3. The Epic of Evolution: A Cosmic Timeline

"Tell me a creation story more wondrous than the miracle of a living cell forged from the residue of an exploding star! Tell me a story of transformation more magical than that of a fish hauling out onto land and becoming amphibian, or a reptile taking to the sky and becoming bird, or a mammal slipping back into the sea and becoming whale! Surely this science-based culture, of all cultures, can find meaning and cause for celebration in its very own cosmic creation story."

~ Connie Barlow

Evidential Mysticism and the Future of Earth

"We are talking only to ourselves. We are not talking to the rivers. We are not listening to the wind and the climate. Most of the disasters that are happening now are a consequence of that spiritual ‘autism’."

~ Thomas Berry

I am an unabashed evidential mystic – a sacred realist, a religious naturalist. Reality is my God and evidence is my scripture. Big History is my creation story and ecology is my theology. Integrity is my spirituality and doing whatever I can to foster a just and healthy future for the full community of life is my mission.

Because mysticism entails a profound communion with Ultimacy, great and small, the capacity to experience such communion is unquestionably enhanced by the storied fruit of the scientific quest. The late Catholic "geologist,” Thomas Berry, inspired many (myself included) to learn the Universe story, the Earth story, and the patterns of human cultural evolution on a global scale. Together these stories constitute the Epic of Evolution – what academia now calls the interdisciplinary study of Big History. Thomas encouraged us to go beyond learning the story and to develop our own ways of bringing this Great Story to others. Toward what end? Personal wholeness, of course! But even more important for these times is to cultivate the motivation, the humility, and the breadth of perspective to enable each of us to capably participate in what Thomas called the Great Work of our time – that is, the work of fostering a mutually-enhancing relationship between humanity and the larger body of life upon which we depend.

We desperately need to learn and to tell our shared story of 13.8 billion years of divine creativity. We need to embrace this sacred story, to allow our
identities and sense of mission to be shaped by this story, because without it, religion is not nearly enough and the conflict between faith and reason will never end.

**The Evidential Reformation**

Religion is undergoing a massive shift in perspective. It is a shift at least as wrenching as the Copernican revolution, which required humanity to bid farewell to an Earth-centered understanding of our place in the cosmos. The religious revolution on the horizon today might well be called the “Evidential Reformation.” We humbly shift away from a human-centric, ethnocentric, and shortsighted view of what is important. At the same time, we expand our very identities to encompass the immense journey of life made known by the full range of sciences. In so doing, we all become elders of a sort, instinctively willing to do whatever it takes to pass on a world of health and opportunities no lesser than the one into which we were born.

At the heart of this theological and spiritual transformation is a profound shift in where we find our most trustworthy guidance regarding two fundamental orientations: *How things are* (that is, *What is real?*) and *Which things matter* (that is, *What is important?*). The shift thus centers on both facts and values – and that means the shift is ultimately about everything.

The good news – the really good news, in my opinion – is that tens of millions of us around the world, secular and religious alike, agree that living in right relationship with reality in the 21st century requires us to value collectively scientific, historic, and cross-cultural insights. The more we move in this direction together, the less our inherited scriptures will continue to divide us. Religious practices and metaphysical beliefs that arose in particular regions of the world and in response to specific challenges in no way need vanish to make room for a larger and more compelling allegiance. Religions can and do (and must) evolve. All we need is to acknowledge that the greatest challenges facing Earthlings today, and the tools to work through those challenges, could not have been fully known by any religious prophet or sage of a bygone era – not Moses, not Jesus, not Muhammad, not Gautama, not Lao Tzu. Worse, we blaspheme the legacies of those leaders by freezing their insights into the pages of written text (a wrong I frame as a form of idolatry: “idolatry of the written word”).

This is why an evidential worldview has become crucial. We now know that evolutionary and ecological processes are at the root of life and human culture. To disregard, to dishonor, these processes through our own determined ignorance and cultural/religious self-focus is an evil that will bring untold
suffering to countless generations of our own kind and all our relations. We must denounce such a legacy. Ours is thus a call to action – a call to sacred activism. Twenty years ago, Carl Sagan both chided and encouraged us in this way:

“How is it that hardly any major religion has looked at science and concluded, ‘This is better than we thought! The universe is much bigger than our prophets said, grander, more subtle, more elegant. God must be even greater than we dreamed.’ A religion, old or new, that stressed the magnificence of the universe as revealed by modern science might be able to draw forth reserves of reverence and awe hardly tapped by the conventional faiths. Sooner or later, such a religion will emerge.”

I submit that the “religion” of which Sagan spoke has been emerging for decades, largely unnoticed, at the nexus of science, inspiration, and sustainability. Rather than manifesting as a separate and competing doctrine, it is showing up as a meta-religious perspective (again, an insight discerned by Thomas Berry). Such an evidence-based emergent can nourish any secular or religious worldview that has moved past fundamentalist allegiances to the literal word of ancient texts.

A foundation of this meta-religious perspective is the celebration of Big History as humanity’s only globally produced, fully inclusive, and evidence-based creation story.

**Big History as the New Genesis**

“The universe is a single reality – one long, sweeping spectacular process of interconnected events. The universe is not a place where evolution happens; it is evolution happening. It is not a stage on which dramas unfold; it is the unfolding drama itself. If ever there were a candidate for a universal story, it must be this story of cosmic evolution… This story shows us in the deepest possible sense that we are all sisters and brothers – fashioned from the same stellar dust, energized by the same star, nourished by the same planet, endowed with the same genetic code, and threatened by the same evils. This story, more than any other, humbles us before the magnitude and complexity of creation. Like no other story it bewilders us with the improbability of our existence, astonishes us with the interdependence of all things, and makes us feel grateful for the lives we have. And not the least of all, it inspires us to express our gratitude to the past by accepting a solemn and collective responsibility for the future.”

~ Loyal Rue

Big History is the 13.8-billion-year, science-based tale of cosmic genesis – from the formation of galaxies and the origin of life to the development of consciousness and culture, and onward to the emergence of ever-widening circles of care and concern. Through Big History we learn that we are made of
stardust and that we’re related to everything. Indeed, we can think of our own species as the way the Universe is awakening to the magnificence of its epic journey – a tale of ebbs and flows of complexity and increasing interdependence. Big History helps us appreciate the role of science in eliciting global wisdom and the role of religion in fostering cooperation at scales larger than our biological instincts could support.

Big History goes by many names. Harvard biologist Edward O. Wilson referred to it as “the epic of evolution.” Thomas Berry and Brian Swimme celebrated the evolutionary journey in a 1992 book titled The Universe Story. The academic discipline of Big History began in the late 1980s when historian David Christian taught a survey course of this title to college students in Australia. Now, thanks to Bill Gates’ enthusiasm (the Big History Project), high school students around the world are learning the story that encompasses all stories and that draws upon all the sciences and humanities.

Big History (by whatever name) is the new Genesis. Ever updated, ever correctable, this universal creation myth – our common creation story – is the source of new facts about our long and storied existence, facts our ancestors could not possibly have discerned. Interpreted meaningfully and ecologically, Big History promotes a profound sense of kinship and fills us with awe and reverence. We call upon Big History to ignite our zeal to confront the challenges of our times. We easily discern lessons that add zest to the values we already deem vital and vitalizing.

What matters most in how we use this new origin story is what has always mattered in the framing and tweaking of a people’s sense of inheritance and kinship: how well that story leads us toward living in right relationship to reality – that is, in more intimate communion with, and subservience to, Godde-Nature-Ultimacy.

**Evidence as Modern-Day Scripture**

The most profound insight in the history of humankind is that we should seek to live in accord with reality. Indeed, living in harmony with reality may be accepted as a formal definition of wisdom. If we live at odds with reality (foolishly), we will be doomed, but if we live in proper relationship with reality (wisely), we shall be saved. Humans everywhere, and at all times, have had at least a tacit understanding of this fundamental principle.

Increasingly, the generations alive today (the devout included) relate to scientific, historic, and cross-cultural evidence as more authoritative than the dictates of an all-male ecclesiastical body or a literalist reading of Scripture. An example of this is a 2011 Christianity Today cover story, “The Search for the
Historical Adam,” which noted that a growing number of evangelical leaders are shedding a traditional reading of Genesis because of what has been revealed through genetic evidence (itself the fruit of science). In the words of two evangelical science luminaries, Francis Collins and Karl Giberson, “Literalist readings of Genesis imply that God specifically created Adam and Eve, and that all humans are descended from these original parents. Such readings, unfortunately, do not fit the evidence.”

Just as Augustine reinterpreted Christianity in light of Plato in the 4th century, and Aquinas integrated Aristotle in the 13th, today there are dozens of theologians across the spectrum re-envisioning the Christian faith. Whose ideas are they integrating now? Darwin, Einstein, Hubble, Wilson, Catton, and all those who have corrected, and continually contribute to, an evidence-based understanding of biological, cosmic, and cultural evolution.

What we now know (not merely believe) about the challenges of our inherited animal instincts and the vital, creative role of death at all levels of the cosmos is what many find most helpful and also the least disputable.

**Humans Have Instincts; Snakes Don’t Talk**

Within us are instincts shaped by millions of years of evolution. Alas, those compelling drives are now dangerously out of sync with modern times. To be blunt, the very same instincts that enabled our ancestors to survive and reproduce for thousands and millions of years now make many of us fat, some of us addicted, and most of us frivolous in how we use resources and time. Instincts can hardly be faulted, however. Even many of the poor within our species’ wealthiest nations have access to “supernormal stimuli” of a sort and strength that none of our ancestors had to face. Eons of evolution never had to sort through and select against those unhealthy enticements. What are the new and novel allurements that have emerged only in modern times? Certainly processed and abundant foods, feel-good drugs and distilled alcohol, internet porn, romance novels, mind-numbing television, and addictive gaming, along with countless temptations for surrounding ourselves with too much stuff and committing our time to trivial and busy-making pursuits. What this means is that, without an evolutionary grasp of why our instincts and emotions are the way they are, it isn’t just difficult to choose wisely and live our values; it’s practically impossible.

In 2012 I delivered a TEDx talk in Grand Rapids, Michigan, on the subject of “Why We Struggle and Suffer.” I showed, among other things, how evolutionary psychology and brain science give us a far richer appreciation of the mythic wisdom of theological insights such as The Fall and Original Sin.
Immediately after my presentation I was approached, independently, by three evangelicals, all of whom said essentially the same thing: “Before I heard your talk I was a young earth creationist. Now I’ve got to accept evolution, I just need to do it in a God-honoring way.” One young man, in his mid-20s, put it this way: “I always thought that evolution was about Darwin, DNA, and dinosaurs. I didn’t know it was about how to live a more Christ-like life and have healthier relationships.”

**Death as a Gift, Not a Curse**

All religious traditions have offered beliefs that helped their adherents face the inevitability of death – and to face it with trust. Thanks to science, we now have knowledge that does as much (and more!), while inviting the religious traditions to evolve.

Science not only increases our knowledge, it deepens our intimacy with Reality/Godde. Nowhere is this more evident than in how an evidential, or sacred-science, worldview helps us honor – indeed, celebrate – the role of death at all scales of the cosmos. As it turns out, everything we value is possible only because of death. The ancients couldn’t have known this divine truth revealed by God through science. We can no longer afford to remain ignorant of it; the cost is too high.

Thanks to a dozen different sciences, we can now not only accept, but celebrate, that death is natural and necessary at every level of reality, and death is no less sacred than life.

The following litany expresses “God’s evidential word” about the material fact of death at all scales of reality. Science underlies each of the declarations, which I explain in chapter 5 of my book, *Thank God for Evolution*. If the connections are not obvious to you, consider yourself blessed: wonders await your further inquiry!

**The Gifts of Death**

Without the death of stars, there would be no planets and no life. Without the death of creatures, there would be no evolution.

Without the death of elders, there would be no room for children. Without the death of fetal cells, we would all be spheres.

Without the death of neurons, wisdom and creativity would not blossom. Without the death of cells in woody plants, there would be no trees.

Without the death of forests by Ice Age advance, there would be no northern lakes.
Without the death of mountains, there would be no sand or soil.

Without the death of plants and animals, there would be no food. 
Without the death of old ways of thinking, there would be no room for the new.

Without death, there would be no ancestors. 
Without death, time would not be precious.

What, then, are the gifts of death?

The gifts of death are Mars and Mercury, Saturn and Earth. 
The gifts of death are the atoms of stardust within our bodies.

The gifts of death are the splendors of shape and form and color. 
The gifts of death are diversity, the immense journey of life.

The gifts of death are woodlands and soils, ponds and lakes. 
The gifts of death are food: the sustenance of life.

The gifts of death are seeing, hearing, feeling—deeply feeling. 
The gifts of death are wisdom, creativity, and the flow of cultural change.

The gifts of death are the urgency to act, the desire to fully be and become. 
The gifts of death are joy and sorrow, laughter and tears.

*The gifts of death are lives that are fully and exuberantly lived, and then graciously and gratefully given up, for now and forevermore. Amen.*

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Until we grasp that death is no less sacred than life, and that it plays a vital, necessary role in an evolving cosmos, Christianity will continue to be shackled by otherworldly notions of “the Gospel,” advanced technologies will prolong physical and emotional suffering, and the medical industry will inadvertently underwrite the widening gap between rich and poor.

Few things are more important than transforming how we think about our inner and outer nature, and our mortality. Thus far, the Evidential Reformation has been centered in science. Now is the time for our faith traditions to honor evidential revelation – facts as God’s native tongue – and carry on the vital tasks of interpretation, integration, and action.

Ours is the prodigal species. Having squandered our inheritance, we are waking up to our painful predicament. Thankfully, God – Reality personified –
awaits us with open arms and a welcoming heart. As Thomas Berry would remind us, the entire Earth community is rooting us on!

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Questions for Reflection or Discussion

1. How do you understand the implications of the “Great Story” or “Big History” altering our fundamental perceptions of our place in the universe?

2. Teilhard de Chardin refers to “the movement into time.” What do you think he means?

3. How does the 100-year timeline help you revise your understanding of the past?

4. What has Reality/Godde/the Universe revealed through evidence about the temperature on planet earth?
5. Describe the fundamental organizing principles of Religion 1.0, 2.0, and 3.0 and why they’re significant to our species’ survival.

6. What benefit does Dowd see in our “prodigal species” returning home to “the garden”?

7. What stands out to you as most significant in the last hour (17,000 years) of human development?

8. Dowd offers multiple characteristics of contemporary “Idolatry.” What aspect of this summation strikes you as most important? Why?

Further Questions

Which ideas from this session did you resonate with? Which did you find challenging?

What are the implications of this material for you personally? For your local community? For the planet?
Going Deeper:

What has this session challenged or changed about the way you think about the Divine? People? Creation? Yourself? The relationship of all these?

ProFuture Words of Wisdom:

“Science is handing us an origin story, and we’ve barely begun to understand its mythic dimensions.”
~ Jennifer Morgan

“The world is almost mind-numbingly dynamic. Out of the Big Bang, the stars; out of the stardust, the Earth; out of the Earth, single-celled living creatures; out of evolutionary life and death of these creatures, human beings with consciousness and freedom that concentrates the self-transcendence of matter itself. Human beings are the universe become conscious of itself. We are the cantors of the universe.”
~ Elizabeth Johnson

“Our evolution has been an awesome journey of fifteen billion years. Every entity that ever moved or swam or crawled or flew, every being that lived to reproduce itself, all the vast numbers of species now extinct and presently living who have invented the amazing capability which we have inherited as our eyes, our ears, our organs, our very atoms, molecules and cells – all of those preceding us are represented in our emergence now. We bow down in awe and gratitude for the past. Without all that came before us, none of us would be awakening now!”
~ Barbara Marx Hubbard