As I was growing up, I also learned that my grandparents' generation had maintained a proud heritage that had a strong commitment to justice, sense of right and wrong, and a belief in honesty. They didn't have to learn these values; they were simply passed along as an inheritance, very early in life. When children are exposed to values, and they see them embraced by those around them in their actions, the values become part of their personalities and are hard to unlearn.

At school, I was encouraged to be honest, too, and I was lucky to possess a mental attitude that was not constrained by judgment or religious dogmas. Catholic nuns—first the Consolata sisters from Italy, then the Irish Loreto nuns, and finally the Benedictine sisters of Mount St. Scholastica College in the United States—taught me from the age of twelve. They encouraged my curiosity, an embrace of the scientific method, and the use of critical thinking. Such exposure made it easy for me to listen and assess without prejudgments, and this has assisted me greatly in my life journey.

Today, people often ask me how I determined all those decades ago that the environment was so important. To a certain extent it was not my discovery. I was led by events that were happening around me at the time. For example, in 1972, the United Nations held its first global conference on the environment in Stockholm, Sweden. In 1973, the UN Environment Programme (UNEP) was established in Nairobi, with Maurice Strong as its first executive director. I was invited to join a group that established the Environmental Liaison Center International, a nongovernmental (nonprofit) environmental

organization founded to work closely with UNEP and monitor its activities.

As I gained knowledge from others who knew much more than I did then, I became interested. This enabled me to respond when, in the lead-up to the first UN women's conference in Mexico City in 1975, I listened to rural women in Kenya listing their problems. I could see that all the challenges they had were rooted in a degraded rural environment. Planting trees came to me as a concrete, doable response.

I came to identify trees as the answer to the environmental problems the Kenyan women faced, partly because I grew up in the countryside surrounded by trees and green vegetation. But I was also fortunate at the time to be involved with organizations that were becoming aware of this issue. I can also point to the Source as the wellspring for all of the ideas that came.

Sometimes the inspiration to act arrives as a spark; sometimes it takes the form of a process. Whether one is drawn into an action through a sudden rush of inspiration, or through the slow dawning of a realization that something needs to change, I would argue that it all comes from the Source. But it's nonetheless essential to cultivate an attitude that allows you to take advantage of that awakening. This entails keeping your mind, eyes, and ears open, so that when an idea arrives you'll be ready for it. To be able to capitalize on our inspiration it is also important to be predisposed to welcome new sets of knowledge and retain an open mind. We need to appreciate as much as possible that a further horizon always lies beyond the one we see in front of us; there are always opportunities to learn and to examine one's own perception in light of recent information or revelations.

poaching, as the animals' skins, horns, and now flesh have a price tag on them. The land on which these animals used to roam free has been commercialized, fenced in, and privatized. In much the same way as traditional human communities are confined in their reservations, so wildlife is now enclosed in ever-diminishing parks and wilderness.

On a worldwide scale, the ravenous craving for more has very direct consequences on our environment. A 2006 study by the United Nations Food and Agriculture Organization, for example, found that the planet's livestock sector, responsible for the production and delivery of meat and dairy products, is also responsible for approximately 18 percent of global greenhouse gas emissions. This is more than the total for all forms of transportation combined and nearly on par with the greenhouse gas toll of deforestation and forest degradation. Intensive animal agriculture, and its massive requirements for feed for farmed animals, is also polluting air, water, and land around the globe, and destroying forests and grasslands.

The economy and the culture of many native peoples has shifted from a sense of collective responsibility for community well-being based on shared public space and the common good to an individualistic ethic that focuses on self. Whereas in the past the community could be defined by how it shared the bounty of the land with itself and visitors, now it is disorientated and disconnected from the land and the customs that physically, environmentally, and morally sustained them.

Such changes in the perspective on the natural world have been both cause and effect of the loss of self-respect and concern for the environment that has affected us. So much that was based on values has been lost.

The question of why humans insist on laying waste to that which keeps us alive is perhaps unanswerable. It is based on behaviors that may have been suitable for us when we were fewer in number and could destroy vegetation and move on with relatively limited effect on the environment, but that now pose a threat to our very existence. Nonetheless, although we may not know *why* we act this way, it's essential that we address the attitudes that lead us to such self-destruction before it's too late.

Along with a shift in consciousness, there is a need for a change in "perspective." We need to reflect more thoughtfully on our responsibilities to the planet and to one another, and provide a way forward to heal all these wounds by embracing creation in all its diversity, beauty, and wonder. To do so, we need to take another look at planet Earth.

exercise of extraordinary intelligence and the expense of financial, industrial, and natural capital developed on Earth could we even contemplate establishing life on another planet; and, after all of the intensive expenditure that allows us to carry human consciousness into space, we are still left with an age-old question whose answer still eludes us: *Why do they do those things?*

The task for us in healing Earth's wounds is to find a balance between the perspectives: between the vertical and the horizontal views; the big picture and the small; between knowledge based on measurement and data and knowledge that draws on older forms of wisdom and experience. Bearing in mind these different points of view, therefore, it is time to reflect more deeply on just how we may go about employing the spiritual values that might save us, using trees as an entry point.

CHAPTER FOUR

The Power of the Tree

The first value at the center of the Green Belt Movement's work is a demonstrable love for the environment. Such a love doesn't have to be sentimental, or imply that human beings should not utilize the resources in the natural environment. Many tree seedlings and full-grown trees die because of lack of care or drought. Or they have been cut for firewood or fencing, which may have been the original purpose for which they were grown. Such use is okay, as long as the land isn't left bare, and trees and forests aren't exploited carelessly or for the gain of only a few, while many suffer the loss of the ecological services (such as regulating rainfall or stopping erosion) that the trees and forests provide.

Even before the arrival of white settlers in the early 1900s, the countryside around the five forested mountains in Kenya was intensively cultivated and relatively densely populated. Nonetheless, the native peoples maintained extensive forest reserves where populations of elephants, leopards, buffaloes, and many other animals flourished. Although trees were cut down in these reserves and elsewhere, the communities made a habit of first using underbrush and already thinned forested areas to create houses and for firewood, leaving the larger, straighter trees to stand.

Such customs allowed the local communities to practice a form of agroforestry that retained water and topsoil. Each tree that was left standing was called in Kikuyu, for example, *mũrema-kĩrĩti,* or "one that resists the cutting of the forest." These trees were considered the habitation of the spirits of all the trees that had been cut down. In turn, the standing trees couldn't be felled unless the spirit was transferred to another tree. This was achieved by placing a stick against the tree to be cut down and then moving it to one that was to remain standing, or by planting another tree immediately in the same place as the felled one. Clearly, such restrictions stopped wholesale deforestation from taking place.

Many communities didn't revere trees per se, but the locals did choose certain species of trees and bushes at the base of which sacrifices were performed, both for their families and for the community at large. In Kikuyuland, one of these was the *mũgumo* or fig tree (*Ficus natalensis*). Although not every fig tree was deemed worthy of veneration, Kikuyu priests performed sacrifices only where fig trees stood. Once a ceremony had been carried on around it, that fig tree and its location became sacred. My mother told me very clearly when I was a child that I was never to collect twigs for firewood from around the fig tree near our homestead since, she said, it was "a tree of God" (*mũtĩ wa Ngai*).

Conceiving of the fig tree as *mũtĩ wa Ngai* had a kind of protoecological reasoning behind it. The tree's deep root system prevented landslides and allowed rainwater to travel from underground reservoirs to the surface in the streams and rivulets that then burst through the soil. Killing or harming every

fig tree would, therefore, mean destabilizing the soil and making both the conservation of water and removing it from the ground more difficult. This logic was clearly how many peoples, who may have also used their trees as sources of medicine and food, survived in environments that were sometimes harsh.

For my mother, and the generations before her, the honoring of certain trees was part of a general reverence for nature. In the Kikuyu tradition, one was obliged to remove one's sandals if you approached a tree during a ceremony or were climbing Mount Kenya, which at the turn of the last century was completely covered with trees. Even those elders with spiritual authority would walk barefoot if they went up the mountain; indeed, so sacred was the mountain that it was impermissible to even crush wild mushrooms underfoot on one's journey through its forest.

Since the beginnings of human culture, the tree has been not only a source of food, medicine, and building material but a place of healing, consolation, and connection—with other human beings and with the divine. Trees are among the oldest, as well as largest, living organisms on the planet, so it's not surprising that human beings should have conceived of them in religious terms.[1] The Jewish mystical tradition kabbalah depicts the connection between heaven and earth as an upside-down tree. The ancient Hindu texts known as the Upanishads mention the pipal (or *aśvattha*) tree, which, with its roots in heaven and its canopy in the earth, is considered to be the manifestation of Brahma in the universe. In Norse

mythology, the ash tree Yggdrasil is rooted in the underground and its branches support the home of the gods. Indeed, in my more fanciful moments I conceive of the tree as an upside-down person, with her head in the soil and her legs and feet in the air. The tree uses it roots to eat and its leaves to breathe, while the trunk resembles the human body.

Through the symbol of the *axis mundi*—the cosmic pole around which everything is ordered—the tree has even embodied the universe itself. Ancient Egyptians believed that a great sycamore connected the worlds of life and death and that a huge tree arched over the earth and contained the sky beneath it. In a story echoed in Genesis, the ancient Babylonians conceived of two trees that guarded the eastern entry to heaven. For the peoples of northern Ghana, the baobab was the pathway by which human beings came down to earth from heaven. The Mayan civilization of Central America venerated the ceiba, which they called Yaxche, the Tree of Life; it supported the heavens. In its cosmology, the Zoroastrian tradition of Persia features the Saena, or the Tree of All Healing.

Certain species of trees have also been important spiritual centers. In southern Ghana, many communities continue to recognize as sacred the *Okoubaka aubrevillei, Milicia excelsa,* and a species of liana, while the Shona of Zimbabwe hold that ancestral spirits dwelled in the *mobola* plum tree. In areas of South Africa the *marula* is considered sacred. The Yoruba of West Africa believe that the iroko, cotton, baobab, and African sandalwood trees are the residences of a number of deities. Sacred groves exist in Nkoranza, Ghana, and throughout Malawi, while the grove dedicated to the *oshun,* or female goddesses, of the Yoruba near the town of Oshogbo in Nigeria is

so important that the United Nations Educational, Scientific and Cultural Organization (UNESCO) has named it a World Heritage site. The Ndembu of Zambia, Congo, and Angola use the *mudyi* or milk tree for a number of cultural and sacred practices, as they do the *muyoomb* and *kapwiip,* which they call "the elder of all trees." Plants can be venerated even in those areas of Africa where there is less forest cover. For instance, the Tuareg of North Africa deem the *Maerua crassifolia* to be a place where spirits dwell.

The Hebrew scriptures similarly place an emphasis on trees—and not merely within the Garden of Eden—as a token of God's presence. After the flood, the dove returns with a leaf from an olive tree in its beak as a sign that Noah's ark can come to rest. The Israelite leader Joshua is believed to have established a pillar under an oak tree at which to honor Yahweh, and Abraham places his tents within sacred groves of trees in Shechem, Hebron, and Beersheba in order to be closer to God. The prophet Ezekiel conceives of God as a tree that produces water from its roots, while both Jeremiah and Hosea compare Israel to a tree. When the Israelites are forced into exile in Babylon, they famously hang their harps upon the willows, which thereafter became a symbol of mourning. In Asia, legend has it that the Buddha was born beneath a sal tree, and experienced his first deep meditative state under a rose apple before finding enlightenment underneath the bo or banyan, which thenceforth became known as the bodhi tree. In Japan, the oldest Shinto shrines are often to be found on hillsides or within groves of trees, and a religious frame of mind is one of the qualities that cultivating bonsai trees is intended to generate.

The ancient Germans considered the oak and spruce

trees to be sacred, while the ancient Greeks dedicated the laurel, olive, myrtle, ivy, and oak to Apollo, and the cypress to Hades. An oak formed the site of worship to Zeus at Dodona in Epirus, while the Romans linked the myrtle with Venus and Neptune. Plato's academy was situated in a grove of trees dedicated to Athena, the goddess of wisdom. Even today, the ancient Greek tradition of associating the olive branch with peace and the laurel wreath with achievement in competitive sports continues.

Pre-Christian Celtic lore also honored sacred forests. Some churches and cathedrals in Europe are decorated with the visage of the pre-Christian "Green Man," who was emblematic of spring and fertility, and often decorated with leaves. Within the Christian tradition, some trees play an important symbolic role. Palm leaves are strewn before Jesus as he enters Jerusalem, and the palm, cypress, myrtle, and olive all symbolize aspects of the Virgin Mary. The columns of Egyptian temples were shaped to reflect the stems of the lotus, palm, and papyrus trees, and Vitruvius, the first-century B.C.E. Roman writer on architecture, suggested that the columns of Greek and Roman temples may themselves have been modeled on tree trunks. In all such places of worship, including Christian churches and cathedrals, the areas within the buildings' colonnades mimic the cool enclosure of an opening surrounded by tall trees, whose canopy provides protection from the elements and yet whose vaulting space gives a feeling of openness and uplift that encourages a sense of the divine.

In addition to the sacred grove—a space in the forest where the divine might be experienced—many religious traditions honor the individual retiring into more intimate or stark landscapes to receive divine messages. The undulating landscape of the Central Highlands of Kenya provided many places for Kikuyu priests to escape and commune with God or to receive inspiration. Kikuyu lore has it that the Kikuyu traditions and language, which is rich with sayings and idioms, and through which efforts were made to create a form of writing, were developed between harvests in the many caves in the region by *aini a gĩchandĩ* ("players of the *gĩchandĩ*," an instrument made from a gourd). These grottos might be near waterfalls or rivers; they would be naturally covered by vegetation and thus it would be easy to secrete oneself away.

The Archangel Gabriel is thought to have given the Prophet Muhammad the Qur'an in a cave. The Hebrew prophet Elijah flees into the countryside, and hides near a brook where he is fed by ravens. The Mormon religion began when Joseph Smith received his revelations in a sacred grove in Palmyra, New York. John the Baptist, of course, prophesies the coming of the Messiah in the wilderness, and Jesus goes into the desert in order to be tested. Through the course of the three years of his ministry, Jesus retreats several times to be alone (for instance, Luke 6:12). On the last night of his freedom, he removes himself to pray in the Garden of Gethsemane. Even cathedrals and churches—which encourage such lofty senses of the divine—provide chapels where one can be alone with one's thoughts and one's God.

Because of their spiritual resonance, as well as the shade and space they offer, trees provide natural focal points for a community to come together to deliberate its future or for

elders to render judgments on contentious issues. Consequently, it's not surprising that certain trees became symbols of a group's identity. I encountered this firsthand in 2006 in the Basque region of northern Spain, where the local government was partnering with the Green Belt Movement to plant trees and offset greenhouse gas emissions. Representatives of the administration took me to see an oak tree that marked the site of the original Basque government. The oak, which was about twenty years old, was said to be the fourth tree that had been planted on that site since the fourteenth century.

The Basque people are not alone in considering a tree the locus of judgment and government. In Kenya, Samburu leaders traditionally gather under a tree to discuss issues. The early Israelite judge Deborah takes her seat under the palm tree to exercise her wisdom. The Oromo of Ethiopia and Kenya deem the scepter tree (also known as the *bokku*) a suitable place for officials of the traditional courts to gather. The judges from the Maasai and Kalenjin communities traditionally sat under a tree, and once ensconced beneath it one was obliged to tell the truth—much as placing one's hand on the Bible is meant to encourage honesty in a court of law today. In addition to providing shade for learning and government in Southeast Asia, and Java in particular, the banyan has also been used as a place under which to conduct business in Gujarat, India.[2] The early Buddhist *sanghas* likewise practiced their austerities within the forest.

Among Kikuyus, once men had finished raising their children, they were expected to become guardians of wisdom and protectors of the community's way of life. As such, they were

considered peacemakers and judges, and during the ceremony inducting them into elderhood they were given a staff from the *thiigĩ* tree. This mark of authority allowed them to officiate in the various ceremonies and rituals that marked the communities' rites of passage and sacrifices.

When he was about to perform a ceremony, a Kikuyu elder would disappear to a special, sacred location in the forest for seven days to purify himself. The number seven signified a bad omen for Kikuyus, so staying in the forest for a week meant that the omen could be reversed. During this time, the elder would take no alcohol, and refrain from sexual activity and other pleasures. He would try to rid himself of bad thoughts and focus on the ceremony at hand: why it needed to be performed and the meaning of its practice. The ceremonies themselves were attempts to appease God, who would have precipitated whatever the community was facing: a drought, a famine, barrenness, or an epidemic of disease.

Whenever a judgment was to be made, the thiigĩ stick had to be present; it was the signal that violence was unacceptable. I recall my mother telling me that if there was a dispute between men from different mountain ridges, the elders from the opposing groups would meet. If they decided there was to be no conflict, rather than announcing their judgment directly to the young fighters, the elders would stand on their side of the riverbank and stretch their thiigĩ staffs so that they pointed toward one another. The elders would then declare a truce by saying in unison, *mbaara horoho,* or "let the conflict end." Once the elders uttered those words, the warriors would depart without speaking or showing any aggression to the other side. This ritual was

as binding as a signed peace treaty, and it served very well to maintain peace within and between the communities.

It needs to be reiterated that honoring and sacramentalizing trees in these communities didn't mean that they could never be cut down or utilized for ordinary purposes. In fact, they always have been, even to make sacred spaces. The temple built by Solomon is made from oak, palm, date, and willow trees, among other natural elements. Hindu temples are often constructed of wood from the deodar.

Within the broader perspective of public policy, therefore, if trees have been grown only for timber, then it seems reasonable to cut them in their prime and use the wood. What needs to be borne in mind, however, is that the conventional economics of natural-resource use—that a tree is only as valuable as the amount of money that can be obtained for the products that can be made from it—fail to account for the many other values that human beings draw from the world around them. In fact, scientists are only now beginning to understand the vast range of services—natural, social, psychological, ecological, and economic—that forests perform: the water they clean and retain; the climate patterns they regulate; the medicines they contain; the food they supply; the soil they enrich; the carbon they entrap; the oxygen they emit; the species of flora and fauna they conserve; and the peoples whose very physical existence depends on them.

In 1997, a coalition of scientists estimated that the total dollar value of the planet's ecosystemic services was $33 trillion—or almost double the then gross national product of the United States ($18 trillion).[3] On a local level, these services

can be of crucial significance. For instance, planting and ensuring the survival of 30,000 acres (12,000 hectares) of mangrove trees in Vietnam cost $1 million, but saved $7 million a year in maintenance costs for the country's dykes, according to a recent report from the United Nations Environment Programme. While shrimp farms, which often require clearing coastal mangroves, can generate (with subsidies) up to $1,220 a hectare (2.5 acres), the losses to local communities of wood and nonwood forest products, fishing, and coastal protection adds up to nearly ten times that: $12,000 a hectare. And after five years of commercial shrimp farming, when the environment is exhausted and the operations move on, restoration costs are estimated at $9,000 a hectare.[4]

That some rare tropical hardwoods are made into such functional items as boardwalks, benches, or even chopsticks—and that so much goes to waste—suggests just how far removed we are from understanding the power and value of trees and forests, and of loving the environment.

When we reflect on the sacred groves and the spiritual and symbolic weight we have given to trees and forests, it seems self-evident that not only have trees been our constant companions, but we would quite literally not be human if we didn't perhaps feel regret when a tree disappears from the landscape. For when it does, a fundamental concept from the Garden of Eden also disappears.

It is possible to live within a forest and not really *see* it, or dwell in the countryside and not appreciate and be inspired by the nature that surrounds you. The prophet Jeremiah laments those "who have eyes, but do not see, who have ears, but do

not hear" (Jer. 5:21). When I raise the issue of the loss of the natural world in the Green Belt Movement's civic and environmental seminars, many participants tell me that it's as if they had looked at the world around them for the first time. "Until I took this course," one representative woman said, "I didn't see the bare fields and roadsides or the denuded landscapes. Now I see areas where there should be trees, and rivers filled with silt that I hadn't noticed before." She finally *saw* what had been in front of her all along; her consciousness had been raised, and now she was in a position to participate in the process of healing.

Perhaps this is why, as I watched that two-hundred-year-old sapele fall to the ground that day in the Congo, it felt to me as though something extraordinarily weighty and consequential had been brought low. In its collapse was an echo of the trees and whole forests disappearing all over the world. Perhaps, too, given the age of the tree, I'd recognized something of myself in it: in the passage of our many years, we had turned from limber youth to creaking old age, our fresh limbs knotted and worn by time, yet still, I hope, with a contribution to make and still holding on to our lives with an element of dignity and resilience.

I could imagine how far that tree had come, from its beginnings as a tiny seed one could hold in one's hand to a mighty organism that had outlived many generations of humans. Such a journey—nurtured in the darkness of the soil, the lightness of the sun, and the dampness of water—could be explained by science, but somehow it was still miraculous: that life of such grandeur and permanence could have emerged from something so small and fragile. The spread of the roots downward and the branches upward provided a glimpse of the beauty and complexity of natural processes that our scientific instruments, for all their sophistication, still aren't quite able to explicate.

That more than half of the wood from the tree would go up in smoke—even though it had until the moment it was cut down possessed a hardiness that enabled it to withstand storms, soak up the rain, and hold fast during dry spells—also upset me. Its branches had hosted insects of various sorts, and, despite the risk of loss of a limb or two, and the parasites and birds that may have bored holes into its trunk or eaten out its inside, it had continued to grow. But now the tree was no more because it had been judged to have greater value dead than alive.

One aspect of a love of nature that we need to foster is experiential. Nature—and in particular, the wild—feeds our spirit, and a direct encounter with it is vital in helping us appreciate and care for it. For unless we see it, smell it, or touch it, we tend to forget it, and our souls wither. This is particularly true in urban settings or industrialized countries where direct experience of the untamed is less common, and it's the main reason so many tourists visit Kenya (for the most part, they're not coming to see the Kenyan people!). They want to see the large animals in their natural habitat. Many develop a connection to a lion or an elephant or a wildebeest, and they want to help keep them alive.

In many ways, this search for the wild is an attempt to heal the "dis-ease" we all live with, since none of us is immune

to the effects of environmental degradation or diminishment of the natural world. I feel it when I'm in the countryside in Kenya and see bare hillsides and rivers red with silt, which harms both people and other species. Likewise, I feel ease when I visit places where trees, particularly those planted by Green Belt Movement groups, have grown and cover a swath of green land that was once bare.

I remember on one occasion we visited a site that had been used for cash crops and then, when the soil was exhausted, abandoned. Through our efforts, the grasses and small bushes that formed the undergrowth out of which native trees could grow had returned, and vegetation covered the ground so completely that one would have been forgiven for thinking that agriculture had never taken place there. Near the site, we came across two streams, which a local forester told us had sprung up since the rehabilitation of the woodland. As we descended into a deep valley, we could see the water from the streams merging with the river, which had deepened and become enlivened. Seeing the replenishment of the deforested area and the resurgent streams almost overwhelmed me. Not only was the land recovering, but we had been instrumental in creating water where none had existed for years. It seemed like a miracle from God—like Moses striking the rock and seeing water gushing forth into the desert (see Num. 20:11)!

I'm sure I'm not alone in feeling my heart stir when I see rivers cleared of silt as forests are replanted with indigenous trees, or when I meet someone who says his life was changed by the work we have done. When we experience something pleasant, such as standing in a forest listening to the birds, the

insects, and the sound of the wind in the branches, we are filled with a sense of well-being. It's as if what we're searching for finally has been found.

Certainly it's important to read about the earth, and understanding its systems also helps create a connection to it, and a desire to want to do something for it. However, if you detach yourself completely from the reality of nature, you lose a little of the knowledge about what is happening to the planet. It is worth remembering that for the last fifty years, scientists working with the soil, in the forests, and in the oceans have told the rest of the world of the mounting evidence of drastic changes to the earth because of toxic pollutants, habitat loss, species extinction, depletion of the ozone layer, and changes in climate and temperature from the greenhouse effect, which we know today as global warming. They gathered data, but they did so *within* the natural environment. This is also why I believe it's so essential to have environmental education in schools that includes experiential learning, so children can touch the soil and see the worms, or tend a garden and harvest and eat what they grow. Unfortunately, if they don't have such experiences, or if they never plant a tree, they may not know what they have missed until it's too late. They may never rediscover the lost sacred groves.