Ending the War Between Humanity and Nature

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Rethinking Everything

By

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This book is dedicated to my grandfather, Cornelius Hickey, who supported my childhood interest in nature. Although I grew up in New York City, he was the first to realize that I was not a city boy, but a country boy trapped inside the body of a city boy. He freed me from the trap. Thanks, Grandpa.

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PREFACE

Are humanity and nature at war? Of course they are…the evidence is all around us: climate change, catastrophic weather events, habitat destruction, extinction of species, crop failure, famine, deforestation, wildfires, drought, polar ice melting, rising sea levels flooding coastal communities and island nations, millions of environmental refugees, non-biodegradable plastic waste, toxic pollution of air, water, soil. The list goes on and on.

What's causing this war, and how can it be stopped? The conventional wisdom is that the war is an unintended consequence of economic and environmental imperatives pulling in opposite directions. And, of course, there is a partial truth to this claim.

But this book takes the question—and its answer—to a deeper level. It argues that the root cause of our war on nature might be found in the time-honored, historically deep myths, narratives and stories we tell ourselves—and have been telling ourselves for centuries, even millennia—about humanity's place in (or out of) the natural world.

When we in the West view the world through the lens of our sacred biblical creation story, we understand nature as ours to subdue and we see ourselves as in God's image, elevated above nature. When we approach the natural world in terms of science's archetypal mechanical model, we see it as a vast assembly of interlocking mechanical systems. And since we humans are the only mechanics in town, nature is ours to work as we wish. Our ruling economic narrative, in turn, reduces nature to "natural capital" and treats nature as a cost-free, inexhaustible, and wholly owned subsidiary of the human condition. Each of these stories—whether religious, scientific, or economic—builds upon and reinforces the anti-nature bias of its companion stories. Although we often think of religion and science as mutually antagonistic worldviews, they are in remarkable agreement when it comes to their respective positions on nature-human relations. Whether sacred or profane, the overarching message is the same: humanity rules nature. Science has given us the cognitive and instrumental means to obey God's mandate that we subdue the Earth. And economics translates the mandate into a profit generating enterprise.

Our mainstream nature stories—whether we describe them as models, narratives, paradigms, or worldviews—have three main functions. Their first function is analogous to a blind man's cane. His cane is at the leading edge of his encounter with the world, and he effectively "sees" and

makes sense of the world through information transmitted to him by the physical structure of his cane. In almost exactly the same way, our collection of nature stories is at the leading edge of our encounter with nature, and the sense we make of nature is largely filtered through the narrative structure of our stories. Replace the blind person's cane with a seeing-eye dog, and he experiences the world very differently. Analogously, if we were to adopt an alternative set of nature stories, we would make very different sense of our encounter with the natural world.

Second, as sensemaking devices, our orthodox nature stories are the raw material at the infrastructure of environmental policy. Public policy, in turn, shapes collective action on environmental issues. Unfortunately, neither our policy nor our action is commensurate with the magnitude and urgency of our environmental problems. We suffer from a semi-paralysis on these matters. Why? To answer this question we have to reason backwards to the raw cognitive and attitudinal material feeding into and informing our environmental policy. The semi-paralysis begins at the level of nature story.

Finally, our nature narratives set the terms we bring to our dialogue and interaction with nature; and nature is telling us in a thousand ways that the terms no longer work. The "dialogue" has become a quarrel and the interaction a war.

Our nature stories, in other words, are much more than "once-upon-a-time" entertainments. They are fundamental vehicles for making sense, assigning value, and prescribing action in the real world. If we want peace and sanity at the nature-human interface, we have to embrace a different repertoire of nature narratives.

The main polemic of this book follows two tracks: first, to examine and critique our mainstream, orthodox nature stories; and, second, to rehabilitate our recessive repertoire of dissenting but silenced nature stories. The latter have been pushed to the sidelines by history and we need to return them to center stage. We need to give them back their voice. And when we do, both we and nature will recognize their voice as one we share in common. These dissenting stories will completely change the terms of our dialogue with nature. In fact, they will put us and nature on the same side of the dialogue.

The scope of the book's argument is admittedly ambitious, covering religion, literature, science, and economics. Within each of these four traditions we examine the orthodox nature narrative and its heterodox alternative. This encompassing focus accounts for the book's somewhat extravagant title: to achieve reconciliation between humanity and nature, we are going to have to "rethink everything."

CHAPTER 1

INTRODUCTION: THE DISCONNECT

Here's the problem: we're all aware of environmental and climate disturbance—particularly the increasing incidence of extreme weather. How could we not be? But our difficulty is that the rabid weather *makes no sense to us*. This is not the way it is supposed to be. The evidence for climate turmoil is all around us—if not right in our face as in flooded and wildfire-ravaged communities, then certainly in the daily news coverage. But again, we fail to take the news at face value…and, again, it makes no sense. We are supposed to be in charge of nature, not the other way around. Our Western sacred tradition gives us dominion over the earth. Our market based economic system sees nature as a wholly owned subsidiary of the human condition. Our scientific tradition is grounded in the mechanical model. Since we are the only mechanics in town, nature is ours to operate as we wish. There is a disconnect between our worldview and the way the natural world is behaving. We are a sense-making species and if something makes no sense, it lacks full reality even while it hits us between the eyes. What's going on here?

At one level we know that nature is in trouble and that its trouble is our trouble—given the steady diet of news stories and TV images, how could we not? But at some deeper level we don't seem to embrace the danger as real. Again, there is a disconnect between the two levels. It's as if the daily news stories are being cancelled out by some other, deeper story.

For most of us this pattern recurs over and over: we take the news story at face value, become vaguely alarmed, and then wait a few minutes for the alarm to dissipate. It's not that we reject, rationalize, or deny the news so much as our not having well-formed mental categories for making personal sense of it. The experience is like catching a ball, but not knowing what to do with it because we don't know what game we're playing. I know the ball is here in my hand, but without the framework provided by a game, its meaning is elusive. I hear the news and even

"understand" it in a literal sense, but without a relevant mental framework, my understanding is shallow and elusive.

Again, it's as if there were two stories occurring simultaneously and at cross purposes. My position in this book is that there *are* two stories, and they *are* at cross purposes. The surface story is immediate and full of threatening information about nature. The other story is old, deep, and reassuring. It reaches back into history, as far back as the sacred and secular origins of the Western worldview in ancient Israel and Greece. This other, more determining narrative operates like a deep mental template or mindset whose function is to give meaning to incoming information about nature. But it doesn't seem to work the way it should. There is a disconnect: We and nature do not seem to be reading the same story.

But why can't we just make sense of current information on its own terms? The answer to this question lies in an understanding of how memory and history shape human consciousness. Our consciousness is not situated solely in the moment; nor is it merely a passive sponge that soaks up whatever is presented to it. Consciousness *actively* engages experience in terms of what it already knows. It is historically elongated, a creature of traditions, beliefs, and narratives that have been passed down for centuries, even millennia. It stretches backward into the past and forward into the present, such that a collectively remembered past is always at work in our understanding of the present. Our inherited memory of the past necessarily *prejudges* our experience of the here and now. These prejudgements draw the present into the flow of history and autobiography. They make for continuity of community, self, experience, and the world. Without prejudgements, without guiding stories, narratives, and myths, human experience would reduce to dots, jumps, and blips. We would live in discontinuous spurts of amnesiac surprise. This urge to coherence, more than nostalgia, is why we cling to narratives from the past. In principle, then, prejudgement is not only inescapable, but it is a highly adaptive function. However, the wrong prejudgements—the wrong seminal stories—don't guide present experience into the emergent flow of history; they keep it out. They fracture human consciousness into two dysfunctional and mutually inaccessible parts, one in the past and one in the present. Again, the disconnect.[1]

What are these seminal nature stories? And how powerful are they in shaping prejudgements? My argument is that they are enormously powerful and foundational. Take, as already noted above, the seminal nature narrative in the West's sacred Judeo-Christian tradition. In the first chapter of the Bible's *Book of Genesis* God creates us in his image and

instructs us to "subdue the earth" and have "dominion" over all its creatures. On top of that, the founding fathers of our archetypal science story—Bacon, Descartes, Galileo, Huygens, Newton, et al.—mapped nature on the "mechanical model." Since we humans are the only mechanics around, it follows that we relate to nature as a mechanic does to a machine. And if running nature's "machinery" translates biblical dominion-and-subdue doctrine into a doable program, it becomes both a practical and sacred imperative to do so. Piled on top of our seminal religion and science narratives, our ruling economic model views nature as a wholly owned subsidiary of the human condition, to be exploited entirely in the service of human appetites and ambitions. These several layers of cognitive and ethical material set the deep terms for whatever prejudgements we humans in the West bring to our encounter with nature.

The purpose of this book is to unpack and take a hard look at these foundational nature stories, the ones that continuously and tacitly murmur in the background of the Western mind. They are our fundamental narratives for making sense of the natural world and our place in it. These stories don't merely tell us about nature; rather they *reveal* nature to us, us to nature, and, in self-congratulatory spasms, us to ourselves. Like the beating of our hearts, they live at the edge of consciousness. Without the next heartbeat our bodies would die, and without stories our understanding would splinter into dots, jumps, blips, and pixels. But there the comparison ends, because our nature stories contain the wrong prejudgements. They overwhelmingly present nature as the "other," as antagonistic, subordinate, or irrelevant to human destiny, as backdrop to the central cosmic drama between humanity and God, as having no moral standing in its own right, as a diminished form of reality, as subject to human control and ownership, as an inert collection of mindless mechanisms, as having no function other than serving humanity's appetite for resources, services, and waste sinks.

Our primary nature stories reveal a profoundly passive and disposable natural world, with no interests, integrity, or perspective of its own. These accounts, secular and sacred in origin, are the mental templates we reflexively invoke when trying to make sense of contemporary environmental issues. But to make adequate sense of our troubled relations with the natural world, we have to seriously entertain three hypotheses that find little, if any, support in our basic nature stories: that we are part of nature, that our destiny is yoked to nature's destiny, that nature is reality itself. No wonder there is a disconnect. Our traditional nature stories deflect new and incompatible information about nature and prevent it from

reaching deep levels of understanding and commitment. Our understanding remains shallow and our commitment confused.

There are, of course, many pragmatic—if short-sighted—reasons for resisting the significance of bad news about nature. To respond constructively would involve great personal, societal, and economic sacrifice. It would require long-term, cross-generational planning; a revolution in what we mean by production and capital; reversing entrenched habits of consumption and waste disposal; reconciling competing interests of different sectors of the human community; and so on. In other words, even if the cautionary messages of environmentalism made perfect sense, we would still have to muster the will to actually implement the messages—the workload itself sits out there like a huge disincentive. But the case I make in this book is that present-day environmental messages *do not make coherent sense to us*. Rather, they unravel our sense of reality; they directly challenge our prejudgements about the way the world is supposed to be. How can we work to rehabilitate our relation with the Earth, when such a project makes little sense to us in the first place? The basic problem of environmentalism is that it questions habits of belief and thought that sit at the foundation of the Western worldview. Ultimately it requires that we in the West revisit and reconstruct what, for sake of a better phrase, might be called our "theory of everything": God, creation, being, becoming, meaning, value, and human exceptionality. Not surprisingly, most of this theory shows up in our canon of nature stories.[2]

The following chapters can be viewed as a series of archeological digs which attempt to unearth the West's tacit, taken-for-granted nature stories. The stories come from four historically deep sources: the Judeo-Christian sacred tradition, secular literature, the scientific revolution, and classical free-market economics. In each case, my objective is to articulate the tacit text, i.e., to make the implicit explicit. Much of the power of our traditional nature stories derives from their inherent poetry, craft, and boldness. But their power also rests on two other pillars: they remain partly hidden from view, where we imagine them to be wiser than they are. We mistake their *sotto voce* murmur for deep truth. And, because of their primacy and longevity, they have been granted a *de facto* immunity from prosecution. But when their immunity is waived, and the stories are put on the stand for detailed interrogation, their power over our collective imagination begins to crumble. Or at least that is my hope.

Working against this hope are several interblended facts: these stories have long been viewed as our "friends" and counselors, they unashamedly puff up human vanity, and they shape the grammar and vocabulary we use when examining the world and our place in it. Our

orthodox nature stories are not accustomed to answering challenging questions about nature—rather their custom is to dictate the terms of discourse: to raise their own questions and supply their own answers. Putting this kind of defendant under cross-examination often makes for awkward, testy, and surreal exchanges, interspersed with occasional moments of comic relief. I cannot promise the reader the process will go smoothly. Nor will I win every argument.

The entering assumption of this book is that our canonical nature stories have had their own way too long. And the main polemic of the book is to bring their claims under sustained questioning not of their choice. Unless we do so, they will continue to block our efforts to accommodate the newly emergent facts of nature. To borrow a phrase from historian Henry Steele Commager, our mainstream, canonical nature stories no longer qualify as a usable past.[3]

Which raises a final question: are any of our traditional nature stories usable? I think so. In a large and complex civilization, such as ours in the West, the past is a mosaic of orthodox and dissenting accounts. Positions which achieve orthodoxy usually begin as one of several competing stands on a particular issue. Orthodoxies, in fact, typically refine and define themselves in terms of how they differ from their pre-existing and co-existing alternatives. But this does not mean that the alternatives simply disappear from history. They live in the interstices of memory, like tough weeds poking through cracks in the asphalt, waiting for their turn to come.

Although the West's canonical nature stories are largely useless, our rich repertoire of dissenting alternatives, taken together, may serve as a usable past. For starters, our orthodox god-story presents God as wholly outside and other than nature. But we also have a recessive supply of heterodox accounts in our sacred canon that bring God closer to nature. These alternatives effectively sacralize nature and naturalize God. Another example: Beauties and Beasts wander all over the landscape of secular literature—in the standard version the animalistic Beast converts to the human Beauty's side; but it takes only a little imagination to tell the story the other way around—and some authors have begun to do so. Third, modern science, dating from the legacy of Galileo, Descartes, and Newton, still officially clings to its archetypal 17th century mechanical model of nature. But science's own 19th and 20th century investigations into evolution, quantum physics, Big-Bang cosmology, and living ecosystems have opened several completely different windows on the natural world.

Finally, our classical, laissez-faire, growth model of economics posits nature as a cost-free, inexhaustible, and wholly owned subsidiary of

the human species. But we also have a dissenting ecological model that turns this picture upside down: the human economy is subsumed under nature, and nature's fixed supply of resources and services is not governed by human demand, but by the laws of physics and biology.[4]

The canonical stories, of course, demand more of our attention simply because they are history's winners. But in each of the four traditions tapped here—religion, literature, science, economics—I will examine alternative accounts that may yet become history's ultimate winners. Indeed, they or something like them must replace our current canon of nature stories. Otherwise the disconnect in our conversation with nature will continue, and the final outcome will not be pretty.

In What Sense Is Our Nature Story "Ours"?

The scope of this book is limited to the Western tradition, that is, to our defining mosaic of Judeo-Greco-Christian-Medieval-Renaissance-Scientific-Technological-Enlightenment-Industrial-Capitalist legacies. Some of these legacies are sacred, some secular, and all enjoy a strong degree of historical depth. Even science goes back at least 400 years to the time of Kepler and Galileo, and "classical" economics dates back two and a half centuries to Adam Smith. But why restrict myself to the Western heritage? Four reasons.

First, as my home base, I think I have an intuitive feel for its texture as well as its formalisms. The same could not be said for my acquaintance with humanity's other grand cultural traditions.

Second, as an insider I have no compunction about being critical of my own legacy: this is an argument within the family. As an outsider to other cultural traditions, not knowing the terms, limits, and sensitivities of discourse, I could not approach their faults with the same legitimacy.

Third, I don't think there is any compelling reason to reach outside our own tradition for corrections or remedies to the failed interface between humanity and nature in the West. Cultural imports—no matter how well intentioned—often don't graft well or quickly on the host body. Their voice is not our voice. And we're running out of time. But, more importantly, we already have a home-based repertoire of dissenting and usable pasts. As noted earlier, most of them have been silenced and pushed to the sidelines by our more established, orthodox positions. But again, *their voice is our voice*. We do not so much discover them, as recognize them: they are part of us.

Finally, to go beyond our own tradition would not only force me into *terra incognita*, which is daunting enough, but into an endlessly

receding horizon. I would wish others to do for their own traditions what this book tries to do for our Western worldview. Difficulties at the nature-human interface are not peculiar to the West.

What Do We Mean by the Term "Story"?

The term "story" is used here in an encompassing, catch-all sense, referring to the entire spectrum of our collectively held accounts of nature. Thus, the term subsumes narratives, models, paradigms, myths, legends, worldviews, etc.—whether sacred, secular, or somewhere in between. There are only two constraints on the term. The first and most obvious is that the focus of the story must be on nature and/or the human-nature encounter. Some sections of the Bible, for example—*Genesis* 1-3, the Flood story, the *Book of Job*, *Revelation*—clearly qualify in full or part as nature stories, while other sections do not. The second constraint is that the story must be broadly and collectively held. Private, idiosyncratic, regional, obscure, or forgotten stories don't make the cut.

What all our nature stories—model, paradigm, account, narrative, etc.—have in common is that they are all sensemaking and/or epistemological devices. They are more than mere entertainments or "once-upon-a-time" diversions. That is, they *dictate an understanding* of what happens at the nature-human interface. When, for example, we bring the first chapter of the *Book of Genesis* to bear on our encounter with nature we understand it one way. If, in contrast, we view nature through the filter of the *Song of Solomon* or the *Book of Job*, we interpret the encounter in a very different way. The first story invokes dominion-subdue and image-of-God doctrines, fostering a *disconnect* between us and nature. The other two biblical stories emphasize the *connection* between humanity and nature. If *Genesis* and *Job* were computer programs, one would fail to compute the input that the other computes. If both were lenses one would blind us to what the other shows us. In this sense our nature stories are epistemological devices. They structure and inform our understanding of the natural world. Different structures yield different understandings. And different understandings treat the same world as if it were different worlds.

I like to think of our nature stories as roughly analogous to a blind man's cane. The cane is at the leading edge of the blind man's encounter with the world. And just as the cane reveals the world's configurations to him, our stories reveal the world to us. Without them, we blink at the world in incomprehension. With them, we "see" the natural world, but only on their terms. We walk into the world, as it were, guided by story, probing for the world-structures prefigured by the story. But if

the blind man were to replace his cane with a seeing-eye dog, he would "see" the world differently. Analogously, if we switch to one of our dissenting nature stories, it guides our understanding into a quite different worldview. Again, our nature stories are sense making devices: they prefigure our knowledge and understanding of the natural world. Our orthodox stories predispose us toward one kind of world; our dissenting stories toward a very different kind.[5]

One other point about our nature stories: They are the raw cognitive and attitudinal material at the infrastructure of environmental policy. Public policy, in turn, shapes collective action on environmental issues. Again, our nature stories are much more than "once-upon-a-time" entertainments. They are fundamental vehicles for making sense, assigning value, and prescribing action in the real world. Whether we like it or not, they have real world consequences—to get the world right, we have to get our nature narratives right.

Why Stories?

Why the focus on stories/narratives? Two reasons. First, stories are user friendly, much more so than rational arguments. We enter a story and follow its path from beginning to end more or less effortlessly. This is much more friendly than running into a brick wall of rational argument or ideological persuasion. Stories are less threatening than argument…they tend to break down the barriers between people, to invite people into a shared reality. We walk together, as it were, through a shared story. In a sense, we *become* the story.

Second, as easily shared realities, stories/narratives tend to bring people together into large communities. As social historian Y.N. Harari points out in his influential book *Sapiens*, without shared narratives/myths/stories, human society would be fragmented into family, clan, or tribe. Shared stories are fundamental to the expansion of relatively small human groupings into vast human communities—nations, empires, collectives—that go way beyond the constraints imposed by geography, language, religious and cultural differences, ethnic identity, etc. If I encounter a complete stranger on the other side of the world with whom I share a story—whether sacred or secular—we immediately recognize ourselves as like each other, as more alike than different, as participants in the same human community and worldview.[6]

And why *nature* stories? Again, two reasons. First, this book is about the nature-human interface. Second, and more importantly, our nature stories are the cognitive and attitudinal infrastructure of the sense

we make of our interface with nature. And, as already noted, the sense we make of nature is at the foundation of environmental policy and action.

A Few Notes on Method

The method of inquiry used here is quite straightforward. We begin each section by closely reading one of our dominant nature stories. As we go through the story at hand—again, closely and point-by-point—the reader is repeatedly encouraged to consider a small set of questions: Do I think that this is, on balance, an account that promotes enmity or peace between humanity and nature? Does it reconcile us with nature or estrange us from nature? Does this story serve a hidden—or not so hidden—self congratulatory, anthropocentric agenda? Is this story at bottom a justification for exploiting or dominating nature, or for diminishing its importance? Do I really identify with this story? Am I comfortable with its message? Given my answers to the previous questions, do I *want* this to be my guiding nature story? And so on. The questions vary according to context, but they more or less follow this pattern.[7]

A second point of method is that the questions are deliberately referenced to the type of nature story under consideration. There is no mixing of types. I do not, for example, confront our sacred, biblical nature story with scientific or economic questions. Rather, I approach it from the perspective of a participant in our Judeo-Christian religious tradition, not as a scientist, economist, or philosopher. I do not expect our biblical creation story (*Genesis* 1-3), for example, to answer for the findings of quantum physics, big-bang cosmology, or Darwinian evolution. Again, I approach it entirely as one steeped in our Judeo-Christian heritage. Do I as an observant Christian or Jew, or even as a secularized member of this tradition—do I *want* to believe this story? As a distinctively religious and/or moral statement, how does this story shape the moral dimension of my encounter with nature? Does it assign moral standing to nature? Does it permit nature to make moral claims on humanity? Do I think it does more harm than good to nature-human relations? Does my Judeo-Christian heritage have alternative stories which are simultaneously within the sacred canon, yet conducive to reconciliation with nature? And so on.

The same domain-specific strategy applies to our examination of other nature stories. Regarding our scientific nature story, for example, I avoid religiously or economically motivated questions. The questions are strictly internal to science. Is the physics of science's archetypal mechanical model, for example, supported by science's own empirical findings? Are there contradictions between the mechanical model and

other fruitful scientific models, such as those underlying relativity, quantum physics, Big-Bang cosmology, and biological evolution? Does the mechanical model's "objectification" of the natural world drive an ontological wedge between the world and the knowing human subject? Does the mechanical model's "mechanization" of nature promote the illusion that we humans—the paradigmatic mechanics—are in charge of the show? And so on.

Finally, the same sorts of questions are posed while reading our dissenting, heterodox collection of nature stories. Again, each type of story is interrogated on its own terms. Alternative science stories—for example, cosmic and biological evolution—are asked the same kind of questions as those addressed to the dominant mechanical model. Do their claims have good fit with science's empirical findings? Do they—either implicitly or explicitly—assign a privileged status to humanity in the natural world? Do they incorporate us into nature? Do they provide a basis for reconciliation between humanity and nature? In general and on almost every specific point, our dissenting nature stories yield more confident and conciliatory answers to these questions.

There are two partial exceptions to this domain-specific approach. One is the book's final section on economics, where the dissenting story borrows much of its framework and methodology from ecological science, thus interblending economics and science. There are at least three justifications for this hybrid. First, economics itself aspires to scientific standing. Second, ecology's multivariate, systems approach keeps economics honest. The application of ecological method forces classical, market-based economics to internalize critical factors it routinely and conveniently ignores. And, third, over the last 30 years, a dissenting and growing school of economists has embraced ecological method in the service of what it calls "ecological economics."

The other exception to domain specificity is found in the "Interlude" chapter. Here I permit myself to freelance a bit, stacking various nature stories against each other or on top of each other, looking for patterns of discontinuity and continuity.

The overarching purpose of this rather relentless interrogation strategy is to make the implicit explicit, to bring the tacit and taken-for-granted text into focal awareness, to lift the story out of the murmuring recesses of memory into the clear light of day. The advantage of this method is that it enables us to *look at* the sensemaking platform from which we usually *look out*; to *look at* the lens we usually *look through*; to dissect the filter that selectively lets some experience in while keeping other experience out. Unless we do this, we'll be stuck with the same

stories; with the same dysfunctional platform, lens, and filter—with the same computer program that fails to compute precisely the input most critical to bridging the disconnect.

In the end, the method adopted here—if taken seriously—forces us to make a choice. Do we want war or peace with nature? And perhaps more to the point—since we are inextricably immersed in nature—do we want to wage war or peace on ourselves? Our orthodox nature stories encourage us to choose war. Our dissenting stories push us toward peace. My objective in this book, of course, is to encourage the peaceful choice. But either way, the method used here will force us to choose with our eyes wide open.

Endnotes

[1] I borrow the notions of prejudgement and historically conditioned consciousness from the eminent twentieth century German philosopher, Hans-Georg Gadamer (1900-2002). According to at least one scholar, Gadamer's *Truth and Method* (1960) is "the most detailed and nuanced account of the event of understanding in the history of philosophy" (R. E. Palmer, 1996, p. 216). An English translation of *Truth and Method* appeared in 1975.

[2] The expression, "theory of everything" is taken from the title of John Barrow's (1991) book, *Theories of everything: The quest for ultimate explanation.* Oxford, England: Clarendon Press.

[3] Commager, H. S. (1967). *The search for a usable past*. New York, NY: Alfred A. Knopf.

[4] The "wholly owned subsidiary" image is borrowed from a statement attributed to U.S. Senator Gaylord Nelson (cf. Gilding, 2011, p. 57).

[5] The analogy of the blind man's cane is borrowed from M. Polanyi (1958), *Personal Knowledge*, pp. 55-56, 59, 61.

[6] Harari, Y. N. (2014). *Sapiens: A brief history of humankind*. New York, NY: Harper.

[7] The method used here is an adaptation of Michael Polanyi's approach to modifying entrenched and tacit modes of knowledge and understanding. See M. Polanyi (1969), *Knowing and Being*, pp. 146-148.

PART 1

OUR SACRED NATURE STORY

Preface to Part 1

The seminal account of nature in any tradition is its creation story. Creation is where nature begins. Everything—all reality, value, and meaning—proceeds from the creation story. And nature gets its reality, value, and meaning from the same source. Our Judeo-Christian biblical heritage offers us two widely divergent accounts of the three-way relationship among God, humanity, and nature. The first—and by far the more orthodox—is found in the first few chapters of the *Book of Genesis*. Here God creates a three-tiered reality with himself at the top, nature at the bottom, and humanity—in the image and likeness of God—hovering in between. Once nature falls as a result of Adam's sin, the Bible segues into a long redemptive narrative in which the all but exclusive focus is on the moral encounter between God and humanity. Nature fades into the background, only to be drawn out occasionally for the purpose of smiting wayward humanity.

The Bible's second—and by far its less orthodox—nature story is found in the *Book of Job* and the *Song of Solomon*. Taken together, these two books narrate an alternative covenant that celebrates, first, God's overwhelmingly creationist presence in the cosmos, and, second, intimacy between humanity and nature.

From nature's perspective, the Bible is a story of two covenants: one orthodox and redemptive, the other heterodox and creationist. The first forces humanity to choose between nature and God. The second brings nature and humanity together under an overarching and providential God. The time has come for our sacred heritage to prioritize its creationist covenant and to assign moral significance to nature.

CHAPTER 2[1]

GENESIS 1-3:
OUR FIRST NATURE STORY

> All our other books, however different in manner or method, relate, be it indirectly, to this book of books … All other books … are like sparks, often, to be sure, distant, tossed by an incessant breath from a central fire.
>
> —George Steiner

The seminal account of nature in any tradition is its creation story. Creation is where nature begins. Everything—all reality, value, and meaning—proceeds from the creation story; and nature gets its reality, value, and meaning from the same drama. The creation account raises and answers the most fundamental questions about nature: Is it real or illusory, alive or inert, sacred or profane? What moral, aesthetic, and ontological weight does the creator give it? Does the creator enter into it or remain aloof? And, perhaps most importantly, where does nature stand in relation to humanity? Are we part of nature or separate from it? Do we cherish nature as our mother or rule her as our servant? Does nature have a perspective and goodness of its own; or does it rise and fall on the roller coaster of human conduct? These questions are not hypothetical, at least not in our own creation account, where they are raised and answered immediately, so quickly in fact that the story seems to end almost before it begins. Our basic nature story—as told to Moses by the creator God—is in the first three chapters of *Genesis*, the biblical account of creation and fall. The Bible goes on for more than a thousand pages, but its primal event is over by the end of the third page.

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[1] While reading this chapter, it would be helpful to have the Bible at hand, open to the beginning of the Book of Genesis. Any of the standard translations will do.

Even so, the brief opening chapters cover a lot of ground, beginning magnificently, rapidly shifting into an ambiguous voice, and ending catastrophically. Their thick, polysemous text can be mined for several stories, and my intent is to extract two of them, first on my own, and then with the assistance of a considerably more expert reader who got there before me: Saint Augustine. The result is a two-layered cake which one wouldn't want to serve for dessert at a meeting of the Sierra Club. The first bite is sweet, but the last leaves a sour taste in the mouth.

The Genesis creation story collapses the several previous questions into a basic two: What is the origin of the world? And how did evil and suffering get into the world? Unfortunately, the authors of *Genesis* did not keep the two questions apart, so nature gets tangled up in the answers to both. *Genesis* so thoroughly conflates the natural and moral dimensions of reality that nature, once created, becomes the setting for human sin; and sin, once committed, enters inextricably into nature. According to the "logic" of this conflation, God punishes not only the human perpetrators, but the natural setting as well. Adam and Eve disobey God, and, in truly stunning overreaction, he proceeds to curse them, nature, and human–nature relations.

This is our first and foundational nature story, reputedly given to us by the revealed word of God. As George Steiner suggests, all our subsequent imaginings about nature are tossed like sparks from this central fire into the darkness that separates us from nature as paradise, as mystery, as nemesis.

A First Reading of Genesis 1-3

The opening chapters of *Genesis* play out like a three act tragedy. Act 1 answers the question about the origin of all things; Act 2 fleshes out the origins story and sets the stage for the second question about evil and suffering; and Act 3 answers the second question.[1] The drama is surprisingly brief. It begins with a glorious paean to God's creative activity, quickly posits the test on which the entire action will rise or fall, fails the test, and ends on an all but stupefying note of malediction and vindictiveness. Our creation story is over almost before the audience is seated, but not before it has dictated a very difficult set of terms for the human–nature relationship.

Act 1

"In the beginning God created the heavens and the earth." This first verse of *Genesis* attests the Judeo-Christian God did not himself emerge out of the primal chaos or void. He exists apart from creation and is transcendent over it—he creates from the outside. This is an important consideration because it establishes right from the outset that the biblical God is not an immanent presence in the natural world. He is *super*natural. He produces nature but he and nature are categorically different realities. His *modus operandi* is magisterial and omnipotent; like a sovereign magician-king, he calls creation into existence with a series of "Let there be ..." proclamations. There is a hymnal, incantatory quality to the language, each creative act following a three part formula: command, execution, appraisal—"Let there be … and it was so … God saw that it was good."[2] In repeatedly judging the world to be good, God confers intrinsic value upon each creature as it appears: light, sky, water, earth, plants, sun, moon, animals.[3] The initial impression is of a transcendent, benevolent, and regal Divinity who creates a good and harmonious world.

Suddenly, with the appearance of humans (Gen 1:26), the recurring formula is interrupted and a different note is struck: there is not to be a democracy of creatures. God creates humans in his own "image" and "likeness" and immediately charges them with "dominion" over all living creatures. These doctrines, *imago Dei* and dominion, dictate a creation that is hierarchically ordered, with a god-like humanity placed over all other creatures. Moreover, the doctrines do not appear to be an idle choice of words. God emphasizes his "likeness" and "dominion" imperatives by repeating them and by reiterating the word "over" eight times, lest there be any doubt: "Let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over every creeping thing …" and so on. Then, as if to further underscore the point, God instructs us to "subdue" the earth (Gen 1:28), extending our rule to include non-living creatures. At this juncture, one might ask whether human rule is meant to be a hard or soft overlordship. The terms "dominion" and "subdue" are translations from the Hebrew *râdâ* and *kâbas*, respectively. The first term means to tread down or trample underfoot; the second term, *kâbas*, means to beat down, attack, assault, or bring into bondage.[4] It often refers to the military subjugation of conquered territory and, in another part of the Bible, to an assault on Queen Esther (*Esther* 7:8). Their etymology argues that "subdue" and "dominion" are not intended to convey a soft or pleasant relationship between humans and the rest of creation.[5]

Alongside the invocation to rule over nature, we are also set apart from nature. Although we are creatures, there is an unmistakable sense in which we are, to borrow George Orwell's phrase, "more equal" than other creatures. First, as already mentioned, we are cast in God's image, and nothing else is. Second, a close reading of *Genesis* 1 shows that all living creatures except humans emerge out of nature. God has "the earth bring forth" and "the waters bring forth" all plants and animals (1:11, 1:20, and 1:24), but there is no mention of nature "bringing forth" humans. We spring directly from God: "Let us make man in our image, after our likeness; and let them have dominion …" (1:26). Nature is not invoked as humanity's womb; God is our father, but nature is not our mother (at least not yet: the next act has a different version of human creation). Finally, although God judges nature to be "good" six times prior to his creation of humans, after our creation he sees his work as "very good." This may seem a small point, but our appearance on the scene upgrades the overall quality of creation from an A to an A+. We are clearly singled out and set apart as God's favorite. Even so, as Act 1 of the Creation drama draws to a close, God seems to want to smooth over the harshness of human dominion. He divides plants into food for people and animals, suggesting a fair distribution of sustenance and, at least for the moment, a vegetarian, non-predatory way of life.[6] Then God surveys creation, gives it his seal of approval, and rests from all the work he has done. The curtain falls.

At the end of Act 1 (Gen 1 to 2:3), we have a firm, if somewhat schematic, answer to the question of origins. Everything in the universe was created at the command of a transcendent, magisterial, and omnipotent God, who seems to be very pleased with his work. There is a pervasive harmony in creation with human dominion as its guiding principle. Dominion doctrine is strongly worded, but seamlessly woven into the natural order of things. The natural order is hierarchical, and humanity is matter of factly the undisputed ruler of nature. The overarching structure of reality is three tiered, with God at the top, nature at the bottom, and humanity in the middle. As regards the human–nature relationship, two apprehensions seem to be warranted. First, it is a *relationship*, i.e., humanity is not subsumed by nature. A relationship, by definition, carries within itself the potential for estrangement. Second, humanity rules over nature, and rule contains the seeds of harshness from above and rebellion from below. The harmony of creation is in place, but, because of humanity's separate and dominant status, it could be a precarious harmony. As it turns out, these apprehensions are well founded.

Act 2

Act 2 narrates the well known story of Adam and Eve in the Garden of Eden. The first thing we notice in this act (Gen 2:4-25) is that God has changed. He has a different name. The "God" of Act 1 is now the "Lord God" ("Yahweh" in Jewish scripture). He also has a different location, persona, and working style. Act 1's God had a lofty and regal manner, and he conducted his work through proclamation. In contrast, the Lord God sets up shop down on earth, and is a hands-on craftsman who molds his creatures out of the dust of the ground. Unlike God, who behaved like an exalted being, the Lord God behaves very much like a man, almost the flip-side of *imago Dei*. While He cannot be taken for an immanent God, he has few of the trappings of transcendence. He gets his hands dirty, wanders around the garden, keeps an eye on things, and loses his temper when crossed.[7]

Reversing the sequence of creation in Act 1, the Lord God begins by making a man (Gen 2:7). The dust of the ground and his own divine breath are the ingredients for the human recipe. Humanity's ambiguous status, already hinted at in Act 1, is made graphically explicit here: we are a blend of earthly dust and God's breath, of the natural and supernatural. When Yahweh later makes the animals, he forms them out of only one element, the ground; his breath is conspicuous by its absence (Gen 2:19). There is nothing ambiguous about the animals' standing—they are entirely natural—but we humans are unlike anything else in creation, a category unto ourselves.

Right after the animals are created, Yahweh brings them to Adam to be named (Gen 2:19). This passage again denotes the central position of humanity in creation. God makes it and we name it. The extravagant *imago Dei* anthropocentrism of Act 1 is replayed here in a minor key.

But, despite these assertions of human uniqueness and centrality, Act 2 reins in some of the inflated pronouncements and images of Act 1. For example, shortly after man is created, he is put in the garden of Eden "to till it and keep it" (Gen 2:15). There is a clear shift in tone from ruling and subduing the earth to tilling the garden. In the original Hebrew text the word for "tilling" is '*abad*, meaning to work or cultivate the ground; and "keeping" translates from the Hebrew *shâmar*, which means to preserve or guard. The initial mandate to exercise a hard overlordship is here qualified by the notion of stewardship, much to the relief of eco-theologists who would like to find a basis for environmentalism in the Bible.[8] But the text gives no reason to assume that stewardship has cancelled dominion doctrine. Rather there seems to be a divine expectation that humanity shall be ambivalent toward nature, on the one hand to rule and beat it down, on