Lowell Gustafson**

by Ted Peters

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Lowell Gustafson likes humility. He admonishes both scientists chasing a Theory of Everything (TOE) and theologians chasing God's essence to remain humble, to avoid the hubris evinced by claiming to know too much. This is sound advice. Humility should adorn science, theology, Big History, and Cosmic History alike.

Gustafson exudes the very humility he advises while reviewing John Haught's new book, *New Cosmic Story: Inside Our Awakening Universe* (Yale 2017) and my new work, *God in Cosmic History: Where Science and History Meet Religion* (Anselm Academic 2017). Both Haught and I celebrate the achievements of Big History while pleading for something to be added, namely, greater attention to both subjectivity and transcendence. Gustafson accurately reports our proposed amendments to the Big History constitution, while adding that Big History as now constituted already makes satisfactory provision for our proposed amendments.

As an author, I could not ask for a more conscientious review of my work than that offered by Gustafson. He is careful to be accurate and judicious in his criticisms, what he calls "quibbles." As a member of the IBHA, I am proud that Gustafson is our current president.

Here is one of Gustafson's quibbles: he questions my bold assertion that Big History as presently constituted falls short of handling adequately subjectivity, transcendence, and meaning. To the contrary, Gustafson contends vigorously, big historians frequently use the term 'meaning' in their works. Meaning is not unique to religion, he argues. Cosmic history has no monopoly on an interest in

consciousness, or what Haught calls 'interiority'. And, of course, religion as a phenomenon is chronicled by some big historians. So, why do Peters and Haught have a problem here? Why can't Peters and Haught simply say "thank you" to what big historians have already done?

The problem is primarily methodological. Even though Haught and I can celebrate the nesting of World History into Natural History to create Big History, the problem is that Big History is now viewed through lenses provided by science and science alone. Specifically, it is evolutionary science (augmented sometimes by the sociobiology of E.O. Wilson which is virtually a pseudo-science) that sets the gauge for what gets filtered. Whether evolutionary biology or any similar science, such a field presupposes methodological naturalism which filters out everything that does not lead to a material explanation. Such a method is characterized by objectivity, externality, non-teleology, and meaninglessness. Phenomena systematically excluded as explanatory are subjectivity, transcendence, and meaning.

Methodological naturalism within scientific research is understandable and appropriate. This methodological assumption has demonstrated the capacity for producing new and valuable knowledge for three centuries now. But, one must ask, could methodological naturalism provide explanatory insight into history, especially when history to be history cannot avoid the meaning question? For the big historian to answer in the affirmative would lead to either self-contradiction or ideology. Whatever a big historian says about meaning is either arbitrary or ideological; it cannot arise naturally out of its research method. What needs to be made clear is this: no historical understanding is reducible to the methodological naturalism already embraced by the natural scientists. In short, the method of big historians is incoherent.

Yes, indeed, I ask whether God might be the author or co-author of Big History, and this asking catapults

my approach into Cosmic History. In Greco-Roman times, the cosmos represented the known world, the scope of mundane reality. In pre-axial societies, gods and goddesses along with other supra-human forces were thought to be intra-cosmic. During the axial breakthrough two and a half millennia ago, however, reality became bifurcated into the mundane and the transcendent. Divinity became thought of as supra-cosmic, infinite, and eternal. Lodged in transcendent and eternal reality with God, our ancestors thought, were the ideals which still matter to us today in our post-religious era, namely, beauty, truth, and justice. Justice is especially significant for us in modern culture, because it provides the transcendent beacon shining a light to guide us from the darkness of injustice to a more just future.

The only place to see the effects of divine transcendence is in the human soul, in subjectivity or interiority. God cannot be located among the things of the natural world, nor can God's actions be numbered among the physical causes which explain natural events. To see God requires that we see within the depths of ourselves; it requires insight or in-sight, so to speak. God and the soul come together in a single package. Insofar as big historians rely upon the worldview implied by methodological naturalism, both God and the soul become imperceptible. To sharpen our perceptions, Haught and I in similar though not identical ways advocate moving from Big History to Cosmic History.



## **The New Cosmic Story: A Response to Lowell Gustafson**

by  
**John F. Haught**

John F. Haught  
Georgetown University

I want to thank Lowell Gustafson for his review and the spirit of dialogue and honest intellectual exchange underlying it. We need this kind of calm and urbane discussion more than ever today. In general his summary of my book is fair and for the most part accurate. I will just say a few words here about several of his “quibbles.”

1. Evidence. When he complains that neither Ted Peters nor I provide what he calls “evidence” for our understanding of cosmic history, Gustafson is apparently privileging the kind of physically available information on which science is based. Neither one of us thinks that the only kind of evidence that counts is the modern scientific variety. Depending upon one's worldview, the kind of warrants needed for a particular set of convictions may differ considerably as we migrate mentally from one vision of reality to another. Moreover, there can be no “objective” evidence that scientific evidence is the only reliable kind, especially when it comes to knowledge of interiority. To privilege the subject-ignoring, objectifying method of knowing characteristic of modern science (and idealized by most Big History) is ironically a matter of subjective “faith,” not the result of any deliberate process of objective scientific investigation. Consequently, to expect confirmation of such a momentous idea as that of divine subjectivity by way of objectifying scientific inquiry is by definition misdirected. For this reason I think we need to examine the possibility that there are other ways of truthfully knowing reality than that of the exclusively objectifying approach taken by much Big History. This is especially true if there is an “inside story” of the universe.

2. Emergence. The reviewer asserts that proponents of Big History are no less aware of the fact of emergent novelty in the cosmic story than I am. In fact, however, I do not deny that Big Historians are aware of emergent novelty. Almost everybody is. My point is that a materialist or what I call “archaeonomic” understanding of the universe cannot make emergence fully intelligible. I believe that the materialist reduction of complexity to elemental simplicity amounts to a de facto denial of true novelty. I argue that the existence of the human mind is our best indication that a materialist worldview is incapable of making sense of emergence. The recent arrival of the human mind is perhaps the supreme example of emergent novelty in cosmic history, but we cannot appropriately use our minds without spontaneously trusting in and valuing their capacity for understanding and truth. I want a worldview that can justify this valuation and trust in our cognitive performances, and scientific materialism cannot do so. Think, for example, of the implicit value Lowell Gustafson gives to his own mind in writing his fine review. I want a vision of reality that justifies that trust, and I do not find it in the materialist assumptions underlying most Big History, but instead in the “anticipatory” reading of the universe that I lay out in *The New Cosmic Story*.

3. Subjectivity. I argue in the book that the failure to acknowledge the reality of subjectivity is morally dangerous and culturally devastating. I do not argue that modern scientific secularism is responsible for all the mass killings of the 20th century, since things are obviously more complex than that. Furthermore, I take pains in the book to point out how much religion has been tied up with the persisting darkness of evil in our awakening universe. Nevertheless, I consider morally problematic any worldview that overlooks the fact of interiority or subjectivity, that turns everything real into something that can be objectified, and that hence makes no ontological space for personal subjects. In that sense I am very

critical of the modern materialist, archaeonomic understanding of the universe since it provides an intellectual setting that can too easily allow political powers to reduce subjects, both human and nonhuman, to nonentities.

My argument with Big History is that, by privileging the objectifying method of knowing, it tends to perpetuate a problematic ignoring of interiority and subjectivity. What I seek instead is a scientifically literate worldview that still makes room for an inside story of the universe to go along with the outside version. Only such a universe can provide full space for personal existence, value—and genuine hope.