An Immense Journey
Religious Naturalism and the Great Story

A Tribute to Julian Huxley, Paul Martin, Aldo Leopold,
Thomas Berry, Brian Swimme, Annie Dillard, and Loren Eiseley

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There are those whose sense of the divine comes most profoundly through intimate communion with the natural world. We are the religious naturalists, and we go by many names.

Distinguishing us from what is usually meant by the terms "atheist" and "secular humanist" is our insistence that we be counted among the religious of the world. Our form of religion is no less than any other. To us, the natural world is sacred, even holy. Ultimacy is diffuse, pervasive; it includes but hugely transcends human consciousness and the human collective. Our interpretation of that ultimacy shapes our values and may fill us with an urge to live our lives in ways that serve the future of the Whole.

We have religious practices of a sort, individual practices. Meditation, even prayer, may offer some of us access to our own psychological core, but we do not typically go there to experience a power greater than ourselves. In contrast, we commune with the inner divine intensely, luxuriently whenever we shift into a state of creative flow. For me, that happens often when I write, when I dance, when I am engaged in ideas-rich conversation.

Some religious naturalists are comfortable with God language; many of us are not. At bottom, if the primary images that the word God calls to mind are not fully integral with our beloved community of life, if those images in any way suggest that this God values the human more than the spider, then "God" is not a term we choose to use.

Religious naturalists find ample cause for reverence in the vast world, and it is the same world that science describes. In fact, science books, especially those that contain the very soul of the author, can occasionally plunge us into an ecstasy of the divine, eyes racing across the page, or eyes blinking, stunned with joy and gratitude.

I have had such experiences on many occasions — especially while reading exquisite writers, living and dead, who show how deeply meaningful science can be: Charles Darwin, Annie Dillard, James Lovelock, Edward O. Wilson, Loyal Rue, Scott Russell Sanders, Loren Eiseley, Diane Ackerman, Paul Martin, Tim Flannery, Aldo Leopold, Thomas Berry, Brian Swimme, Ursula Goodenough, Dave Foreman, Julian Huxley.

Religion Without Revelation: The Gift of Julian Huxley

I learned of evolution and was fascinated by fossils as early as junior high. As a zoology major in college, evolution was inseparable from most of my coursework, though it was not offered as a discipline in its own right. An understanding of evolution did not enter into my communion with the natural world at that time in any significant way. It did not assist my experience as a religious naturalist.

For an evolutionary understanding to enrich my communion with the natural world, I required more than textbooks. I needed that knowledge translated into affect and emotion. I needed to have evolution extended into the realm of meaning by a master meaning-maker whose delights and longings mirrored my own. I needed to be mentored by Julian Huxley.

Julian Huxley was the grandson of Darwin's great friend and ally, Thomas Henry Huxley. He was trained as a biologist, and as a young man in England he made important contributions in his field. His was a mind that embraced the whole living world. He wrote from his soul, and he wrote with a fire passed onto him by literary mentors long dead:

> In art it is a triumph if a Beethoven or a Titian finds new ways of building beauty; in science it is acclaimed a triumph if an old universally accepted theory is dethroned to make way for one more comprehensive; but in the religious sphere the reverse is the case, and change, even progressive change, is by the great body of religiously minded people looked upon as a defeat. Whereas once it is realized that religious truth is the product of human mind and therefore as incomplete as scientific truth, as partial as artistic expression, the proof or even suggestion of inadequacy would be welcomed as a means of arriving at a fuller truth and an expression more complete.

Many educated atheists of my parents' and grandparents' generations were well aware of, even inspired, by Julian Huxley's 1958 book, *Religion Without Revelation*. There Julian coined the term "evolutionary humanism"

to characterize his brand of religious naturalism. Evolutionary humanism is a religion for nature enthusiasts open to embracing the majesty of deep time. Humanism is, unfortunately, a word with unfavorable connotations in our own epoch of environmental duress, but Julian's variety of humanism was far from anthropocentric.

Julian Huxley died the year I graduated from college, so it was only his books, and the compelling spirit who lived on through those books, that would be my guide. I stumbled upon his writings in my late 30s, when I retreated from the work-a-day world for several years to follow my bliss in libraries and bookstores.

What a gift I received from Julian! Truly, it was a religious awakening. Thenceforth, the evolutionary epic would serve as foundation for my religious experience.

What precisely did I learn from Julian? What worldview and wisdom am I compelled to pass on through my own writings and presentations? What quickened my soul to such a degree that everything in my life would shift: vocation, intimate partnership, home?

For one, I learned to see patterns in evolution, notably, the patterns of convergent forms suggestive of inevitability, which to me is a comfort, given the modernist proclivity to find only the random in the real. This inevitability I do not read as evidence of a divine plan. Nonetheless, it is something to be expected, and it is something to be counted on in the future, just as one can expect rain when sea clouds rush up a mountain.

For example, Earth, it seems, was determined to have sight. Diverse means of seeing emerged independently, "convergently," among the major animal phyla, from the dot of color on the tip of a snail's lensed eyestalk to the crystalline compound domes on the fossils of ancient trilobites. Similarly, Earth was determined to fly (as insects, pterosaurs, birds, bats) and to glide (as flying squirrels, flying fishes, aerial snakes, lofting spiders). Earth would have there be trees, too; time and again the tree form would emerge from lowly ancestors.

I learned through Julian the core tenets of religious naturalism, which gave precision and expression to my own intuitions. What we all share is an instinct to look for ultimacy in the synergies of matter and energy. The creativity of the cosmos emerges through a community of interacting agents (be they quarks, protons, atoms, molecules, or organisms). To use the religious language of Thomas Berry, creativity comes from "a communion of subjects." These subjects are engaged in a kind of intense

conversation — not always pleasant — that is riveted to the present moment. Deer run from cougars in the now, spiders weave their webs in the now, I type these words in the now. Divine wonders nevertheless emerge that will give shape to the future.

The myriad conversations of subjects (agents) within the natural world all take place within a context that is not always pleasant either. Chaos and cataclysms are real. As Gregory Bateson so splendidly put it: there is no such thing as organisms, only "organisms-in-environment." Elisabet Sahtouris expands on Bateson's point in this way: "In the real world there are no rabbits in habitats; rather, what we find are *rabbitats.*"

Communion, conversation, context: this is the recipe for creative emergence. This is the trinity at the helm of the four billion year journey of life as we know it, and of the billions of years of prior cosmic creativity.

Seeing Ghosts: The Gifts of Paul Martin and Aldo Leopold

Long before I gathered the evolutionary sciences into my form of religious naturalism, I was feasting on the ecological sciences.

Ecological understanding gave me depth experiences with my beloved community of life virtually on demand. I knew I had esoteric knowledge and trained senses that allowed me to experience what others could not. And I knew I could keep going deeper and deeper the more I learned and the more I ventured into the wild.

In the mid 1990s I began to acquire knowledge and to train my senses in a way that would allow me to experience the past in the fruits of today. This was not just ecology; it was evolutionary ecology. Today, I cannot spy a ginkgo tree along a sidewalk without conjuring the dinosaurs of the Jurassic, without remembering that this exotic tree from China was native to my own continent for more than a hundred million years — thus for far longer than bears or bison have been native to this land.

Thanks to my mentor and friend Paul Martin, I cannot slice an avocado without feeling the shaping influence of monstrous South American beasts, extinct for just a few thousands of years and for whom the avocado fruit was intended. No creature native to South America today can swallow and defecate that enormous seed — which is, of course, the function of a seed dispersal partner.

The same holds for the sweet pods that dangle in the fall from a favorite American street tree: honey locust, *Gleditsia triacanthos*. These pods are still waiting to be snatched by the uplifted trunks of American elephants: our mammoths and mastodons, extinct a mere 13,000 years.

I thus have come to see ghosts along the sidewalk, ghosts in my kitchen. Daily life now brings reminders of my creation story whether or not I venture beyond the pavement.

Even better is ghost watching in the source environment, where the plants still grow in the wild. I've experienced mammoths lurking around honey locust, osage orange, and *Gymnocladus* trees in the Flint Hills of Kansas. I've gone ghost watching, too, in the Sonoran Desert with Pleistocene ecologist Paul Martin. Because Paul's work is to discern the ecological interactions of the geological epoch commonly known as the Ice Ages, his vocation demands that he conjure ghosts. He must be able to stand in the presence of North American plants alive today and envision their extinct partners: the native camels and ground sloths who interacted for millions of years with the fruits and thorns of cactus and mesquite. In 1992 Paul wrote:

> To behold the Grand Canyon without thoughts of its ancient condors, sloths, and goats is to be half blind.

Paul Martin is a scientifically trained religious naturalist who has the courage to speak and write from the heart. When Paul invited me to join him in staging a "Mammoth Memorial Service" at the great Mammoth Site at the southern edge of the Black Hills of South Dakota, he lured me by suggesting that this might well be only the second public memorial service for an extinct species. Aldo Leopold presided over for the first, a half century earlier. "On a Monument to a Pigeon" — the Passenger Pigeon — was published posthumously as a chapter in Leopold's *Sand County Almanac*.

Paul and I began our public memorial service by reading from the eulogy Aldo had delivered at the dedication of a monument in southwestern Wisconsin, a monument that still stands:

> Men still live who, in their youth, remember pigeons. Trees still live who, in their youth were shaken by a living wind. But a decade hence, only the oldest oaks will remember, and at long last only the hills will know.

Aldo Leopold was referring to the massive flocks of pigeons that once blackened the skies of the Midwest and roosted in its forests. Passenger pigeon numbers plummetted toward the end of the 1800s. His reference to trees "remembering" the pigeons is thus metaphorical, save for those still bearing stubs of limbs severed by the sudden burden of an alighting flock.

I can be sure that Aldo would have thrilled to learn that there are still trees, like honey locust, who *genetically* remember the mammoths. That understanding would not emerge until several decades after his death. Paul Martin and Dan Janzen would put that ecological-evolutionary puzzle together. Still, Aldo Leopold, ecologist extraordinaire, espoused a religious naturalism deeply enriched by evolutionary understanding. This, too, from his Monument essay:

> It is a century now since Darwin gave us the first glimpse of the origin of species. We know now what was unknown to all the preceding caravan of generations: that humans are only fellow voyagers with other creatures in the odyssey of evolution. This new knowledge should have given us, by this time, a sense of kinship with fellow creatures: a wish to live and let live, a sense of wonder over the magnitude and duration of the biotic enterprise.

Celebrants of the Great Story: The Gift of Thomas Berry

Our modern malaise draws, in part, from a perhaps subconscious fear that Earth itself doesn't particularly need us, that we don't have an ecological function that serves the community of life. We take, but we do not give. At our best we live lightly on the land; our ecological footprint reduced. We do less harm. Doing less harm is essential, but it is not an inspiring vision for the future if that is the only vision we can muster.

Consider our hominid ancestry. Our primate forebears did have an ecological function — indeed, more than one. Our ancestors served the plants who fed them by defecating seeds. When we came down out of the trees and onto the African savanna, we did an even better job of dispersing seeds to fresh soil, soil enriched by our own fecal gifts. We were also excellent food for lions and leopards, and our flesh nurtured many parasites. When dead, we fed the vultures, hyenas, and bacteria.

Now? Few in my homeland defecate on the ground anymore. If and when we do, it is pollution, owing to our sheer numbers. And if we do defecate

with discretion, the seeds we scatter are almost always unfit or unwelcome exotics. Our feces have lost their ecological function.

So too, if a lion perchance takes one of us (a mountain lion, or couger, here in North America), then that lion may have got its dinner but it can count on being hunted down and killed. Parasites are not tolerated either. And no matter how much I desire to have my corpse tossed off a cliff of the Grand Canyon, so that my flesh might become that of the endangered condor, the best I can hope for is that a handful of ashes will enrich a tree.

So who are we, modern Homo sapiens sapiens? What are we for, from Earth's perspective?

Julian Huxley gave me an inkling that there was, in fact, an answer that was both scientifically rigorous and inspiring. In 1957 he wrote:

> As a result of a thousand million years of evolution, the universe is becoming conscious of itself, able to understand something of its past and its possible future. This cosmic awareness is being realized in one tiny fragment of the universe — in a few of us human beings. Perhaps it has been realized elsewhere too, through the evolution of conscious living creatures on the planets of other stars. But on this our planet, it has never happened before."

So! The human role that benefits the whole is no longer ecological; it is evolutionary. It emerges through our studied awareness of deep time. It is nonetheless a huge contribution. And unlike dispersing seeds or becoming food for predators, parasites, and scavengers, this role is unique to us. No creature except the human remembers the trilobites, the great ginkgo forests that encircled the Arctic, and nobody except us is aware that honey locust is still expecting a mammoth to drop by for a snack.

To know is not an end in itself. Julian Huxley's perspective all too easily feeds the hubris of us science types. It was not until I came into the presence of cultural historian Thomas Berry that I began to see that surpassing the knowledge given by the sciences are celebratory expressions of that knowledge — including eulogies for extinct birds and beasts. Perhaps those best equipped to celebrate the evolutionary epic are children — children who still play with and dream about dinosaurs. Not only the memory but the spontaneity and excitement carries on through them, and by the hundreds of millions. Because of children, Earth, in a way, still plays with dinosaurs.

Catholic theologian Elizabeth Johnson applies Thomas Berry's wisdom in this way:

> 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.

We Are Stardust: The Gift of Brian Swimme

Ursula Goodenough — biologist, friend, and religious naturalist — writes movingly in her book, *The Sacred Depths of Nature*, of being "overwhelmed by terror" under the immensity and radical otherness of the night sky. Existential angst was so intense that she rolled over in her sleeping bag and buried a tearful face into the pillow. Since then, she has made a "covenant with mystery."

Ursula's is one form of religious naturalism. A religious naturalist can easily celebrate mystery, for it is a truism that the more we come to know, the more we know that we do not know. Consider: Until 1927 we knew of just one galaxy: our own. Then Edwin Hubble used his telescope to measure red shifts of celestial objects. From then on, the night sky was even less scrutable. Myriad galaxies, and clusters of galaxies were all galloping away from one another.

Seventy years after Edwin Hubble recreated the heavens, a space telescope bearing Hubble's name captured a picture, the "Hubble Deep Field," which convinced astronomers that our Milky Way is but one of a hundred billion galaxies. We do not know any of those galaxies in any substantial way. The Universe, in that sense, is deeply mysterious.

Ditto for dark matter and dark energy. Since 2002 most scientists have come to accept that 23 percent of the Universe consists of "dark matter" and another 73 percent is "dark energy." Yet nobody knows if dark matter is really matter, or if dark energy is really energy. Both are mysterious because they can be detected only by their effects.

Religious naturalists so inclined (as well as science-friendly theists and pantheists) are thus fully justified in finding a kind of spirituality and ultimacy in the interstices of the scientifically known. They make their covenant with the unknown, with Mystery, called by some "God."

For myself and many others, mystery is not something that allures. I recognize it is there, yet I choose to focus on, bond with, celebrate, and find divinity almost exclusively in the known. The more I know, the more I am in awe. What is known is so big and powerful, so ancient and everlasting, so complex and creative that I can but fall on my knees, swooning. In short, what is known is so far beyond human scale and capabilities that reverence is a completely natural response.

It helps to have a connection, a deeply felt, even personal, connection with what is revered. For me that connection is pretty much automatic for anything earthly, especially if I have an opportunity to be fully present to the creature or phenomenon in question and to do so repeatedly. But what is Andromeda or Antares to me? What difference do they make in my inner world?

Unlike the Lion King, I cannot look at a constellation and see my fallen father. Unlike some indigenes, I cannot look at the stars and see campfires of those who have passed on. Until very recently I had no connection whatsoever with the night sky. Had I been more in touch with my feelings, I too would have turned into my pillow and wept. But now, thanks to Brian Swimme and others, I can see and celebrate ancestors up there, too.

Not until 1958 did a combination of empirical evidence, predictive power, and mathematical calculations convincingly place the origin of complex atoms inside stars. We now know that only hydrogen and helium formed "in the beginning." Carbon and calcium came much later. Joni Mitchell was spreading scientific truth when she included this verse in her song *Woodstock*, "We are stardust, billion year old carbon. We are golden. And we've got to get ourselves back to the garden."

Carl Sagan said the same thing beautifully in his television program, *Cosmos*, which I watched avidly in the early 1980s:

> We are the local embodiment of a Cosmos grown to self-awareness. We have begun to contemplate our origins: starstuff pondering the stars; organized assemblages of ten billion billion billion atoms considering the evolution of atoms; tracing the long journey by which, here at least, consciousness arose.

Carl's words were soon forgotten. It was not until the early 1990s that I would encounter "stellar nucleosynthesis" in a way that would finally stick.

And another ten years would pass before I would feel competent to teach this subject (and its meaning) to novices. Books and tapes by cosmologist Brian Swimme launched me on this journey of outer and inner discovery, and then my own bookish inquisitiveness took over. Since then, I have marveled at how the atoms within grains of sand (silicon), when mixed with the contents of a child's balloon (helium), and brewed within the belly of a star, will yield calcium, the very stuff that now stiffens my bones. I still cannot get over that the silver on my finger was once iron at the core of a collapsing star.

Brian Swimme has written:

> We are in the midst of a revelatory experience of the universe that must be compared in its magnitude with those of the great religious revelations. And we need only wander about telling this new story to ignite a transformation of humanity.

A Frayed and Nibbled Survivor: The Gift of Annie Dillard

I recall no deep emotional bond with the night sky as a child. Perhaps this had something to do with my growing up at the edge of Detroit during the two decades preceding the Clean Air Act. More likely, I was simply a child of the Earth from the get-go. Bonding with fascinating creatures was an expression of something innate. For the stars, however, I would need coaching.

I remember awakening day after day to the urgent invitations of mourning doves, heartbroken that, as a 3 or 4 year old, I could not simply rush out to greet the birds while my parents still slept. Around the same time, I began a summer project of searching ours and a neighbor's lawn for fallen feathers. This was a practice I attended to religiously, and kept up for several years. I still have the scrapbook that contains my trophies, with probable identifications carefully printed onto labels.

Both of my parents modeled a love for the natural world. Only my mother went to church, however, and it was a given that her children went with her. From the very beginning I sensed that the trees and the clouds were my father's church. On my fourteenth birthday, he would pass that tradition on to me.

I do recognize a cost, however, of choosing his path over that of my mother's, for I do not have faith that this small self within a vast community of life can hope for any special dispensations; there is nothing

for me to pray to or for. Instead, I go into nature when I am troubled. Yet even there I do not expect to be comforted. I will find solace, yes, the solace of coming home. But solace is not the same as comfort, as being held by a benevolent grace. And there is much in raw nature that is far from pretty.

Nature is undeniably red in tooth and claw. But it is not only that. In the last few decades of the twentieth century, Lynn Margulis and colleagues worked a transformation in biology and in the philosophies drawn out of biology. Symbiosis and cooperation must now be regarded as no less intrinsic to life and evolution than strife and competition. Yet if those who popularize these constructive and heart-warming powers do not also acknowledge (indeed, celebrate) the creative-destructive role that the opposing forces play, then in my view they are not of our tribe.

On the other hand, we religious naturalists can sometimes be tempted to commune with the dark side in unhealthy ways — ways in which solace becomes as secretive as a shrew. Annie Dillard reveals such struggles in her *Pilgrim at Tinker Creek*, published in 1974. Along a beloved creek in Virginia, she witnesses violence, breakdown, death, suffering. Finally, Annie dives into the darkness, bypassing solace. With eyes wide open, she surrenders, and thereby finds the grace of faith. I have these lines from *Pilgrim* committed to memory:

> I am a frayed and nibbled survivor
> In a fallen world, and I am getting along.
> I am aging and eaten and have done my share
> Of eating too. I am not washed and beautiful,
> In control of a shining world in which everything fits,
> But instead am wandering awed about on a splintered wreck
> I've come to care for, whose gnawed trees breathe
> A delicate air, whose bloodied and scarred creatures
> Are my dearest companions, and whose beauty beats and shines
> Not in its imperfections but overwhelmingly in spite of them.

The Judgment of Birds: The Gift of Loren Eiseley

Annie sought out the dark side of nature, and found the bliss of community grounded in faith. Another approach is not so much relational but a shift in identity.

If I experience myself merely as one being, as a skin-encapsulated ego — as, therefore, my "small self" — then I am easily confounded by the dramas and little tragedies of my life. But if I identify with the 13 billion

year epic of evolution, if I feel myself to be an expression of that immense and continuing journey, then so long as the whole is on course, then "I" am too. This constitutes an identity shift into my "Great Self", or "Deep Self." The philosophy and practices of deep ecology, enriched by a deep time perspective, do well in nurturing this shift.

Joy Harjo evokes an expanded identity through her poetry:

> I can hear the sizzle of a newborn star,
> and know that anything of meaning, of fierce
> magic is emerging here. I am witness
> to flexible eternity, the evolving past,
> and I know I will live forever,
> as dust or breath in the face of stars,
> in the shifting pattern of winds.

Sometimes, however, the small self will not allow the Great Self entry until it gets what it wants: full and exclusive attention. When I am compelled to give in to melancholy as a way of cleansing, as a way of getting through depression quickly by plunging straight into the core, I do not turn to Joy Harjo or Julian Huxley. I reach for Annie Dillard or for her mentor Loren Eiseley and then head out into the wilderness.

I did just that one day in July of 2000. I was summering, as I had for ten years, in Aldo Leopold country: the Gila Wilderness of southwestern New Mexico. I tossed Loren Eiseley's *The Immense Journey* into my backpack, along with a sleeping bag, tarp, and a monk's ration of food, and headed out for a four-day solo, intending to stay put in one isolated and alluring spot along a creek. There I experienced a meaningful, to my mind mystical, congruence of life streams.

It was Day 3, the day I intended to spend at least six hours doing nothing but sitting on a low cliff overlooking the creek, contemplating predation. This would be the culmination of my sojourn; the previous days of quiet observation around my campsite were preparation. I chose the cliff because on a hike the week before, I had discovered there a treasure trove of bear shit and a circular impression that looked the proper size for a bear-size bed.

On this day, my second visit, I heard the alarm cries of a pair of robins as I approached "Defecation Point." That was not unusual in this wilderness: I have watched jays harass a sleeping fox. But many a time I have heard that sound ahead of me and become more watchful for larger predators, the kind my ancestors feared — and were the fitter for fearing.

As I topped the ledge, I could discern that the birds were protesting the presence of something hidden in the green just thirty yards away, on the other side of the creek. This could be interesting! But before settling into watchfulness I needed to pay homage to the dozen or more tokens of ursine prowess on the cliff, all far from fresh.

Amidst the scatter, there was something I had not expected: a heap of needles at the butt end of two long scrapes that exposed bare earth. This is not what bears do; this is lion. A lion had defecated here, and less than a week ago.

Reluctantly, I gathered several palm-size rocks and began my vigil, back against a young cedar. My intention had been to contemplate predation — not to fear it.

Soon the robins were joined by a rufous towee and a pair of canyon wrens, all protesting the presence of something invisible to me. I scanned the green jungle across the creek, and I scanned it again. Who and where was the predator?

I wonder now what the day would have been like had I not happened (or felt compelled?) to turn my head far to the left at one crucial point. For there, slightly above me on the opposing cliff, perhaps a hundred yards away, was the back and shoulder hump of a very large animal, its head down and lost in the brush. The head came up and turned to look in my direction. Such a small head for so massive a body: lion!

Although the distance was too great to the backlit ridge for me to make out the eyes, the head was pointed in my direction and remained there for a time I cannot honestly estimate. A decision apparently was made and the animal casually resumed its upslope journey. A long tail emerged from behind a bush, the end jauntily tipped up.

Birds! my mind screamed. Birds! Wake up! There's a lion over there. That's the animal you ought to be scolding!

But no. The staccato protests maintained in the thicket straight ahead.

Soon, the most frightening event of the day occurred. A pair of jays had added their harsh voices to the din, and now one flew from the jungle to a low branch on my side of the creek, a few paces directly ahead. The jay kept scolding, but here is the horror: the bird's back was to me.

Well, that's it. I never saw the mysterious predator. The jays and towee and wrens eventually tired and went on with their lives. But the robin couple kept up the protest for hours. Finally, a late afternoon thunderstorm chased me back to my tarp, which now was hung unmistakeably at the base of an animal trail, the very trail that the lion had followed up the cliff. Uneasily, I decided to keep to my plan: I would spend one more night here. But I would gather a lot of firewood, move my gear to water's edge, and have no expectation of falling asleep.

The essay I had reserved to read that final evening was my favorite of Loren's: "The Judgment of the Birds." The title image is the author awakening from an afternoon doze in the woods "dimly aware of some commotion and outcry in the clearing." The light was "slanting down through the pines in such a way that the glade was lit like some vast cathedral." And there, on a low branch, sat "an enormous raven, with a red and squirming nestling in his beak."

The outcry in the clearing came from the nestling's parents, who were soon joined by birds of "half a dozen varieties."

> No one dared to attack the raven. But they cried there in some instinctive common misery, the bereaved and the unbereaved. The glade filled with their soft rustling and their cries. They fluttered as though to point their wings at the murderer. There was a dim, intangible ethic he had violated, that they knew. He was a bird of death.

Loren recounts how the protests stilled and the mood shifted:

> It was then I saw the judgment. It was the judgment of life against death. I will never see it again so forcefully presented. I will never hear it again in notes so tragically prolonged. For in the midst of protest, they forgot the violence. There, in that clearing, the crystal note of a song sparrow lifted hesitantly in the hush. And finally, after painful fluttering, another took the song, and then another, the song passing from one bird to another, doubtfully at first, as though some evil thing were being slowly forgotten. Till suddenly they took heart and sang from many throats joyously together as birds are known to sing. They sang because life is sweet and sunlight beautiful. They sang under the brooding shadow of the raven. In simple truth, they had forgotten the raven, for they were the singers of life, and not of death.

I had not forgotten the lion. And for all I knew, the robins were still protesting the mystery predator a short distance upstream, as dusk crept into the canyon.

A day devoted to the contemplation of predation now passed into a night exquisitely tuned to contemplate death — and not just my own. The one-year anniversary of my mother's passing was just a week away. What I was not prepared for was the sudden insistence of my father's death, more than thirty years distant. Quickly I made the calculation: within a few days I would attain the age my father would forever remain.

A second revelation followed: the book I had just set down was the book our minister had given me the day before my father's funeral, the day before my fourteenth birthday. Not this particular copy, of course. But it was *The Immense Journey*.

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My sister and I had just completed confirmation classes at our Congregational church. I recall Reverend Read explaining how, like a watch, a creation requires a creator. I was almost convinced that day that believing in God was warranted.

An hour must have passed as Betsy and I stood outside the church waiting for Mom to pick us up. A neighbor finally came in her stead, and then the rest is just blank. I do remember Reverend Read sitting by my bed and offering the little book with its tangerine cover and black-lined fishes.

I don't believe I ever opened it. The book I had with me now was blue, a silhouette of a fork-tailed tern at its center.

* * *

When I awoke the next morning, I was horrified to see that the fire I built beneath a close canopy of creekside alder had wreaked havoc with a population of spiders inhabiting the spaces between the leaves. Their webs were now hopelessly sullied with soot.

Again a congruence. I returned to Eiseley's "Judgment" and reread the closing paragraphs.

* * *

It is a bitterly cold night, late autumn. A restless writer is beginning a stroll when a pattern on the pavement stops him in his tracks. It is a gargantuan spider. He looks up to check the source. Sure enough, an orb spans the shield of an outdoor light.

The inveterate naturalist fetches a ladder and commences to examine the spider and her bundles of prey. Thoughts and associations pour forth. Then he descends and reclaims his position on the patterned pavement.

> I stood over her a moment longer, comprehending somewhat reluctantly that her adventure against the great blind forces of winter, her seizure of this warming globe of light, would come to nothing and was hopeless. Nevertheless it brought the birds back into my mind, and that faraway song which had traveled with growing strength around a forest clearing years ago — a kind of heroism, a world where even a spider refuses to lie down and die if a rope can still be spun on to a star.

* * *

I looked up at the little tragedy I had caused. This time I spotted a few white threads, where someone had begun to rebuild a life.

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Connie Barlow is a science writer, whose books include *Evolution Extended: Biological Debates on the Meaning of Life* (MIT Press, 1993); *Green Space Green Time: The Way of Science* (Copernicus, 1997); and *The Ghosts of Evolution* (Basic Books, 2001). To access magazine articles she has written on these topics, go to www.thegreatstory.org/our_writings.html. You will also be able to click on her internet writings that address two of the topical areas presented in this essay: evolutionary convergence and element formation within stars. This essay was written during a writer's retreat in Hawaii, made possible by the love and generosity of Yoko Kmetz and Rich and Sandra Reha.