

# *The Energy Transition: Religious and Cultural Perspectives*

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## ENERGY: THE CHALLENGES TO AND FROM RELIGION

by Larry L. Rasmussen

*Abstract.* Exiting the fossil-fuel interlude of human history means a long, hard transition, not only for energy sources, uses, and policies, but for religious values as well. How do religious values account with integrity for the primal elements upon which all life depends and by which all energy is conveyed—earth, air, fire, water, light? What challenges do energy policies pose to religious values so that the latter might be judged to be truly Earth-oriented and Earth-honoring? Reciprocally, how do shared cross-cultural, interfaith religious values challenge present and prospective energy policies? How might value orientations, such as asceticism, sacramentalism, mysticism, prophetic and liberative practices, together with wisdom traditions, influence energy practices and policies? The intention of this essay is to surface these two-way challenges in present debates on energy.

*Keywords:* asceticism; death and renewal; global economy; industrialism; mysticism; population; prophetic and liberative practices; sacramentalism; transitions; wisdom traditions

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### DEATH AND RENEWAL

As nature abhors a vacuum, so human history resists a dead end. Many of the great religions and philosophies—biblical monotheism, Hinduism and Buddhism, Confucianism and Taoism, Greek rationalism—emerged from a long season of suffering and turbulence, 900 B.C.E. to 200 B.C.E. It was creativity so momentous as to merit its own name, "the Axial Age." Centuries later, in Europe, the Dark Ages gave way to the Renaissance, the medieval to the modern, and religious wars to the Enlightenment. More recently, first slavery, then legalized racism, and the disenfranchisement

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of women gave way to the ballot box and equality before the law. In the late 1980s, the Cold War and state socialism collapsed and new states arose in transition toward democracy and capitalist market economies. A-bombs, H-bombs, and Intercontinental Ballistic Missiles became massively irrelevant just as we find ourselves too broke to address human needs and repair Earth's mounting distress. Not least, the shift from the energy regime historians will call "the fossil-fuel interlude" of Earth's history coincides with a communications revolution—the rapid spread of information technologies—that makes widespread changes in consciousness possible in short periods of time. Always tribal, we can now be global as well. All in all, history furnishes evidence aplenty for the Phoenix arising from its own ashes. Death and renewal are both real.

Now we live on another of history's hinge times. This time the social and ecological coalesce and the world must of need enter an ecological age it has not prepared for well. The planet is no longer the one our ancestors knew, or even the one many of us grew up with, explored, benefited from, and have grown accustomed to. The industrial era, made possible by dirty fuels we love, faces its terminus. The transition, *if* it happens, is from a technozoic age to an emerging "ecozoic" one (Berry 1999, 8).

Religious faith, like both nature and history, abhors a vacuum as well as a dead end. It does not rest, it will not give up. It will change, it will create, it will bang on the door of hope, insisting that someone be home.

Some faiths may die. Others will mime Israel's experience, with new life from a tree given up for dead: "A shoot shall come out from the stump of Jesse, and a branch shall grow out of his roots" (Isaiah 11:1).

But what is the kind of religious faith we seek now, for the "Great Work" (Berry 1999, 1) of this epoch? What roots and branches? The answer begins with questions, questions that may take us to more things in heaven and on earth than have belonged to our philosophy to date (to remember Hamlet to Horatio in Shakespeare's *Hamlet*).

What kind of faith is life-centered, justice-committed, and Earth-honoring, with a moral universe encompassing the whole community of life, the biosphere, and atmosphere together? What kind imports the primal elements—earth (soil), air, fire (energy), and water—into the moral universe and centers them there? What kind interrogates past traditions of spirituality to ask for their contributions to new first works? What kind alerts us to past pitfalls? What kind uses a single stringent criterion—contributions to an Earth ethic and robust Earth community—as the plumb-line that measures all impulses and aspirations? What kind illumines our responsibility, offers well-springs of hope, and generates renewable moral-spiritual energy for the hard season ahead? What kind is savvy about the play of power and privilege in light of the kind of creature we are and the kind of world we have? What kind offers the kind of security that permits risk when we are absent the firm plateau and sure confidence we had when Earth and nature seemed endless, free, and ours?

President Obama's Inaugural address included a sentence that, with one alteration, describes our circumstance as this turning time. Substituting "planet" for "world," it goes like this: "For the planet has changed, and we must change with it" (Obama 2009, 2). Given our impact on the planet and a new relationship to it effected by limitless energy, the changes in turn mean what the president went on to say: "What is required of us now is a new era of responsibility . . . God calls on us to shape an uncertain destiny" (Obama 2009, 2).

U.S. presidents never label the national destiny "uncertain." It has always been "manifest," the opposite of uncertain. Yet "uncertain" is correct for a world no longer possible on its present terms but not yet accomplished in new works. Ours is both "a new *era* of responsibility" and an era of *new* responsibility, all because of consequences roiling in the wake of seemingly limitless fossil fuel energy.

But has the planet changed? And even if so, why should we? Such are the questions to energy policy and religious faith for an ecological age. Here is the world we have, graphed by scientists tracking global trends.

Figures 1a and 1b (Steffen et al. 2004) track a deeply altered relationship of *Homo sapiens sapiens* to the rest of the planet. They also graph a deeply changed planet. They chart the great transformation effected by the triumph of abundant, dirty energy from sea to shining sea and on into both the oceans and the atmosphere. The graphs all begin with the onset of the Industrial Revolution, 1750, and they all reflect modernity as industrialized nature.

Two features surprise. First, the "screching acceleration" (McNeill 2000, 4) on all graphs is the same, despite widely separated subjects. What can population growth, foreign investment, the damming of rivers, fertilizer and paper consumption, and McDonalds restaurants in Figure 1a, and ozone depletion, collapsed fisheries (Ocean Ecosystems), and species extinction (Global Diversity) in Figure 1b possibly have in common? Yet, lay one graph atop the next, like a fourth grader cleaning her desk, and you get the same abrupt curve for the same five decades. It is hockey sticks everywhere! Second, the change is gradual from 1750 until 1950 wherever we have records. Then, from 1950 onward, humans truly leave behind the moorings of the past and shatter the previous constraints and stabilities of earlier economic, demographic, and energy regimes (McNeill 2000, 16). The year 1950 marks the shift from a militarized economy across much of the industrial world to the post-WWII explosion into the global consumer economy of industrial capitalism and socialism. Nor was the militarized economy left behind. It joined the escalation. Cold War economics and subsequent conflicts such as Iraq, Afghanistan, and the war on terrorism are no miniscule presence.

The drivers for Figure 1a, and all the energy use represented by them, sit in the upper left of the first set—unprecedented human population (Population) matched to unprecedented global economic

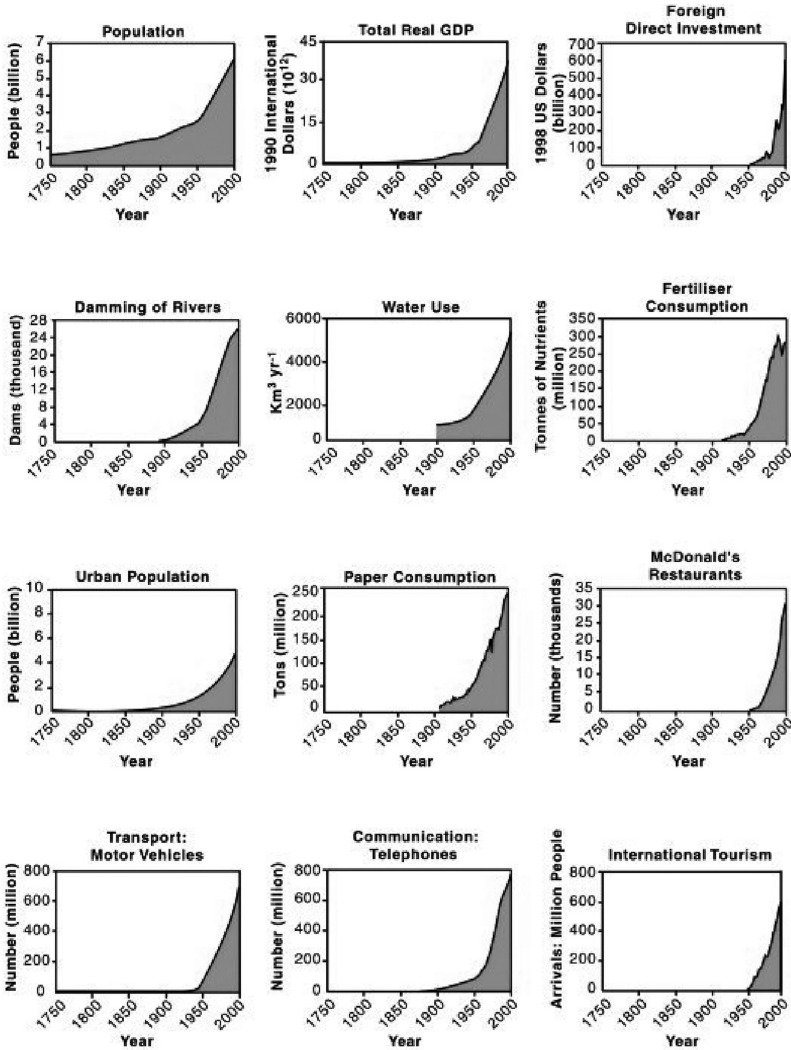


Figure 1a. With kind permission from Springer Science + Business Media: *Global Change and the Earth System: A Planet under Pressure*. 2004. pp. 132–133, Will Steffen, et al. Figures 3.66 and 3.67. Copyright 2004.

activity (Total Real GDP). It took all of *Homo sapiens'* history—roughly 150,000–200,000 years—to arrive at 1.6 billion precious souls by 1900. But in only 100 years, that number flipped—to 6.1 billion. Now, we are at 7 billion and heading for 9–10 billion within the lifetime of many readers. By 2050 that is, 8+ billion *more* people using earth, air, fire, water, and light than our great-grandparents did. Their world was not “hot, flat, and crowded” (Friedman 2008). Ours is, as is our children’s unto the third and

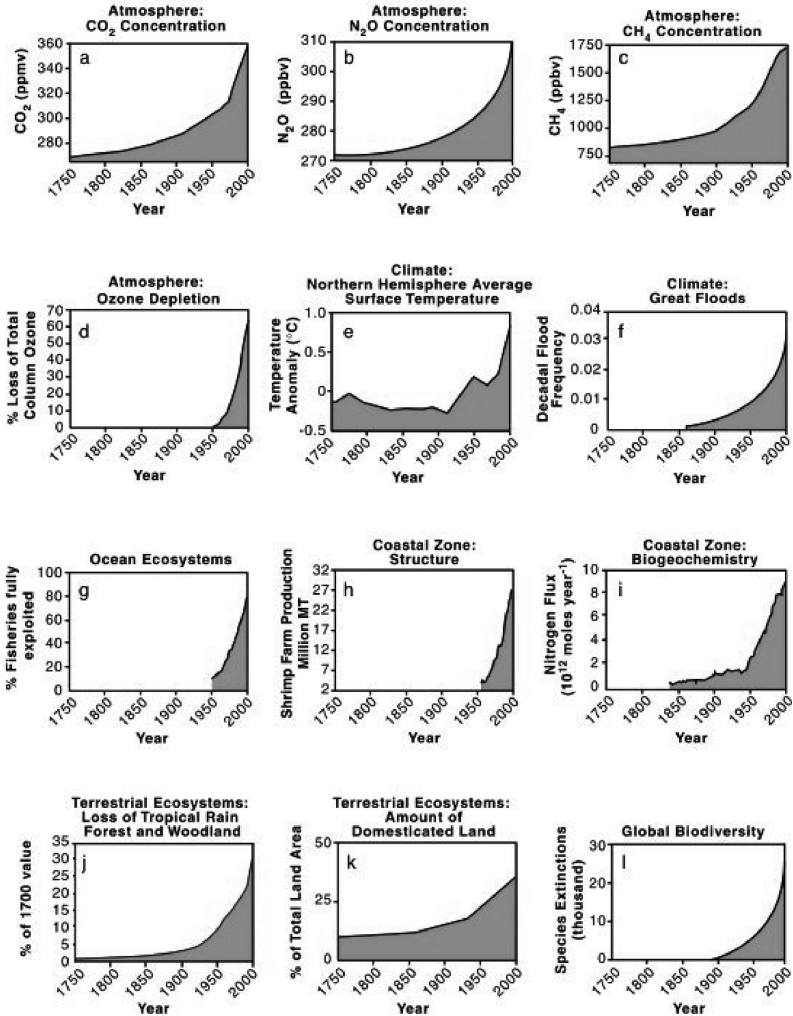


Figure 1b. With kind permission from Springer Science+Business Media: *Global Change and the Earth System: A Planet under Pressure*. 2004. pp. 132–133, Will Steffen, et al. Figures 3.66 and 3.67. Copyright 2004.

fourth generation of those that fear the Lord, and of those that do not as well.

Total real economic activity follows the same line, doubling the world economy since 1960 with a projected quadrupling again by 2050. Contrast that with earlier increases. John Maynard Keynes says that from a couple thousand years before Christ until the eighteenth century, there was little change in the standard of living for most peoples, at most a 100 percent increase over those four millennia (Keynes 1963, 358). Even a 100 percent

increase is not an impressive number over 4,000 years. But when Thomas Newcomen scooped coal into a new kind of engine, a practical steam engine in 1712, and replaced the equivalent of 500 horses, a new age was underway. Now each one of us “is effectively acting as a blue whale,” says biologist Geoffrey West, rather than the mackerel we used to be, “and it’s screwing up the whole system” (West 2007, C1).

The same curves on all the graphs have been possible because of fossil fuel energy. And, the graphs all expose the same pattern. Namely, the more energy you used, the more you produced; and the more you produced, the more energy you used. If Alan Durning is correct, global consumer classes produced, transported, and consumed as many goods and services in the prodigious half century from 1950–2000 as *throughout the entire period of history prior to that date* (Durning 1992, 38). That kind of unlimited economic growth is in fact our secular religion, our fundamentalism, and it has been possible only because a barrel of oil substitutes for “twenty-five thousand hours of human manual labor—more than a decade of human labor—more than a decade of human labor per barrel” (McKibben 2010, 27). An energy-intensive world has largely replaced and displaced a labor-intensive world. As a consequence, we are mining the planet at a rate far in excess of its own regeneration on its own nonnegotiable terms and timelines. “Each gallon of gasoline,” for example, “represents a hundred tons of ancient plants” (McKibben 2010, 28). Human water use is now so extensive that not enough is left for the rest of life’s ecosystems.

Such energy intensity has generated enormous human benefits. But the benefits have been tethered to almost pathological indifference to the rest of the planet’s well-being. If human well-being were primary, and the rest of the planet’s derivative, it would not matter. But, exactly the opposite is true. Planetary well-being is primary, human well-being is derivative (Berry 2006, 19). Neighborkeeping at the expense of Earthkeeping is a sure dead end.

The decade 2001–2010 is not graphed here. What do these years add? Since time does not permit the *ad seriatim* treatment of all these graphs, I will attend to only one development—climate change impacts. To let you know where we are going, I state the conclusions up front. (1) Humanly related climate change is the biggest thing to happen to the planet in thousands of years, and it is directly the consequence of energy use and policy. (2) The single most salient consequence is the fading of the planet we knew and the sweet spot of a relatively stable climate that allowed human civilizations. (3) We now face some binds from which there is no visible escape, binds related to energy and energy policy. The consequence is that *we* must change, in response to a changing planet.

The figures do provide the initial evidence of climate change. That is in Figure 1b: CO<sub>2</sub> concentration, average surface temperature, great floods, ocean ecosystems, coastal zone biochemistry, and global biodiversity. All share the screeching acceleration of the other graphs.

Yet, 2000 only foreshadowed what is presently happening. The key vector of climate change is warming water in the two great global commons, the atmosphere and the oceans. Warm air holds more water vapor than cold air. This atmospheric warming—the outcome of escalating energy-produced greenhouse gases—means increased evaporation. That affects more droughts in some areas and, now that that water is in the atmosphere, more deluge in the same or other areas. Flood damage is currently increasing by 5 percent a year across the planet (McKibben 2010, xii). Vermont saw “three flood emergencies in the 1960s, two in the 1970s, three in the 1980s—and ten in the 1990s” (McKibben 2010, xii) with ten more in the first decade of the twenty-first century. Iowa had both a 100-year flood and a 500-year flood within the space of 15 years and Nashville had rain for which its record books had no precedent. In the summer of 2010, Russia had its highest temperatures and worst drought, with hundreds of wildfires, while Pakistan suffered record monsoons, with thousands of deaths and millions of homeless, together with the loss of crops.

Nor are droughts and deluge the only factor. So is melting. The polar caps, the Greenland ice sheet, and glaciers are disappearing faster than the earlier scenarios forecast. Take only the Himalayan glaciers, those feeders of the great rivers, agriculture, and population centers of the largest settlements of Asia. Indian glaciologist Syed Iqbal Hasnain reports the melting is for three reasons: overall warming due to increase CO<sub>2</sub> emissions, changing rain and snow patterns such that less new snow is replacing what melts, and pollution from vehicles and smoke is covering the glaciers with carbon soot that turns their surfaces darker and less reflective, causing them to melt more quickly (cited by Kristof 2010, 10).

Then there is timing. Jesse Mugambi was still shaking his head, when we met in Geneva, over the snow that had just fallen on his crops at home, the first snowfall ever at that altitude, the lower slopes of Mt. Kenya, almost on the equator. The seasons are now changing and farmers do not know when to plant and expect the rains; or, as in recent years, not expect the rains because of extended drought. Too, new pests are appearing that did not bring their natural predators along. Should the farmers plant their traditional food crops, or something else? It has become a crapshoot for subsistence farmers and a dress rehearsal for living on an altered planet.

Turning to ocean warming, a simplifying is happening, with attendant loss of biodiversity. In some places, this is also an increase in undesirables. Jellyfish grow faster and produce more offspring in warmer waters. Nomurai jellyfish are now the scourge of Japanese fishermen, clogging their nets. A section of the Bering Sea is so full of jellyfish, it has been renamed “Slime Bank.” And speaking of slime, enormous sheets of a mucus-like material have begun to appear on the seas, some 140-miles long (McKibben 2010, 26–27). The complex, biodiverse water world that gave us life, including our own, is changing qualitatively.

Perhaps the most portentous change, however, is ocean acidification, the consequence of the seas absorbing more of the CO<sub>2</sub> pumped into the atmosphere. The oceans are now more acidic than anytime in the last 800,000 years. If we continue at 1950 rates (see the Climate and the Coastal Zone graphs in Figure 1b) the acid will be more corrosive than anytime in the past 20 million years, according to paleo-oceanographers. The Pacific oyster industry reported in 2009 that oyster larvae mortality had increased 80 percent, likely from the acid levels. Shellfish cannot make thick enough shells and innumerable coral reefs—those ocean nurseries—may be gone by the end of the century. This kind and level of change overwhelms systems that have been in place for ages.

Lastly, ocean waters absorb heat slowly and expend it slowly. This means that warming ocean waters have climate change “in the pipeline” for a very long time to come and that human slowing, even stopping, of CO<sub>2</sub> emissions will not change any time in the near future. Continued emissions can make far futures worse, however.

The point is two-fold. First, the experience of the planet from 1750, and especially 1950 on through 2010, is because of one thing: the availability and kind of energy that has powered the world with dirty fuels for 250 years. Second, the planet we presently inhabit is not the old one that has been in place for the entire period of the human species to date. In Bill McKibben’s phrase, “The Holocene is staggered, the only world that humans have known is suddenly reeling” (McKibben 2010, 5). Moreover, because of feedback loops, we can no longer turn off these epic changes. We can, however, make things worse. The Arctic may hold 20 percent of the undiscovered oil, and the oil and gas industry is already lined up to drill. BP, Conoco-Phillips, and Shell have bought leases to 4 million acres of the Arctic region. BP even built an artificial island near the coast so as to skirt rules that do not permit off-shore drilling. From the rig there, it will drill a long, largely horizontal line to the off-shore oil. All this means yet another pulse of carbon into the atmosphere to melt not just more of Greenland but those Himalayan glaciers. Bottom line? The planet has changed and now we must change with it. Our destiny is uncertain because the new planet will not work the same way the old one did.

#### RELIGION

What is the challenge to religion? The same as for all things human. Namely, “doing [some] first works over,” to cite James Baldwin. In *The Price of the Ticket*, Baldwin writes this: “In the church I come from—which is not at all the same church to which white Americans belong—we were counseled, from time to time, to do our first works over. . . . Go back to where you started, or as far back as you can, examine all of it, travel your road again and tell the truth about it. Sing or shout or testify or keep it to yourself,” Baldwin says, “but *know whence you came*” (Baldwin 1985, xix).



To do first works over means to reexamine everything from its onset and speak the truth as best one can.

First works, those by which we expect to work out our social salvation, are layered deeply in psyche and society. They generate the “normative gaze” that frames and guides feeling and thought alike (West 1982, 52ff). They fund our personal habits and the habits of our institutions. They show up in our modes of production and reproduction; our cultural sensibilities; our basic aesthetic, intellectual, and moral values. They furnish the content of our symbols and consciousness. They comprise, at day’s end, nothing less than our way of life, the way of life mirrored in the graphs.

For religions specifically, doing first works over, transitioning to a different way of life, means entering the ecological phase of religion, to render religious faith Earth-oriented and Earth-honoring. It means being converted to Earth and God in the same moment so that all religious impulses are measured by the same stringent criterion—their contribution to the planet’s well-being and their centering of the well-being of life’s generative parenting elements—earth (soil), air, fire (energy), water, light—in religious institutions as well as in the habits of the heart, in theology and ethics together with rituals and practice.

For some religions, this ecological phase will come more easily than for others. The Peoples of the Book—Judaism, Islam, Christianity—may have a more difficult time than, say, Hinduism, Buddhism, or numerous indigenous traditions. In part, this is because the roots, scriptures, and most of the formative practices of these three religions are sunk in the world brought about with the Neolithic Revolutions. The Neolithic Revolutions self-consciously reconfigured nature for the sake of human society and reorganized society in order to produce more effectively. From now on, and in great contrast to the 95 percent of the human experience that is hunter-gatherer society, society became a humanly designed, humanly ordered, set-apart rendition of nature. Christianity, Islam, and Judaism assume in virtually every line of their sacred texts and across their practices the Earth/human relationship wrought by the Neolithic Revolution. Almost nothing of the 95 percent of human history in nature, as nature, with nature is present in these holy writings and traditions of thought and action. How massive that deficit is, with its concomitant loss of human intimacy with Earth and human rapport with nature as the numinous, we will never know. The ethos of the bios and the cosmos is largely absent. Some biophilia and cosmophilia may still course in our veins, but the difference between praying “thy kingdom come” rather than “thy garden remain among us” is not small. Nor is the difference between an identity as Peoples of the Book and an identity as Peoples of Nature or Peoples of the Cosmos. Nor, for humankind as a whole, is the difference between being local, tribal animals, living in the confines of a small company of compatriots true for both hunter-gatherers and Neolithic settlements, and

being tribal and global at once in a world never beyond the daily imprint of our lives.

Add to this the later influence on much religion of the profound dualism of humanity from the rest of nature that is simply assumed since the Industrial Era and the Enlightenment, and you glimpse the rather strange newness of an ecological phase for these faiths.

Yet, religions are all about ways of life and shaping people inside and out for those ways of life. Doing first works over is a task long attuned to religious dynamics and traditions. In fact, almost all religions have their origins in creatively meeting the stark challenges of a burdened world. Religions normally arise at the hard hinge points of history, like the Axial Age, or some reformation. What they work for there is a different way of life.

But what should religions expect as the first response to the deep challenges we face, responses that will occur both within religions and apart from them?

The first and strongest effort will be to put new wine into old wineskins and sew new cloth onto the old. While Jesus, in Luke 5 (36–39) says “no one” does this, lest the new piece tears with the old, and the new wine bursts the old skins, in fact people do this kind of ill-fated patching and pouring all the time. Indeed, Jesus’s comments about the unintended consequences would seem to say that at least “some one” rather than “no one” has tried this. Were it not a regular habit, there would be little reason for Jesus to teach foolish disciples about it.

Differently said, key historical moments usually require outside-the-paradigm thinking and organizing. Yet, the first try is always to fit new knowledge and vocabulary inside the paradigms and molds we know and love. Rather than break the mold or exit the paradigm, both are retained and the wisdom attributed to Einstein, that we cannot solve basic problems with the same mind-set that produced them, is ignored.

To see this at work, consider an example. The example is what Aidan Davison calls “eco-modernity” (Davison 2001) and it *is* new wine. Modernity worked with a set of famous dualisms, those long-standing boundaries of mind and matter, human culture and resistant nature, and the sharp distinctions of humans from other creatures. Modernity also carried a largely mechanistic understanding of how things worked. This has now been largely erased in favor of knowledge that all life is seamlessly interconnected and the ecological has largely replaced the mechanical. This is new knowledge, new perception, and new vocabulary. Deep, wide eco-systemic understanding is new cloth and new wine.

Yet eco-modernity’s fundamental biases and habits remain modernity’s. The day-to-day practice of science, technology, and industry, including energy policy, features human mind and culture as the creators, controllers, and high-tech bio-cowboys who work ecosystems and genomes as they would their ranchlands. Furthermore, creatures are generic, not particular.

They are not even truly creatures, as biological individuals; they are, categorically “information” and “resources.” Humans are thereby recentered as masters without qualification, despite webbed interdependence; and ecology, molecular biology, genetics, and evolution itself find themselves, as practiced science, in the employ of a morality that views “all things bright and beautiful,” “all creatures great and small,” even “all things wise and wonderful” (hymn phrases) as information, resources, and property; in short, as pure capital in what is the eco-modern version of the oldest ethic of all, the master-slave ethic. Humanity is master, the rest of nature is slave.

To say it differently, genetics as a science may render us kin to roundworms, to say nothing of giraffes and bonobos, all mirroring the “zoo in you” (Shubin 2009, 173) that is your evolutionary pilgrimage. Ecology may map in gratifying detail the awesome webbing of life. And, Evolution with a capital “E” may present a dynamic universe still on its pilgrim way, with us a stupendous expression of it, even if only a wink in its regime of time. Such is indeed the new cloth and new wine of recent discovery. Yet, these sciences are captured by the present energy economy for an ethic that retains modernity’s hubris as that is married to entrepreneurial courage and engineering confidence. Life is chiefly a production, management, and security problem, subject to technological remedies based in rigorous science and the wizardry of the market. Life is not a species problem, or a problem of the human soul or spirit, or a matter of evil and injustice and things going wildly awry on a regular basis by incremental means. Nothing here, in all the talk of energy technology and policy, has any intrinsic need for the spirit, much less repentance or truth and reconciliation.

To illustrate new wine in old skins, we could use the great energy corporations.

Say, “Beyond Petroleum” BP, with its yellow and green sun and sunflower logo. Or algae-interested Exxon-Mobil. New cloth on the old garments.

For a different illustration, consider the parameters to include green growth as a major new movement. Thomas Friedman, though he did not mention climate changes and the planet’s physical system changes in either *The Olive and the Lexus* or *The World Is Flat* got religion of a sort in *Hot, Flat, and Crowded*. He even claims the world has entered a whole new era, one he names the Energy-Climate Era. The present date is 1 E-C E. And very big changes are afoot.

But do *we* need to change, just because the planet is no longer the old one and has entered a new era because of geophysical change? Not really, not beyond shifting energy sources from dirty fuels to clean ones, nonrenewables to renewables. And given the right incentives, leadership, and education, entrepreneurs and engineers can largely accomplish this task. Simply go massively green. Green growth is the path out of our troubles.

Gore joins Friedman here. The end of *An Inconvenient Truth* lists the things we can do to save the planet. They do not ask us to fundamentally change our way of life but instead change your light bulbs and plumbing. There is no deep critique of corporate global capitalism here even though “the Great Collision” (our graphs) *is* the collision of capitalism’s economy with the economy of nature, of which it is part. Rather, the modern world, Friedman says, is a “growth machine” “no one can turn off” so declare “Code Green” and put two plug-in hybrids in every garage instead of the gassy ones. “We don’t just need a bailout,” writes Friedman. “We need a reboot. We need a build out. We need a buildup. We need a national makeover” (McKibben 2010, 50, citing Friedman).

But it is not a makeover, it is the same way of life, now powered by green growth instead of grey and brown. Bill McKibben cannot resist noting that the Friedmans live in an 11,000 sq. foot Maryland mansion they designed. Green growth in such fashion is definitely new wine, lots of it, but in the old skins. It is new clothes sewn on old cloth and hung in big walk-in closets.

Another example is our language. The language befits the planet we used to live on and continues our relationship to it. The biggest human-caused environmental disaster in U.S. history is called a “spill” (the BP off-shore oil rig explosion in the Gulf of Mexico). Invoked thereby is a world in which we have an unfortunate mess that we clean up. It is costly and inconvenient and requires some short-term sacrifice and spending of good profit but then life returns to normal.

While “spill” is on one side—the regrettable mess we have made, described with a very mild word—on the other is aggressive technological problem solving. Here, the language is not mild, but violent. The language is of top kill, bottom kill, static kill, junk shot, choke line, kill line. The escaping oil is itself the aggressor, moreover, not those doing the killing. It is the “ogre that keeps coming at us.” And while it is “mortally wounded it may not be dead” yet, despite all the kills (*The New Mexican* 2010a, A1, A8). Here is wayward nature conquered by strong masters who have no true use for it beyond human means for human ends. This is the old cloth and old wine of the industrial paradigm and master-slave ethic.

The change will have to go deeper than “eco-modernity” and different energy sources and tools. Coping with the Earth we have changed and which is now rather ironically out of our control because of our efforts to control nature, even conquer it with Prometheus’s gift of fire—this will require some different first works and a different Earth/human relationship. How, when our destiny is uncertain and we are on a planet that is changing and will change much more, do we simultaneously address, as matters of heart, mind, institutions, and policies, such as the following? This list is four key challenges presently taken up in Santa Fe’s Sustainability School: (1) Controlling global warming while distributing the world’s

wealth more equitably. (2) Boosting the economies of developing countries while preserving biodiversity and ecosystems. (3) Figuring out whether technological or traditional, cultural solutions work best. (4) Looking at the broader implications of social unrest brought on by environmental problems (*The New Mexican* 2010b, C-7). There is a fifth not on the school's agenda: (5) Bringing the sixth great wave of human-induced species extinction to an end while simultaneously addressing the habitat needs of unprecedented numbers of human beings.

Before we outline what religious faiths bring to doing such first works over, a couple binds ought to be noted.

There has been a Plan A for countries seeking to be better off. It is still the basic strategy. It is called the Washington Consensus, and it goes like this. Reform the farming to look like ours—industrialized agriculture and factory farming. Send the displaced peasants off to the cities to get jobs making cheap stuff for the global market. This will lift the masses from poverty and provide new markets. This has worked, by and large, with China and India, Brazil and Indonesia as prime examples. Yet, Plan A only works if we have cheap coal and cheap oil and burn lots of it. We can add nuclear and some renewables as fast as we can, but we will not be done with oil and coal—lots of both—if we stay with Plan A. That in turn portends more extreme climate change, so we feel compelled to move to Plan B.

Plan B however, does not exist, at least not in the form of serious national and international energy policy. It could exist in the form of a great bargain, by which the richer nations share with the poorer in a transfer of wealth so that the rich ship enough windmills and solar panels in exchange for the poor not burning their coal. Or, the richer help build truly green factories so that the poor do not burn their coal. Short of such global transfers, the poor will burn their cheapest, most abundant fuel in the effort to leave poverty behind (McKibben 2010, 78–79).

That is one bind. The second is related; namely, how to back off an economy that only knows how to work with growth, including material growth. At least how to do so without plunging into perpetual recession or depression. How do we imagine smaller, how do we imagine less complicated, how do we imagine less vulnerable? When society was small and nature large, growth made good sense. When that key ratio is reversed, however, material growth does not. It certainly does not when the energy sources and policies keep pumping CO<sub>2</sub> aloft (McKibben 2010, 102–106). Already way past (387 ppm) what we thought might be safely managed (350 ppm), we are not slowing the pace.

Those two closely related binds are enough to make the point: we face a long, hard transition to some uncertain destiny for present and future generations on a planet that is not aging gracefully.

We finish with religion's potential contributions to negotiating this transition. (The order that follows is not meant as a rank order of importance.)

The first contribution, often mentioned, is the mobilized constituencies of religions and their considerable material resources. One tally says the major religions of the world own 8 percent of the habitable surface of the planet; are the third largest investing group; have run, founded, or set up some role in over 50 percent of the schools; and publish more works annually than the rest of the publishing industry combined. Most important, 85 percent of the world's population professes a faith. All in all, it is a considerable presence (Palmer 2009).

The second contribution is long experience with patterns of death and renewal; with living amidst conflicting forces, even ages; with making a way where there is no way; with generating hope and new life in the midst of despair and loss; with launching new ways of living together. In a word, most religions carry genes adapted to life at turning times, and the hard work of doing some first works over. Not least, the changes effected by religion have real staying power. They affect values, habits, and practices that persist in a way of life that lasts several lifetimes and more. They shape culture at profound levels.

The third contribution is the particular work religion does among creatures of symbolic consciousness. Religious faiths engage people operating in the register of the spirit (Taylor 2007, A20). Through ritual and symbols and symbolic consciousness, religions imaginatively construe human experience of the world so as to invest it with meaning and provide motivation, energy, and guidance. They grapple with sense-making on a grand scale—"rearranging the nonreligious furniture of our mind into a coherent whole" ("The Origin of Religions, From a Distinctly Darwinian View" 2002, F2). Thus is religious meaning cosmic in its reach (the big questions of origin, destiny, and purpose), sacred in its value (questions of morality and ultimate standing), and unifying in its drive (the coherent whole). In the process, religion gathers up the human experience of nature. Lasting, cross-cultural symbols are usually lifted directly from nature: the sacred mountain, the rivers of crystalline waters, the Tree of Life, the caves of the gods, the deserts of our lives, the rock from which we are hewn, springs of living water, Mother Earth, and Father Sky. For its ecological phase, religion will yet again be recasting meaning, telling the story of our lives, and gathering the materials for that from symbol-rich nature, though now a diminished nature about which we will grieve—religiously.

Lastly, there are substantive, deep traditions shared by mostly all religions. None are pristine. There are no pristine traditions. That means, these traditions of needs must also be measured by Earth-honoring faith and be converted to Earth in order to serve the ecological phase of their home communities. But they are "deep" and cross-cultural and millennia-old for a reason. They speak to the human heart and spirit and they have answered to human longing in a burdened world. I simply list them and

the forces they address, forces that on balance are now largely destructive of a habitable Earth.

*Asceticism* is about saying Yes! and saying No! in a disciplined way of life that is spiritually rich and materially simple. It seeks, in the face of a dominant culture it judges to be morally corrupting and spiritually unfulfilling, to forge a counter-world. Resistance to distracting and corrupting attachments—ostentation, conspicuous consumption, loose sex—goes hand-in-hand with constructive efforts to embody harmony with nature and society in the details of life—in clothing and diet, agricultural and healing practices, governance, art, architecture, and liturgy.

The kind of asceticism most needed now is one that loves the Earth fiercely in a simple way of life, with disciplined and heightened senses for the sacred, holy, and awesome in all of life.

Asceticism's challenge is utterly clear. It is self-restraint and self-mastery, or self-control, in the face of arrogant consumerism and materialism advertised as the good life itself. Earth-honoring asceticism says no to both the spiritual vacuity and the material destructiveness of institutionalized consumerism.

*Sacramentalism* is another deep set of religious traditions. Across sacramentalist traditions, the great theme is the same. Namely, life as the unmerited and awesome gift of God and the medium of grace. In these traditions, life in its totality is brought into the worshipful presence of God and there renewed in contemplative and sacramental practices. Its story is one of a God beyond dimensions we can ever know, yet a God as near as the grain and the grape, the water and the oil, the kiss of peace, the lover's touch.

Sacramentalism is the antithesis of the working "theology" of modernity's institutions and practices. Modern institutions and practices assume an utterly plastic view of non-human nature. Nature is "resources" and "information." "Natural resources" and "capital," like "human resources and capital," now even "social" and "moral" and "spiritual" capital, betray a mindset that is instrumental with a vengeance and devoid of any sacramental sense. This instrumentalism and its commoditization of all things belong to a disenchanting world, where the numinous is beaten from the common and the sacred is leached from the ordinary. Value is only value for us and often that is further reduced to economic value only. ("I wonder what that stone is worth?") The reigning relationship is that of "use" only, not beauty. For sacramentalism, all material reality is sacred and possesses a value and beauty we participate in, but do not create and cannot veto.

*Mysticism and the contemplative life* is yet another deep tradition set. Mysticism and contemplation rest in the conviction that "we can touch with our living hearts the Heart of the World" (Gottlieb 1999, 149) and that we can do so in ways that transcend the hold that forces of division

have upon us so that we experience union and communion with all that is. This is a prior unity, a given reality that we did not create but to which we belong, profoundly. The struggle is always between transcending wisdom and powers that split and fragment. In the mystical experience, self falls away, the heresy of “mine” and “thine” falls away as well, and the vision quest of the mystic ends in the cool cosmic fire some name “God” and others refuse to name at all.

I add that this mystical experience often happens in the direct encounter with a simple detail of nature—a leaf in spring, a reddened vine in autumn, a walk on the beach, a child asleep in your arms, a seed silently exploding into new life, an afternoon leading a creek life.

The challenge of mysticism and its sense of communion with all that is, is the challenge to a commoditized world that lives by subject-to-object relationships only, rather than subject-to-subject ones. We easily treat all else as objectified “other.” But the mystic knows that all *that* exists, coexists; we belong to a fierce communion called creation. The interbeing of nature-rich mysticism is an antidote to modern fragmentation and alienation. It understands that the good is truly common and held in common by common elements. It understands, like science does, that everything is microcosm of the macrocosm, that all is starseed.

Then, there are *the prophetic-liberative traditions* revived in liberation theologies, including eco-feminist theologies. For the Hebrew prophets, redemption is always the redemption of all creation, human, and nonhuman, together. The prophets’ vision is the liberation and fulfillment of all life, from the cell to the community, a struggle inclusive of the poor, the weak, the marginalized, the diseased and disfigured, together with exploited and exhausted nature. The God of mercy and compassion, who is also Judge, “knows” their suffering and goes before in the long journey to a teeming land and fertile Sabbath. Where there is justice, this tradition says, there is abundance for all, for all the children and the land itself. Where there is injustice, the covenant with Earth is broken.

In short, this is a justice-focused tradition that addresses poverty and inequality, other forms of violence, and environmental degradation together. It rejects our habits of loving some bodies among God’s children more than other bodies, and hating or devaluing some bodies more than others, on grounds of race, gender, sexual orientation, class, culture, or creed. With some tweaking, this tradition set also offers an account of human responsibility that encompasses the biophysical, even the geo-planetary, as well as the sociocommunal. The issue this tradition set now poses is how to reorder moral worlds so that all creation within our reach is considered community, with justice inclusive of the whole community of life.

The wisdom traditions—yet another set—are pan-human religious and philosophical traditions. They tend to underscore prudence, moderation in



all things, and the common good, often including the goods of the common itself—the soil, water, air, fire (energy). Such prudential orientations now say such as the following. Do not subject a contracting planet to an uncontrolled experiment. And, if an entity cannot be reclaimed, reused, and recycled, do not make it. If it cannot be reproduced without deleterious effects, do not grow it. If the probable consequences of its use cannot be reasonably known, tracked, and paid for, do not venture it. And, since we all mess up, and truly do not know much about what we are doing to the planet, keep the scale small and the margins of error large.

Asceticism vis-à-vis consumerism, sacramentalism vis-à-vis rank commoditization and rank utilitarianism, mysticism vis-à-vis alienation, a human/nature dualism and fragmentation, prophetic-liberative practices vis-à-vis inequality and oppression, wisdom vis-à-vis imprudence and reckless judgment—such begin to locate what, added to the rest of our list, religions can bring to the long, hard work of doing some essential first works over. Which to say, in different words, what religions can bring to the difficult project of finding out what it means to be a human being on a diminished and different planet, finding out what it means to craft, with joy and hard work, a different way of life, new wine into new skins. In the end, the subject is death and renewal. It's quintessentially religious.

#### NOTE

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