Text Matters, Number 12, 2022
https://doi.org/10.18778/2083-2931.12.07

William deBuys

Robustness and Vulnerability: Caring for the Earth in an Age of Loss

THE FUTURE OF AN ARID LAND[1]

The old metaphor of the canary in the coal mine has lost its edge. When applied to global warming and climate change, the relevance of its parts has become reversed—the canary is clearly dead, and it died a good while ago, its warnings mostly ignored. The coal mines of the world, meanwhile, are busier than ever, as the power plants they serve pump vast amounts of CO_2 into the atmosphere. A better metaphor for the present human predicament is the frog and the kettle of water. Everybody knows that the frog, if thrown into hot water, will leap out. No problem there. But we pity the frog placed in cool water because, when its kettle is gradually heated, the complacent frog hasn't the sense to escape, and it stays until it boils.

…Climate change is transforming the polar regions of North America fastest—melting ice, thawing permafrost, and drowning polar bears—but for most people who live in the Lower 48, those transformations are nearly as remote as a tsunami hitting Borneo. While we lament such calamities at a distance, the warming kettle, now rattling up toward a boil, is working changes closer to home that promise sweeping transformations. The place where those changes might best be observed is a region already straining from rapid growth, whose water resources are stretched to the utmost—the aridlands of the North American West. What happens under the turquoise skies of the continent's most celebrated landscapes will presage changes that human frogs in kettles the world over can expect to experience.

[1] This section is excerpted from William deBuys, *A Great Aridness: Climate Change and the Future of the American Southwest*, Oxford University Press, 2011. © William deBuys 2011. All rights reserved. Reprinted by kind permission from Oxford University Press.

In that land of exceptional beauty and complexity, the remotest arroyos and mountaintops bear witness to a changing climate. They give their testimony in the form of tree rings, vanishing wildlife, insect outbreaks, the dust-blown ruins of ancient villages, and the behavior of wildfires. The story they tell is already reshaping the politics of the Colorado River, on whose water nearly thirty million people depend. It also adds a subtext to the violence and human suffering along the U.S.-Mexico border. Adapting to the changes now underway will ultimately require the metamorphosis of cities like Phoenix and Tucson, if those cities are to preserve a modicum of the quality of life they now possess.

. . . The North American Southwest is hardly alone in its predicament. It stands as proxy for the large portion of the world that will experience similarly powerful impacts from climatic change. The die-back of forests in the Mediterranean Basin, uncontrollable fires in Australia and Russia, floods in Pakistan, and the drying-out of southern Africa are all part of the global dynamic. What sets the Southwest apart, endowed as it is with abundant financial, human, and technological resources, is that nowhere else will the drama be acted out more elaborately—or reported more thoroughly. . . .

. . . *[N]othing big happens for just one reason.* This may sound like a trivial matter, but in fact it is important. Notwithstanding the attraction of tidy, sound-bite-ready, just-so stories, most things happen not for one reason but for many. It takes a lot to destabilize, let alone dismantle a civilization, like that which once dwelled at Chaco Canyon or Mesa Verde, and it also takes a lot to cause an otherwise stable and self-replicating forest community to begin behaving in self-extinguishing ways it rarely or never did before. The more one looks at any situation, the more one marvels at the interlocking gyre of causes and effects. Part of the beauty of the world, even including its disasters, is its complexity.

Almost inevitably, wherever multiple causes are gathered, one or more will prove to have been produced by humans, a fact which leads to another theme, that *the human contribution to change in the natural world more often catalyzes than dictates the outcome*. It energizes and speeds the interaction of forces that are already present and at work, rather than deciding the result outright and single-handedly. We see this in the "flip" of desert grassland to mesquite and other shrubs, where overgrazing helped bring about vast landscape changes in the space of a few generations that otherwise might have taken centuries. The idea that *it would have happened anyway*, however, should console no one. There is always chance. No set of potentials has just one outcome. If humans had not influenced the desert grasslands as they did, they would surely have influenced them in a different way. Indeed they did so for

eons before Europeans arrived in North America by collecting mesquite beans for food, possibly on a very large scale. Long ago, in such a case, with a different catalyzing influence, yet another result ensued. The forces latent in nature have the potential to move ecological systems toward multiple future states; human activities help select the direction of the move.

A third theme . . . concerns the *enormity of human capacity for adaptation*. At various times and under various circumstances—from the great droughts of the medieval era to the cardboard shanties of today's Mexicali—simply surviving in the Southwest has been a signal achievement. But the people of the Southwest have done far more than merely survive. They have erected a great hydraulic civilization in one of the most intimidating environments on the continent. Vast quantities of ingenuity, wealth, and cooperation have made this achievement possible. It is a heritage fit to inspire both pride and emulation. Today the robustness of the Southwest's past achievements is perhaps matched by its vulnerability, and the people of the region will need to call on even greater amounts of the qualities that allowed their successes if they are to meet the challenges of the decades to come.

The answers to these challenges will be plural, not singular, but no answer will count for much—it will not in fact be an answer—if it is not backed by strong social will and collective commitment. A professional class of policy wonks, land managers, and water buffaloes, the usual suspects to whom the public defers on environmental matters, cannot handle this set of problems on their own. There needs to be broad debate and broader understanding. There needs to be a citizenry aware of the stakes.

. . . The idea of fiber lends itself to metaphor: it will take fiber to contend with the changes of the future and not least to endure the uncertainty that will attend them. Ultimately, the best answers to the climate change predicament in the North American West lead back to mundane matters: we need to get on with what we should have been doing all along, including limiting greenhouse gasses. We need to take care of unfinished business on the border, in our forests, and in water management. It wouldn't hurt to love the desert, too: there will be so much more of it; and to protect the rivers and to give the diversity of nature our serious respect. No silver bullet will make the coming decades of the Anthropocene more tolerable. There is only the age-old duty to extend kindness to other beings, to work together and with discipline on common challenges, and to learn to live in the marvelous aridlands without further spoiling them. It is an old calling and a great one. We have already had a lot of practice. We should be better at it. We can be.

EARTHCARE ON A HIMALAYAN TRAIL[2]

We will not "fix" the present wave of extinction or the climate crisis, in the sense of returning to a richer and more stable past. The jig, one might say, is mostly up. So, how to proceed? How to deal with the anger, sorrow, and very real grief that such profound changes produce? I began my journey in the Himalaya wondering if the time had come to apply the ethics of hospice to the care of Earth.

The idea of *hospice for Earth* is easily misunderstood. Of course, Earth is not dying. It has supported life for billions of years, and no matter what we do, our planet will generate life in myriad forms for billions more. But aspects of Earth are passing away. Soon more than an alarmed community of scientists and activists will mourn the lost stability of the Holocene climate, as it becomes clear that a warmer, more energetic, and more turbulent climatic regime has replaced it. Meanwhile, the Sixth Great Extinction, the unmistakable wave of human-caused species loss, which is already underway, will accelerate in proportion to the vehemence of the changes the new climate brings. So, yes, there will be a lot of death, a lot of "patients" breathing their last. And the emotional and spiritual toll on the caregivers who attempt to mitigate those losses and on others who consider themselves family to the ailing world will tap our deepest wells of fortitude.

In Dolpo, the clinics conducted by the Nomads expedition, in villages far from hospitals and laboratories, became theaters in which to observe a particular set of ethics. Most of the time, we could not "fix" our patients—could not put them on long-term drug therapies, let alone intervene with surgeries or other dramatic measures. Instead, the medicine the Nomads clinicians practiced, whether drawing on Western science or on the traditional healing arts of the Himalaya, was old-fashioned. It emphasized person-to-person contact and relief from immediate suffering. In a phrase, it prioritized *care* over *cure*. Also, it frequently required both patients and practitioners to avoid preoccupation with probabilities over which they had no control—to relinquish their attachment to outcomes—and to focus on the fullness of the present. These ethics, while contrary to the main thrust of Western medicine, are central to hospice and palliative care, and they are far from being defeatist or despairing. As we trekked through the brilliant mountains, the idea of applying such ethics to our troubled planet seemed to me to open possibilities that felt liberating and reenergizing. It offered the prospect of revising one's "terms of engagement" in serving the planet, and this, in turn, raised the possibility of engaging more effectively and with a lighter heart. . . .

[2] This section and the next are excerpted from William deBuys, *The Trail to Kanjiroba: Rediscovering Earth in an Age of Loss*, Seven Stories Press, 2021.

*

. . . A conservationist friend argues that to prophesy the end of anything is an act of hubris. We cannot know the future, she says, and we delude ourselves if we think we can. To foretell the demise of great waves of the world's wildlife is an act of overweening pride. She may be right. Chance never sleeps. My own hope, such as it is, lies in surprise, and surprises of various kinds may ultimately alter our calculation of outcomes for the wild world. This may already be happening. Some of the contra-indicators for the Sixth Great Extinction include:

- Urbanization: as more people crowd into megacities, some rural areas become depopulated. Without constant hunting, wood-gathering, grazing by domestic livestock, and other human-caused disturbances, many natural systems, including their wildlife, will rebound. India provides examples of this, and in some of the vacated rural areas, wildlife—even tigers, provided they are protected from poaching—are making a comeback. (The trend, however, can also reverse: not just in India but throughout the world, the economic impact of the Covid-19 pandemic has sent many impoverished city-dwellers back to their natal villages and to a resumption of subsistence activities. The collapse of tourism, meanwhile, has deprived many villagers of the means for living lighter on the land.)
- Speciation: some authorities maintain that rapid adaptation and global mixing in wildlife populations is producing not a sixth extinction, but a sixth genesis. In a way, it is a failsafe argument: evolution guarantees that life on Earth, given a chance, will diversify. The question is: Will the rate of diversification surpass the rate of loss? Those who say yes seem to rely more on faith than data.
- Technology: perhaps scientists will manage to accelerate biological adaptation to new global conditions. One promising area involves developing new strains of coral capable of tolerating warmer and more acidic seas, as Madeleine van Oppen and the late Ruth Gates have striven to do at their respective labs in Australia and Hawaii. Perhaps such new strains will be successfully seeded into the Great Barrier Reef and other cornerstones of marine diversity, and perhaps analogous "fixes" may be found for other ecosystems. That's a lot of "perhapses," but, hey, don't be a party pooper.
- "Geoengineering," the application of technical fixes at a planetary scale, may avert the worst impacts of climate change, benefitting natural systems as well as people. So say the advocates of re-jiggering the planet. One proposal involves deploying space-tech umbrellas in the upper atmosphere to reflect more of the sun's energy away

from Earth. Another calls for pumping vast amounts of water (with what energy?) back onto the Greenland and Antarctic icecaps to refreeze during winter, thereby forestalling the rising of the seas. Of geoengineering one thing is sure: its potential for moneymaking is oceanic. As conditions worsen, desperate societies will clutch at increasingly wild ideas, while companies hungry for giant contracts will launch sales promotions at the scale of national political campaigns. Perhaps such schemes will live up to their hype. On the other hand, perhaps they will amount to no more than a lavishly expensive ghost dance for industrial capitalism.

- Enlightenment: humans, the hopeful say, will rein themselves in, protecting and restoring habitats on a massive scale. Maybe so, but so far, not so good. Protected areas, which often exist more on paper than in actuality, and the careful management of surrounding buffer lands have certainly slowed negative trends, but they are far from reversing them on a broad scale. And people, in general terms, continue to behave . . . well, like people.
- Epidemic: disease might decimate human population, as actually happened in the fourteenth century when the Black Death triggered a rewilding of many parts of Europe. A much greater calamity swept the Americas when Old World diseases, on the heels of Columbus's voyages, reached populations unadapted to them. (The consequences—because forests reclaimed vast amounts of abandoned farmland—may have included a lowering of atmospheric CO_2 and a cooling of the climate, producing the so-called Little Ice Age, which began in the sixteenth century.) A repeat experience, enacting tragedy at a colossal scale, is horrific to contemplate but lies within the universe of possibilities. The economic shutdowns brought on by the novel coronavirus in 2020 produced hints of nature's potential for resurgence: peccaries, emus, elephants, and other species were seen to be wandering city parks and streets (although many supposedly corroborating videos proved inauthentic). While such anomalies make for entertaining YouTube clips, beyond the roads and houses, back in the swamps and forests, genuinely significant extensions of habitat may also have occurred. Even if such changes prove transitory, they illustrate one way in which rewilding can start. Outcomes that are worse for humans and better for most critters may ensue with the inevitable onset of the next pandemic. But the price to pay may very well exceed our most ghoulish imaginings, and such a cost, like the cost of every terrible thing, will fall most heavily on the poorest and most vulnerable among us.
- Combinations of the above: unexpected linkages produce surprise. Although ignorant of the future, we can nevertheless prepare. If we build enough arks and keep them afloat, and if the current expansion

> of Petri Earth eventually abates, or at least shifts to a more forgiving phase, perhaps the worst outcomes now predicted may be averted. And then what? A new and enduring equilibrium? Maybe, so long as runaway warming does not take us past thresholds from which there is no return. But don't count on it.

Let's be real: we don't live in the gentle Holocene anymore. Alteration of the climate has delivered us to the Anthropocene, and the heat already loaded into the climate system guarantees increasing impacts for decades to come. Even if we start doing everything right tomorrow, our path will not lead back to where we used to be. As Bill McKibben has observed, "We've lost [the] fight, insofar as our goal was to preserve the world we were born into. That's not the world we live on any longer, and there's no use pretending otherwise."

We are in a sick room. The patient is a tough old coot, still with plenty of vigor, but key systems are declining. There's no turning back the clock to an earlier period of robust health. From here on, adaptation will be a primary theme, with lots of workarounds, prostheses, and propping up to keep things working. We need to give the right kind of care, in the right way. How to proceed? What ethics should guide us? Perhaps the proper model is not far away.

Palliative care and hospice care differ from each other. In the first instance, patients may live a long time, although compromised, and may ultimately die of something unrelated to their debility. In the second, the present illness is deemed terminal, although the time frame for its culmination may be unknown. The differences are important, but in each case the manner of providing care and support is similar. The aim is to alleviate suffering and preserve the highest possible level of awareness, function, and enjoyment. The benefits of such a path accrue to both the patient and the caregivers, as well as to the patient's family and friends.

In the years ahead, the intensifying crises of Planet Earth will elicit a Niagara of crazy behavior. Panaceas will sprout like mushrooms after a rain: "Plant my tree on five million acres and all will be well!" "Build my machine and make carbon pollution a memory!" Myths of denial will morph into myths of escape, and cultish "End Times" fervor will flourish. Some of the hopeful say that, when things get bad enough, the dead-end nonbelievers will finally come to their senses. Let's hope so. Some might shift allegiance and choose to live in a fact-based world. But millions of others will keep walking down Crazy Street because, for them, deviation would cost too much in bewilderment, lost relationships, and eroded identity. People will keep behaving at least as badly, and as well, as people typically behave. Those among us who escape the worst of the calamities will find it challenging to continue necessary work and avoid shutting down.

Which is why the ethics of hospice and palliative care deserve consideration. Prioritize care over cure. Remain unattached to outcomes. Focus on the now. Maintain endurance for the long haul. Such ideas offer an emotionally and spiritually resilient approach to Earthcare. What they imply in terms of projects and policy, however, is difficult to say. A "managed retreat" before the inevitability of sea-level rise, rather than the construction of doomed seawalls, would be consistent with those values, as would material support for those whose homes and cherished places are abandoned in the retreat. Also consistent would be a deep skepticism about "heroic" interventions, such as atmospheric umbrellas and genetically manipulated plants and animals, which may spawn hosts of unintended consequences. Rich societies will have multiple options, poor societies fewer ones. In either case, blanket policies, are sure to fray under the wearing realities of cost, societal will, and the peculiarities of individual situations.

My personal, albeit limited, experience in hospice work has taught me that, if you keep your head and are reasonably diligent, surprisingly good things can happen, both for you and for the patient. That word again: "surprise." Everyone has heard the adage, often attributed to Mark Twain, that nine-tenths of good luck is preparation. My guess—call it my hope—is that this principle applies also to Earthcare. Luck favors the prepared planet. It also favors the prepared caregiver.

Along with the toothbrushes, dehydrated eggs, and dried fruit that I lugged to Nepal, there was a bag of several hundred stretchy red rubber bracelets, with "G.R.A.C.E.," in yellow letters, stamped into the band. We distributed them among the members of the expedition and handed them out, along with solar lights and spare clothing, to patients and their loved ones at our clinics.

G.R.A.C.E. is a mnemonic. It stands for steps in a methodology that Roshi Joan, with various colleagues, developed for clinicians.[3] Like most mnemonics, its use of language is a little tortured, but its purpose is pedagogical, not poetic. Its intent is to prompt those who take care of the seriously ill to remember, not so much what to do, but how to be.

G stands for *gathering attention* (the caregiver's, not the patient's).

R for *recalling intentions* (what is the present purpose?).

A for *attuning* (both to oneself and to the patient and others).

C for *considering* (what action will serve the purpose?).

E for *engaging* (doing it) and then *ending* (acknowledging and learning from what has transpired).

---

[3] Halifax, Joan. "G.R.A.C.E. for Nurses: Cultivating Compassion in Nurse/Patient Interactions." *Journal of Nursing Education and Practice*, vol. 4, no. 1, 2014, pp. 121–28. http://dx.doi.org/10.5430/jnep.v4n1p121. (Note added by the author.)

It's no accident that four of the five steps precede the actual doing. Preparation. Clarity of mind. The heightened awareness and extra moment it takes to tilt the odds toward benefit. In my first-aid kit, I carry a plastic card that outlines a similar series of steps for assessing emergencies and making first-order diagnoses. When people are in pain, bleeding, or unconscious, your mind speeds up and a hundred thoughts compete for attention. Or maybe you freeze. Unless you are so experienced that reflex alone will produce correct results, a checklist merits the time it takes to consult it. You sort things out; you do things in order; you don't skip steps. G.R.A.C.E. is like that. It helps a caregiver navigate stormy emotional seas. It outlines a process for getting centered and remaining so. The patient receives coherent treatment, and the caregiver benefits too: anxiety and internal conflict might not be banished, but they don't overwhelm.

Some emergencies, like car accidents, happen fast. Others, like climate change and the woes of Petri Earth, begin invisibly and seem to have no end. I keep my G.R.A.C.E. bracelet where I can see it when I work at my desk. Sometimes it helps. It reminds me to approach difficult situations as though they were patients in a clinic: take a deep breath and start at *G*. Get centered. Strong back, soft front. And go from there.

*

THE RIGHT WAY OF WALKING

Hospice is a compassionate triage. So is Earthcare. You balance a dedication never to quit with the discipline to recognize endings. You pause to honor the passing of whatever is lost: mobility, autonomy, life itself; wildness, species, ecosystems. You remind yourself that, even as Kanjiroba melts, it inspires; that beauty, though diminished, remains. Sometimes you need a lot of reminding. . . .

I'd come on the trip thinking that hospice ethics might usefully apply to Earthcare, and nothing I had learned from Roshi, the medicos, or our stoical patients contradicted that. Yet I had not gone further. I had a sense of *so what?* The formulations I had made and the formulations I had borrowed seemed worthwhile, but they were at best only recipes. Where was the real grub?

I dwelled in such ruminations, plodding along, when I became aware of a kind of counterpoint welling up in the background of my thoughts. No one can explain how words and ideas come to mind. The manner of their

summoning eludes us. Yet the mystery of unframed thoughts becoming manifest attends us daily, and every walker knows that walking seems to foster it. It is as though the physical shock of our footfalls shakes loose notions we never suspected our minds contained and frees them to float into consciousness.

At first, I couldn't grasp the idea hovering in the back of my mind, couldn't cast it as a thought. It was a shadow, no more. Then, strange to say, a light fell on it and it took form. It presented itself as a sentence: "The right way to carry the grief is the right way of walking." I heard it in my mind's ear, as though it were made of sound. I replayed it, hearing it again. Once. Twice. Several times. The words were clear but the sentence seemed a riddle.

I was walking. The sentence had arrived like a telegram, sender unknown. It had a rhythm that fit my steps. I marched to it, silently chanting. I didn't understand what the words were trying to tell me, but I liked their sound and I kept their cadence. I walked a hundred paces, repeating the sentence like a mantra. Then I reversed the phrases and walked another hundred: "The right way of walking is the right way to carry the grief."

When I thought about the grief, it was not hard to identify. It was the stew of sorrows brewed from climate change and the woes of Petri Earth. It was the distress aroused by our planetary dilemma and by our failure as a society, even as a species, to respond in full, to assent to what we know.

Grief was not the riddle. Walking was. What was the right way? Our expedition had walked for five weeks. Life had contracted to the essentials of food and shelter, movement and rest, work and play. Every hour's effort had been embedded in a stern geography. The requirements of place and mission asserted demands that none of us could meet alone. We had to cooperate, act together, and so we formed a community. We served. We learned. We walked. We found a settled pace, literally and figuratively. For a time, we were nomads. The trail became home. . . .