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The suspect wonder of the new cosmology

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The astronomer Carl Sagan once predicted that a religion inspired by scientific knowledge of the universe would eventually emerge to rival the traditional faiths. Such a religion, he proposed, "might be able to draw forth reserves of reverence and awe hardly tapped by the conventional faiths" (1994:50). Sagan's prophecy contains an implicit assumption that science is better positioned than traditional faiths to elicit a powerful response of awe and wonder. Though more elegantly expressed by Sagan than by some of his colleagues, the assumption itself is not unique. It is something of a set piece in the science-religion debate. Richard Dawkins, in characteristically strident tones, often promotes the power and authenticity of scientific wonder over and above religion's vastly inferior offerings. "Science provides the most stupendous sense of wonder at the universe and at life, something that eclipses the meager, puny, paltry, little sense of wonder that any religion has ever managed to muster" (Dawkins, in Burstein and Keijzer 2009: 240).

Edward O. Wilson, another outspoken and visionary biologist, exhorts us to look to the sciences for "richer material to work with" because "the real world, the universe—from black holes to the origin of consciousness—offers far more complex and grander themes than does traditional theology" (Wilson, in Barlow 1997: 27).

We might ask how these scientists know that science-inspired wonder is more grand and potent than its religious counterpart. Is this claim amenable to empirical investigation? Might there be an instrument or tool—perhaps a handy "grandeur meter"—that can determine objectively and decisively that modern science offers more wonder than its presumed competitors (Gray 1998)? Assuming that scientific forms of wonder are indeed supremely potent, why should we assume that scientific wonder is mostly superior to similar feelings inspired by religion? Is it better for humanity, for our moral character, or for the well-being of the planet? Curtis White, in The Science Delusion, takes scientists like Dawkins to task for their surprising "lack of curiosity about what this feeling of awe means." Scientists frequently claim the feeling and advertise its popular appeal "without thinking that it needs to be 'substantiated statistically', as everything else they consider is required to be" (White 2013:22).

Perhaps we, the laypeople, ought to take these claims for scientific wonder on faith, as the verdict of experts far better acquainted with the universe and its wondrous details than we are. On the basis of such faith, we might proceed even further to construct an entire mythic system—a new science-based religion—around the awesome discoveries of modern science, as Sagan suggests. Recast as a mythopoetic enterprise, a universal narrative rich in metaphor and
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poetry, science might steer us toward an inexhaustible source of wonder, encourage stronger feelings of connection to the universe, and provide a common platform of facts and values from which to bridge cultural divides and galvanize collective action on "wicked" global problems.

Proponents of what I call the "new cosmology," more commonly called the Epic of Evolution, The Universe Story, or Big History, are working to realize Sagan's prophecy. In its various iterations, the new cosmology professes a grand narrative of cosmogenesis—the unfolding of the universe from the Big Bang to the present—as a sacred story, a common creation myth for the modern world and for all people. Science, in this movement, offers a wondrous new revelation, an updated sacred scripture, a new Genesis. Prominent advocates of the new cosmology include the cultural historian and "geologist" Thomas Berry and his protégé, the mathematical cosmologist Brian Swimme (Swimme and Berry 1992); religion scholars Mary Evelyn Tucker (Tucker and Swimme, 2011), John Grim, and Loyal Rue (2000); astrophysicist and science educator Eric Chaisson (2005); biologist Urula Goodenough (1998); science writer Connie Barlow (1997); and Christian pastor and popular author, Michael Dowd (2009). As I argue in detail elsewhere (Sideris 2017), these individuals and their projects share an overlapping agenda. All are engaged in a project of mythopoiesis or religiopoiesis: the crafting of a new religion from the materials of science. Modern science is here refashioned as an overarching story that outcompetes or perhaps simply subsumes (it is never quite clear) the particular stories of particular peoples, by virtue of its availability to all and its close conformity to fact.

Tucker, Grim, and Swimme are strongly influenced by Thomas Berry's call for a "New Story" to supplement or replace the traditional faiths and long-standing creation myths. Other versions of the new cosmology display therapeutic dimensions, as with self-styled evolutionary evangelists Dowd and Barlow who encourage audiences to "evolutionize" their lives for personal and planetary well-being. Still others, notably Rue and Goodenough, represent a trend toward an aesthetic brand of religious naturalism akin to what Bron Taylor (2010) identifies as "dark green religion," that is, nature-oriented and science-oriented spirituality that rejects the supernatural worldviews and values of traditional faiths, notably the Abrahamic traditions.1

The movement also has tractions beyond the academy. Journey of the Universe, a documentary film written by Brian Swimme and Mary Evelyn Tucker, is widely featured on public television stations, and Tucker, Grim, and Swimme hold screenings and discussions of the film worldwide. Dowd and Barlow, travelling road-show enthusiasts for the Epic of Evolution, introduce the new scientific story to children in religious education classes or summer camps, often in song and storybook form, or in ritual enactments of "evolutionary parables" (Barlow, Evolutionary Parables). Rue and Goodenough hope to extend the scientific narrative into the public sphere, urging the adoption in primary and secondary education of a "consilient" curriculum, inspired by the Epic of Evolution (Rue and Goodenough 2009).

The new cosmology can be understood as a fairly broad, interdisciplinary movement, depending on how the parameters are defined. My focus here will be on a subset of new cosmologists—Rue, Goodenough, Dowd, and Barlow—who self-identify as religious naturalists, as evidenced by leadership roles in the Religious Naturalist Association, for example, or in publications and lectures in which they claim the title for themselves. These religious naturalists also derive inspiration for their projects from some of the scientists mentioned above, notably Wilson and Dawkins (among others). Like Wilson and Dawkins, they celebrate the superior forms of wonder made possible by science. For Rue and Goodenough, this celebration of scientific wonder entails advancing Wilson's agenda for consilience—the unity of knowledge—as a key development that makes it possible to tell a coherent "evolutionary epic" of matter, life, consciousness, and the universe. For Dowd and Barlow, the Epic of Evolution is the stuff of real
magic, in Dawkins's preferred phrase. The Epic stands as the one true myth that reliably informs us of how things are in the world and which things matter.

Taken as a whole, the new cosmology calls on us to respond with awe and wonder to what is deemed most authentically real. Religious Naturalists who embrace the Epic of Evolution believe that a comprehensive scientific narrative outperforms the mythic and moral functions of traditional religion. Specifically, and importantly, they maintain that a science-based cosmology will inspire an ecumenicalism. Awe at the scientific account, they believe, will readily translate into feelings of care and concern for the natural world.

The new cosmologists are invested in a high-stakes competition with the existing religious traditions to determine where we direct our sense of wonder and how we define our ultimate values. As a movement seeking converts to science, however, the new cosmology elicits wonder first and foremost at science and the scientific enterprise, and only secondarily, at nature. As it is typically portrayed, the pitched battle between scientific and religious forms of wonder can have only one winner—science, of course, being the projected winner—but it can have more than one loser. Nature itself, I argue, is a neglected category in this competition. Put differently: in their desire to redirect wonder away from religion, and toward science, the new cosmologists tend to divert wonder away from the natural world. The redirection of wonder toward science casts nature as science’s poorer cousin—a thing not quite real until explained—while also stripping wonder of its salutary and commendable dimensions.

The quest for a new myth

The idea that a science-based myth offers a header sense of wonder than the traditional faiths is traceable in part to Wilson, who is generally credited with having coined the phrase “Epic of Evolution” (Wilson 1978) and whose vision of a fully unified body of knowledge (“consilience”) inspires some of the new cosmologists (Wilson 1998). His own youthful conversion from Southern Baptist faith to a profound enchantment with evolutionary theory marked him indelibly with a deep sense of science as fulfilling our innate hunger for religion and meaning (Wilson 1998). Like many converts, Wilson feels moved to share his “unification metaphysics” with the wider world (1998: 6). Throughout his career, he has sought a way to “divert the power of religion into the services of the great new enterprise that lays bare the source of that power”—i.e., the scientific enterprise (Wilson 1978: 193). Science, in explaining the sources of religion as an evolutionarily engrained propensity, is positioned to appropriate religion’s power for itself in the form of a new mythology.

Rather than write off religion, scientific humanism must confront religion’s power if it hopes to turn it to nobler ends, Wilson advises. But where will science find a compelling narrative to rival religious myths? Wilson insists that a consilient unity of the disciplines will eventually knit all knowledge together into a seamless whole. The Epic of Evolution is a mythic, narrative rendering of that whole. “The core of scientific materialism is the evolutionary epic,” Wilson explains in On Human Nature, and the evolutionary epic “is probably the best myth we will ever have” (1978: 201). Consilience makes a similar case: “The true evolutionary epic, retold as poetry, is as intrinsically ennobling as any religious epic” (1998: 289).

Wilson’s prophecy regarding the imminent unification of all knowledge entails convergence not just among academic disciplines but between science and religion as well. More accurately, it entails the displacement of religion (but not the religious impulse) with a scientific mythology. Humans’ evolutionary predisposition to engage in religion is a valuable “source of energies that can be shifted in new directions when scientific materialism itself is accepted as the more powerful mythology” (Wilson 1978: 207). This appraisal of science as the stuff of a superior
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myth, issued by Wilson decades ago, resonates strongly with today's champions of the evolutionary epic.

The challenge of anythia

A new myth is urgently needed, the argument usually goes, because "our" culture (commonly, Western culture) is suffering from what Loyal Rue (2004) calls *anythia*—the condition of being without a serviceable, universal myth.² The stories we have inherited from the traditional faiths are no longer morally relevant or cognitively plausible. Rue's concern about anythia echoes earlier calls made, for example, by Thomas Berry who anticipated the dawn of a "New Story," a functional religion that takes our modern scientific understanding of the universe as its primary reference point. For both Rue and Berry, the environmental crisis is, at root, a crisis of meaninglessness, of *storylessness*. A new, more accurate story must be found or invented if we are to steer a path back to meaning and purpose, as well as proper concern for nature.

Rue's project of creating a new global myth, or what he calls "everybody's story," includes blueprint for educational reform drawn from the consilient unity of knowledge. "Consilience among scientific disciplines," he argues, "now makes it possible to construct a coherent narrative" (Rue 2005:615). Like Wilson, he believes that the evolutionary epic gains universality and power to unite from the unity of knowledge itself. Consilience suggests that in reality there is not a multiplicity of stories in the universe, as the diverse spectrum of religions would suggest, but just one. The epic of evolution is "the biggest of all pictures ... It is the ultimate account of how things are, and is therefore the essential foundation for discourse about which things matter" (Rue 2000: xii). The disciplines show signs of converging around this ultimate account, moving toward decreased specialization and tighter integration (the current, and highly artificial, state of academic sprawl notwithstanding). This integration suggests that education at all levels should reflect a new core curriculum "focused on the evolution of matter, life and consciousness—culture" (Rue 2000: 130–31). Even children's science education will take the form of narrative instruction because "the brain is a narrative spinning modular system" (Rue 2000: 131).

One story for all

In this effort to construct a consilient curriculum grounded in the evolutionary epic, Rue is joined by Goodenough, whose own work adopts Rue's basic division of reality into How Things Are and Which Things Matter (Rue 2000; Goodenough 1998, 2009). Indeed, she credits Rue with "explaining to me most of what I understand about theology and philosophy" (1998: xi). A cell biologist and author of a widely used genetics textbook, Goodenough attracted broader attention with The Sacred Depths of Nature (1998), a scientist's personal and spiritual reflection on nature and natural processes. Rue and Goodenough recognize the affinity of their project of religio-poesis with Wilson's efforts to mythologize scientific materialism in Epic form. Like Rue, Goodenough regards the Epic as the one narrative capable of fostering the values needed to cope with our current global challenges. Their joint commitment to teaching the Epic as the centerpiece of education draws inspiration from "Wilson's bold vision" of a consilience (2009: 175).

A co-authored essay spells out the authors' rationale for a consilient curriculum. Rue and Goodenough argue, for example, that recent breakthroughs in science make it possible to extend the evolutionary paradigm broadly, in novel directions; doing so will produce a fresh, coherent vision of nature and ourselves that has the potential to transform our lives and culture. "Inherent in this story is a rich and satisfying account of who we are, where we have come from, and
how we might become fulfilled,” they confidently assert (2009: 181). Culture wars over core curriculum—pitting the Western canon against multiculturalism, and conservatives against liberals—are not only tedious but irrelevant, they contend, because these debates about pedagogy emerged before the watershed publication of Consilience. In that less enlightened time, before science emerged as the authority on “human nature,” it was popularly assumed that the humanities spoke authoritatively about humanity’s greatest stories. “Understanding humanity was then the exclusive province of the humanities,” Rue and Goodenough note,

[but this is no longer true, as Wilson’s Consilience makes abundantly clear. Indeed, it is so far from being true that one might insist (as we do) that any story of human nature not firmly grounded in the sciences does not merit the attention of youthful minds.

(2009: 178)

Consilience presents an opportunity for us all “to rethink the issues at stake in the on-going debate over the American college curriculum” (2009: 175).

As we continue to debate which stories young people in our culture should be learning, the evolutionary epic emerges as the one narrative encompassing everything that matters. “Debates over the core curriculum should be focused on how best to tell this story to the next generation”—not whether the story should be told as a grand, unifying narrative. Rue and Goodenough go on to argue that a core curriculum is “all about coming to terms with human nature,” or what they term “human reality” (2009: 178). “One world calls for one story,” they conclude. “The Epic of Evolution is it” (ibid).

Rue and Goodenough invoke the text of Consilience much as a fundamentalist might reference the Bible, as self-evident proof that we are now in possession of the greatest story ever told, one that finally clears away doubts about human nature and destiny. Consilience, the unity of knowledge, is treated as a fait accompli, rather than a hypothesis—still hotly disputed (Dupré 1998) regarding the possible links among the branches of knowledge. (Significantly, Wilson himself uses the language of faith, conviction, and metaphysics in describing his commitment to consilience.) Also problematic is Epic enthusiasts’ naive positing of a direct relationship between How Things Are and Which Things Matter. They proceed on the assumption that acquainting students—or anyone—with “the” story of the universe will invariably arouse feelings of intimacy and care for the natural world. But science itself—even when gilded with the accoutrements of myth and poetry—is not a sufficient source of environmental values or of moral motivation generally. It does not give us adequate grounds for caring.

Building the perfect cult

The conviction that the scientific narrative inspires the “awe,” “majesty” and “sense of wonder” (Rue 1997) and that these feelings will in turn motivate environmental concern is taken farther in some of Goodenough’s work apart from Rue. Epic enthusiasts display a penchant for applying evolutionary frameworks to traditional religions in order to evaluate their adaptiveness and “fitness.” Both Rue and Goodenough diagnose these traditions as dysfunctional in the modern context and, consequently, forecast bleak prospects for these faiths.

When Goodenough turns her attention to the existing religious faiths and their stories, she makes short work of them. “I set about analyzing religious systems,” she explains, “using the paradigm most familiar to me, the paradigm of biological evolution” (1994: 321). She imposes a simplistic three-fold typology on all the major religions and finds them wanting in terms of their cognitive and universal appeal and their environmental or economic potential. Her typology (at
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which she arrives without consulting any scholarship) consists of ancestor cults, sky cults, and earth cults. Ancestor cults include virtually "all religious systems" insofar as they create continuity with the past by means of art, ritual, and beliefs that the dead "are engaged in bestowing benefit or harm" (1994: 322). Sky cults, which may also function as ancestor cults, pose questions of ultimate origins and destiny, and often display belief in a supernatural creator who is actively involved in day-to-day lives of believers. Together, the first two categories encompass the main established tradition. A scientific worldview has nothing to contribute to these two types of religions—all of the major world traditions, according to her classification scheme—because they are essentially closed systems, providing answers to questions about why we are here and where we are going on their own unscientific terms. "After hundreds of years of effort, in thousands of books written by thousands of theologians and physicists, the science/sky-cult dialogue remains a stand-off" (1994: 326). Moreover, these traditions tell stories that are too particular to be expanded into a global myth. Because they evolved to fill a particular niche, they cannot tell everybody's story.

Goodenough's remaining category of religions, earth cults, initially looks more promising, owing to nature-centered practices and rituals (rain dances, seasonal celebrations) and forms of devotion (earth goddess traditions, contemporary appropriations of Native American rituals). However, they offer little in the way of otherworldly rewards such as an afterlife, and therefore cannot compete successfully with ancestor and sky cults in the evolutionary lottery. Invoking Rue's categories of How Things are and Which Things Matter, she rejects earth cults on the grounds that they lack coherence with modern science, as indeed she rejects all religious narratives crafted prior to "contemporary understandings of How Things Are derived via scientific inquiry" (2009: 373). All such religions produce "all-too-familiar conflicts about which accounts are 'true'" (2009: 373). There are simply too many deficiencies in the existing traditions, even the earth-centered, nature-reverencing varieties. "Therefore," Goodenough concludes, "if we want an earth cult grounded in scientific cosmology, we're going to have to invent one" (1994: 325). This "invented" religion is, of course, the Epic of Evolution.

As Goodenough concludes, many nature-centered religions—what she dubs earth cults—emerged in cultures that knew (or know) nothing of "genes or molecules or plate tectonics" (1998: 328). This lack of knowledge has not prevented them from respecting or even worshiping nature. Nevertheless, Goodenough insists that science ought to function in such religions as something like a main text or canon, like the Bible or Koran. "The earth sciences could be such a text ... a basis preferable to the authority of custom" (1998: 329). But why must an inherently earth-friendly tradition be reinvented with science at its core? Does Goodenough believe, for example, that indigenous cultures will develop a more robust environmental ethic following a lesson in genetics or ecosystem ecology? Her commentary suggests that she does. It also points a very narrow vision of what counts as real and true in human relationships to the natural world.

Goodenough contends that "awe" made possible by "understanding how life works" will turn to affection for nature (1993: 327). "The more we know about life, the more we can care about it" (ibid). As an example, she offers sociobiological claims about kin selection that present a "calculus" of genetic relatedness. This calculus, she ventures, explains why we care more for organisms with whom we share genes. And since we share genes with all life, sociobiology actually enables a broad concern for the whole earth: "Our cognitive understanding of evolution now allows us to take this concept much further: to the extent that the genes are shared throughout all of life, this gives us a lot more to care about" (1998: 328). This is a dubious claim. What is to prevent this "calculus" from justifying a position of caring very little or not at all for organisms far removed from us on the genetic spectrum? The genetic calculus Goodenough defends (and insists earth cults need to adopt) might very well reinforce rather than correct existing biases.
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The inordinate investment of the new cosmologists in what they assume to be universally true, cognitively compelling, or empirically verifiable, blinds them to other sources of attachment and intimacy with the natural world, including wondrous encounters with nature (spiritual or otherwise) not filtered through scientific explanation and up-to-date knowledge of genes, molecules, star formation, or light waves. Mythopoetic science and its narratives suggest that the natural world as humans normally encounter it—without aid of sophisticated instruments of facility with the latest scientific concepts—is neither fully real nor especially valuable. Wonder then becomes the province of the expert who grasps the abstract knowledge that eludes the layperson. Once displaced from lived experience of the world, wonder becomes at best a vicarious experience; the natural world, a derivative reality (Abram 2010). This equation of wonder only with what is scientifically real and verifiable makes additional appearances in devotees of the evolutionary epic who look to Dawkins for inspiration.

"Wonderful because real"

As I have noted, Richard Dawkins’ reflections on scientific wonder have deeply impressed some enthusiasts of evolutionary epic. Unlike Wilson, who is explicit about adopting scientific mythology as a surrogate religion, Dawkins denies that his esteem for science amounts to religious-like reverence, and he refrains from presenting science in mythic form. Nevertheless, he understands science to provide spiritual uplift that far outclasses the awe of traditional religion. “Uplift,” he writes, “is where science really comes into its own.”

All the great religions have a place for awe, for ecstatic transport at the wonder and beauty of creation. And it’s exactly this feeling of spine-shivering, breath-catching awe—almost worship—this flooding of the chest with ecstatic wonder that modern science can provide... The merest glance through a microscope at the brain of an ant or through a telescope at a long-ago galaxy of a billion worlds is enough to render poky and parochial the very psalms of praise.

(Dawkins 1997: 27)

Dawkins has long championed the superiority of scientifically clarified—“real”—wonder vis-à-vis wonder at perceived mysteries, puzzles, or miracles. In Unweaving the Rainbow (1998) he presents science as satisfying the human “appetite for wonder.” He chides the Romantic poets who revered Newton for destroying the mystery and poetry of the rainbow by dissecting it into light of different wavelengths. It is true, he concedes, that science banishes mystery and the miraculous, but the knowledge it returns is itself a thing of wonder and the stuff of magic. Real wonder, as Dawkins sees it, arises not in the presence of something unexplained but as a payoff for intensely earnest but dispassionate study.

Knowledge, in putting to rest (at least for a time) the questioning impulse, warrants the ultimate prize, the highest form of wonder. Hence, Dawkins disapproves of admiration for nature that does not stem from or culminate in something more scientific. Wonder evoked by such untutored encounters with nature is fake wonder, a phenomenon almost as repellant as religion itself: a mystical, muddled response to something unreal and unexplained. He lambasts the poet William Blake who, in gazing with wonder at the world in grain of sand, reveals himself as a lazy mystic “content to bask in the wonder and revel in a mystery that we were not ‘meant’ to understand.” The true scientist “feels the same wonder but is restless, not content; recognizes the mystery as profound, then adds ‘But we’re working on it’” (1998: 17).
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The lofty status Dawkins confers on science and scientific knowledge is further indicated by his horror that science ever be made into "vulgar fun" for laypersons or even children. Science, he stresses, is hard work but "worth the struggle" (1998: 23–24). Popular science demonstrations featuring "fun explosions" and "whacky personalities" only "store up trouble for the future," he ominously warns (ibid: 22). Dawkins denounces the "populist whoring that defiles the wonder of science" wherever he finds it (ibid: 23). In the same metaphorical vein, he castigates those who profit from a willingness to "prostitute the language—and the wonder—of science" (2003: 43). Allusions to defilement and debauchery suggest that we that are indeed in the presence of something sacred.

Dawkins's dedication to ensuring that even children develop demystified and scientifically correct responses to the world around them is one of the peculiar hallmarks of his sense of wonder (Sideris 2015). In 2011, Dawkins published a book for young readers that explains the true, scientific genesis of many wondrous objects, including (once more) the rainbow: The Magic of Reality: How We Know What's Really True. He juxtaposes myths and fairytales with lucid scientific explanation in order to discredit longstanding myths that children are likely to learn at a young age. By myths he means everything from fairytales about the rainbow's origin to Judeo-Christian stories such as Noah's ark. A chapter on the sun presents an Aztec myth, an ancient Egyptian myth, and an Aboriginal myth, prior to displacing each and the false wonder they generate, with an account of the sun's true nature. Though he often exhorts children to think for themselves, the book's message is essentially the same as Unweaving the Rainbow: what is real and explicable in a scientific sense is most deserving of wonder. Science is not one way of experiencing wonder, but the authentic way.

I want to show you that the real world, as understood scientifically, has a magic of its own ... an inspiring beauty which is all the more magical because it is real and because we can understand how it works ... The magic of reality is—quite simply—wonderful. Wonderful, and real. Wonderful because real.

(2011: 31)

A religion of reality

Dawkins' project receives enthusiastic support from evolutionary evangelists Dowd and Barlow who endorse the Epic as a religion of reality and hail Dawkins as its courageous prophet (Dowd 2010). Converts to this religion, Dowd likes to say, are not believers but knowers. Together Dowd and Barlow spread the gospel of evolution and host evolutionary revivals for thousands of groups throughout North America. They aspire to attract audiences large enough to rival modern mega-churches, and at times they nearly do. These audiences include children and adults, in both secular and liberal religious venues. Barlow describes her vision of "evolutionary revivals" that preach the message of evolutionary psychology and brain science, particularly to young people:

Michael and I have been working for more than a year on some cool stuff in evolutionary psychology and evolutionary brain science, that helps us understand WHY we have these challenges, helps us accept our "inherited proclivities," our "unchosen nature." ... We have found that teens and young people especially tune into this part of our programs, as these are their new and frightening struggles. With the help of local liberal churches (talk about re-energizing mainline congregations!), we could pour a
lot of energy into an amazing event that would be the template for doing more and better “Evolutionary Revivals” all around the country—which would be a new form of participatory concert for college kids, too!

(Adler 2006)

Dowd and Barlow have also created what can only be called a promotional video for Dawkins’ children’s book, *The Magic of Reality*. The video opens with the pair affirming Dawkins’s commitment to presenting scientific reality as more wondrous than traditional myths and stories “the truth is more magical ... than any myth or made-up mystery or miracle,” in Dawkins’s words (Dawkins 2011: 265). The book’s message, they note, has “really broad implications for society along the lines that we’ve been promoting for ten years” (Dowd and Barlow 2011). The two read aloud from sections of the book that meet with their strongest approval, as when Dawkins distinguishes “supernatural” magic (a category that includes religious myths and miracles, Grimm’s fairy tales, and the Harry Potter series, among other pernicious sources of fake magic) from real “poetic magic” that is the domain of science. Reality—facts as ascertained through science—is magical in the poetic sense, Dawkins contends. Dowd and Barlow also read with approval Dawkins’ more controversial claim: “To say that something happened supernaturally, “Dawkins observes, “is not just to say ‘We don’t understand it’ but to say ‘We will never understand it, so don’t even try’” (2011: 23). They estimate that *The Magic of Reality* is suitable for children of approximately fifth grade level but urge viewers to introduce the book to children as early as possible, before they are old enough to understand.

Why so much interest in children and young people? If a new religion is to survive, it must have a fresh supply of young converts. But children are an important part of the ministry for other reasons. Following Dawkins, Dowd and Barlow aim to inoculate children against religious ideas before they are infected. Their goal of battling widespread religious intransigence is not, however, limited to debunking fundamentalist or creationist beliefs. Rather, Dowd and Barlow, like Dawkins, tackle any number of childlike beliefs or fanciful notions, simply because they are not of scientific provenance. Hence, Barlow’s insistence in teaching children an enlightened version of “Twinkle, Twinkle Little Star”; “now I know just what you are” (Dowd 2009: 91).

Dowd insists that demands for reality are coming from children themselves, who are no longer satisfied with stale myths and fairy tales. Children are rejecting stories that do not meet their evidentiary standards.

Now kids expect the real deal: magnificent BBC, National Geographic, Discovery Channel, and History Channel productions that enflish *T. rex* and trilobites, and that spectacularly feature (and animate!) the fresh news delivered by Earth’s orbiting population of space telescopes.... Ancient stories that contradict the new stories beloved of modern children (the stories of black holes and fossils).

(2012)

Given Dowd’s account of reality-seeking “modern” children, the real mystery is why so many flock to stories of boy wizards, vampires, and mythical beasts.

Nature in the hands of Epic enthusiasts is too often invoked as something in the distant past—extinct dinosaurs—or something far away and fantastical—black holes, Hubble images—rather than a vital, living dimension of our everyday worlds. It is invoked as a story, and the story itself is treated as an object of veneration, as indeed it is to the new cosmologists. At other times,
nature surfaces merely as a thing to be correctly explained rather than encountered close up and in person, in a state of wonder.

Drawing children into the world of science seems laudable enough. But can it be wise to impose scientific "reality" on children who may not have yet formed attachments to nature in other ways, whether these ways are deeply spiritual or merely sensory and emotional? What does this imposition of reality suggest to children about the trustworthiness of their own impressions of the natural world and its wonder, value, or reality? I would venture that these evolutionary evangelists are less concerned with connecting children to nature than they are in preventing them from adopting religion, in any traditional sense. Appeals to the superior charms of science illustrate that science and religion are cast not simply as competing explanations for the physical world but as competing discourses of wonder. Nature, meanwhile, gets lost in the shuffle.

**Wonder, lost and found**

What sort of wonder is this, then, that the Epic of Evolution claims? These narratives are demonstrably lacking in what the poet Keats (1899: 277) called negative capability: an ability to dwell in doubt, mystery, and ambiguity and to resist the categorization of all phenomena and experience into a system of knowledge. For all its talk of deep time and space, stars, galaxies, and dinosaurs, Epic science peddles a rather bland yet potentially vicious (I will suggest) form of wonder. True wonder, by contrast, resists and defies the static ordering of a universal narrative and the quest for certainty that so often impels such narratives, the evolutionary epic included. Oddly, then, the superior wonder, magic, or grandeur said to infuse the new narratives is a function of the systematic displacement of abiding mystery and the questioning impulse: *now I know just what you are.* Ambivalence toward uncertainty and mystery—sometimes bordering on hostility by Wilson and Dawkins—runs through these projects. "When we have unified enough certain knowledge," Wilson fervently believes, "we will understand who we are and why we are here" (1998: 7). Paradoxically, these celebrations of wonder seek wonder's eradication at the hands of scientists and their totalizing knowledge. We should think twice about ceding wonder to mythmakers whose only response to wonder and mystery is to start "working on it," as Dawkins advises, as if it were a problem to be solved.

Whether in theology, science, or natural history, wonder has long been valued because of the ethical dispositions it frequently engenders: humility, compassion, generosity, non-exploitative stances, a "concern not to blunder into damaging manipulation of another" (Hepburn 1984: 146). We risk losing wonder's most laudable dimensions when we tether it to such delimited and rigorously patrolled categories of what is real and true. In valorizing certainty and reality (thus construed), Epic science elevates the human mind as the epic "hero"—as Wilson says, the central character in the cosmic drama (1978: 203). Armed with such certain and complete knowledge, we need not proceed with caution, prudence, or humility in our interactions with the world around us, for these dispositions are not necessary and will not flourish in an atmosphere of complete knowledge. Invoking Icarus—a tragic figure—Wilson thus throws caution to the wind: "Let us see how high we can fly before the sun melts the wax in our wings" (1998: 7). This is not the sort of dictum we should heed if it is nature—not merely ourselves and our science—that we hold within our wondering gaze.

Science is a valuable but fallible human enterprise, and as such, remains a dubious candidate as the sole or ultimate object of wonder and reverence. If we seek a new religion that enhances the prestige of science and exalts the human mind, then the Epic of Evolution may fit the bill.
But if the goal of Religious Naturalism is to foster ethical sensibilities that encourage reverent, responsible coexistence with the natural world and enduring wonder for its myriad creatures, then the Epic stands on much shakier ground. Perhaps the lesson to be learned from efforts to consecrate and mythologize science is this: those who advocate strenuously for the superiority of science over religion do not always make the best advocates for nature itself.

Notes

1 Taylor (2010) develops a typology of dark green religions that casts Goodenough’s worldview as a form of Gaian Naturalism “whose proponents express awe and wonder when facing the complexity and mysteries of life and the universe, relying on religious language and metaphors of the sacred (sometimes only implicitly and not self-consciously) when confessing their feelings of belonging and connection to the energy and life systems that they inhabit and study” (16).

2 The diagnosis of amnesia typically extends primarily to Western cultures or to global industrial society generally, irrespective of particular religious or cultural commitments. Thomas Berry often diagnosed storylessness as a Eurowestern problem. The subtitle of Loyal Rue’s book is revealing: Crisis in the Natural History of Western Culture (Rue 2004).

References

Concerning consecrated science


Kennard, D and Northcutt, P (dir.) (2011) *Journey of the Universe*, InCA Productions. DVD.


