Faith and Science as Partners in Environmental Awareness and Creation Care: An Ecologist’s View

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Trees are sanctuaries. Whoever knows how to speak to them, whoever knows how to listen to them, can learn the truth. They do not preach learning and precepts, they preach, undeterred by particulars, the ancient law of life.

— “On Trees,” Herman Hesse

Last winter, I spoke at a synagogue in Olympia, Washington. The congregants had come on a January night to hear my sermon on the topic of trees and spirituality. As an academic ecologist and a conservationist, this event was part of my exploration of ways to discuss the critical connections between humans and nature in settings well outside of academia. One member of the congregation was elderly and dressed in disheveled clothes. At the end of the discussion, he stood up, his eyes directed upward. “When it is raining,” he said, “and I stand under a tree, I stay drier and warmer than when I am out in the open. Trees protect me.” He paused. “Sort of like God.”

No conservationist—or theologian—could have made a stronger statement. Many scientists consider religion to fall outside of the way they understand the world. But I think that if scientists can communicate how people of different faiths describe trees in their own holy texts and in their own places of worship, we might inspire followers of those religions to fruitfully exchange ideas about how to collectively be better stewards of forest ecosystems. The approach I used in the synagogue that night—and which I describe here—is an example of how scientists and faith-based ground can find authentic common ground that is authentic and can catalyze efforts to protect the Earth.

Throughout human history, many religious traditions have examined the concept of Earth’s cycles and their stewardship. More recently, historians of science have explored how explanations of life in scientific and religious terms are closely intertwined. By placing discussions about how crucial nature is to human well-being in settings outside the university, both the scientist and the non-scientist may be more open to exchanging ideas. My approach puts these concepts into direct practice, by exploring ways to directly interact with religious communities by delivering sermons, creating printed materials about trees growing in the sacred grounds of churchyards, and participating in church-led ecological restoration activities.

I describe novel ways that environmental scientists might forge relationships with faith-based groups to increase a sense of stewardship for trees, forests, and nature. This has involved finding common ground between scientists and faith-based groups in venues of religious worship. Clearly, many church-goers are aware of and interested environmental issues, but people who come to church or synagogue or a temple are in a receptive mode—they

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make time, dress carefully, sit quietly, and have open hearts and minds in that time and place to consider matters of their spirit and of truth. So, places of worship can be optimal venues to explore links between the ecological values of trees and their spiritual values to evoke a stronger sense of conservation for all involved.

The lens of the scientist

Ecologists are charged with understanding and communicating the ecological values of the natural world from the standpoint of science. They are trained to bring the tools of science—observation, experimentation, modelling—to document patterns, understand processes, and make predictions following disturbance. Ecologists are also trained to communicate their research findings to other scientists in language that is efficient, technical, and targeted toward our closest peers.

There is nothing wrong with this mode of understanding or communication. In fact, I have embraced it for my forty years of being a faculty member at academic institutions. However, it is growing increasingly clear that scientists—at least some scientists—must go beyond the typical modes of scientific communication if we are to be effective in motivating the large pool of non-scientists to conserve and sustainably use the natural world. The scientific literature can be exclusionary among people who are not schooled in the language of science. Non-scientists must often rely on the media to “translate” scientific work into the more accessible forms of popular magazines and television documentaries. Although many media people are sincere and well-trained, they sometimes overlook the complexity of environmental issues.

When scientists decide to spend some of their time and energy in communicating with non-scientists, however, they usually choose to give presentations to groups who are already convinced of the importance of conservation. Usually they write articles for natural history magazines, or give talks to nature groups, whose readers and listeners are already convinced of the importance of conservation and sustainability. Thus, environmental practitioners have been exhorted to expand their communication spheres and to go “beyond preaching to the choir.”

A listening approach

I decided to try to uncover common ground by drawing upon the authorities of religious texts rather than just scientific texts, and then to directly provide that information to faith-based communities in venues where they worship. I did not attempt to convince faith-based communities of the importance of trees based on science. Rather, I relied on their authorities, their scriptures, to tell them what they already know, what has already been written.

Academic scientists like me tend to think of themselves as the authorities. We are so used to thinking that we need to increase science literacy in the general public, that we do not listen to other groups in society and learn from them. A scientist doesn’t have to become a Lutheran or a Catholic to listen to Lutherans or Catholics, just as Lutherans and Catholics don’t have to become scientists to listen to what scientists might have to offer. Thus, I

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started my work by reading the Old Testament, the New Testament, the Qu’ran, the Talmud, the Bhagavad Gita, and Buddhist stories, and searching for the items that related to trees and forests. I then synthesized those items into sermons that highlighted the uses and importance of trees and forests in the lives of people of each of those faiths and presented them in venues for worship.

This approach is one example of a growing movement among ecologists and religious groups to improve humans’ relationship with nature. Hundreds of projects involve “the greening of religion.” As environmental issues grow more urgent, an unexpected but effective collaboration between environmentalists and conservative evangelical Christians has occurred. In 2006, eighty-six evangelical leaders signed the Evangelical Climate Initiative, a statement that calls upon believers to urge federal legislation to reduce CO₂ emissions through a cap-and-trade market system. Signatories of the statement included the presidents of thirty-nine evangelical colleges and pastors of mega-churches. They preach a gospel of “creation care,” wherein God gives people dominion over the Earth, and with it an obligation to carry out good stewardship of the land, air, and water.

What religious authorities and places taught me

My source materials came from web-downloading and searching the Bible, the Talmud, the Qu’ran, and Hindu and Buddhist scriptures for quotations containing the words “tree” and “forest.” I downloaded the texts of each and searched for all references to “tree” and “forest.” In the Old Testament of the Bible, for example, I found 328 references to those terms and then categorized them into six groups, ordered to show which trees were used or viewed (practical use, adornment for temples, analogies to a deity, location markers). More than 50% of the references described the use of trees for symbolic, aesthetic, and practical purposes (“He offered sacrifices and burned incense . . . under every spreading tree.”). About 20% of the references used trees as an analogy to life and

God (“Like an apple tree among the trees of the forest is my lover among the young men.”). Only 3% of the references describe aspects of tree biology, ecology or physiology (“So it towered higher than all the trees of the field; its boughs increased and its branches grew long spreading because of abundant waters.”).

I also found that trees in the other major world religions have spiritual and symbolic importance. In holy writings, plants, and especially trees, are often seen as symbols or manifestations of divine knowledge. They have the power to bestow eternal life or renew the life force. One example is Buddha’s enlightenment under the Bodhi tree. In Egypt, the gods sit in a tall sycamore known as the tree of life, and in Indian mythology there is a tree in heaven that provides a life-giving drink called ‘soma’ to Yama and the other gods. The Jewish Talmud says “…and the Lord God planted a Garden in Eden, and so you, too, when you come to Israel, shall do nothing before you have planted…” And as early as the second chapter of Genesis of the Bible, trees and forests are portrayed aesthetically, practically, and symbolically: “the Lord God made to grow every tree that is pleasant to the sight and good for food, the tree of life also in the midst of the garden, and the tree of the knowledge of good and evil…”

Although there were no references to what ecologists refer to as “ecosystem services” that trees provide, the scriptures stated the equivalent. Trees are not only inextricably tied into human needs—for food, shade, wood, rituals, ornamentation—but are at the base of what is most spiritual. Trees are symbols—analogies to god, and to that which is holy—and are used to help humans understand what is basic about life.

I compiled these findings into a sermon, titled “Trees and Spirituality.” I integrated results into three topics: (1) trees as fillers of the needs of followers, (2) how trees connect humans to the divine, and (3) ways in which humans incorporate trees into spiritual practices. I then focused on the connections that have the strongest bearings on the particular faith. Finally, I discussed actions that we might take as a result of heightened awareness, and invited later discussions.

Because I was new to the world of formal religion, I had to acquaint myself with the settings, customs, behaviors, and tone of places of worship. I could not make assumptions about how communication works in churches based on my experiences in academia. So I first simply attended and listened to a wide range of places of worship in the Pacific Northwest. I noted where services were offered by looking at the Faith section of my local newspaper and visited a different church or synagogue each weekend. I dressed up, sat in the back pew, listened, watched, and responded, taking my cues from regular congregants. I noted that sermons were only 20 minutes long (in contrast to a typical 50-minute academic lecture); that people were attentive and followed instructions, and that a donation basket was passed to show gratitude and contribution. Most importantly, the people in the seats next to me, clearly a stranger, greeted me with a nod or “good morning,” and during the coffee hour after the service, engaged me in warm conversation. I learned that they talked

Invitations to the pulpit

After I had compiled my data, and learned something of protocols, I knocked on doors of different places of worship. I did not portray myself as somebody who belonged to that faith, because I don’t have a religious faith. I am the daughter of a Hindu and an Orthodox Jew, and I don’t believe in God myself. But being a believer was not necessary. Because I was drawing upon the Holy Scriptures of these different faiths and using that as my authority, I would be able to convey the importance of trees and forests through that rather than my own personal [religious] conviction. I didn’t feel that I was betraying myself as a scientist by trying to pretend I was a religious person. This posed a barrier when I began, because I was rightfully viewed as an outsider. However, I was able to draw upon the connection of a personal friend who was a long-time member of a Unitarian church. After I gave a sermon there, and they saw that I wasn’t trying to dissuade them from their own religious convictions, I was invited to other Unitarian churches. After those, I was invited to other Christian churches—Presbyterian, Episcopalian, and Catholic—and on to congregations of Jewish and Buddhist faiths.

My sermon began with an explanation that my own affinity for trees began when I was a child of a large and sometimes chaotic family. Trees were my refuge. They held me in their branches and reassured me that there are safe places in the world. I chose as my profession the study of forests and trained myself with the tools of science to come to a better understanding of how trees work and how they provide the innumerable functions for humans. They have since provided me with a livelihood that has brought me professional and personal fulfillment.

My sermons were flexible. If I gave a sermon to Baptists, for example, I would highlight the Christian, Bible-oriented references. If I gave a sermon to Buddhists, I would highlight Eastern religious texts. But I also emphasized the universality of these relationships between humans and trees, as they were manifested in all of the

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about their children and vacations, not just religious topics. I got a sense of their feeling of community and trust and though I was an outsider, I was not entirely outside of it.
The passage of time: their concentric rings count the years.

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response was about offering more information about the importance of trees to me. I found that to be such a welcome and open invitation to exchange.

Other pathways of exchange

This approach of trying to find common ground led to other activities. One of them concerned the natural history that occurs in the sacred ground provided by churches themselves. When we think, “What’s sacred about a church” we think about the crucifix on the front of the nave, the cabinet where the Torah is housed, or images of the twelve Stations of the Cross on the walls, or the altar where we place marigold flowers for a Hindu deity. All of those occupy interior space. But nearly all places of worship also protect exterior space, many of which support trees. In 2013, my students and I began approaching churches and saying to the clergy, “Could we map the trees in your churchyard and create booklets that would inform your congregants about the living things that you protect in your churchyards? You are fostering sacred ground, so the trees that live there are also in some ways sacred, and we would like to document that.”

We brought out our surveying tools and mapped every tree in the churchyard of St. Mark’s Episcopal Cathedral as well as the Unitarian Church, both in Salt Lake City. We created booklets for congregants that contained maps that showed the location of the trees in the churchyard, and listed biological information about each species of tree, as well as any verses that we found in Holy Scriptures that related to that particular species of tree. For example, in the Episcopal Cathedral in Salt Lake City, we mapped their locust trees, and noted that the fruit of the locust is what Saint John the Baptist ate while he was in the desert for forty days. Microorganisms in the roots of locust trees also transform nitrogen in the air to forms that help fertilize the surrounding soil.

The pamphlets led to a third way that we’ve been interacting with people of faith, started by an interaction in a Baptist Church. A congregant came to me after I gave the sermon in this church and said, “Dr. Nadkarni, could I get your email address please?” And I said, “You know, I’m not going to be a Baptist. It’s not really worth your time, even to contact me.” He said, “Oh no, I’m not trying to convert you. I would like to invite you to a tree planting that we do once a month in our city here.” I was amazed, because here was a faith-based group that was actually doing more in terms of conservation and carbon sequestration than I and my students could contribute to. I realized that I should not have assumed that tree conservation is restricted to me in my academic environment, but rather that there are faith-based groups that also have this idea of conservation. We may have different motivations, but the result is that we all placed seedlings in the ground that would not otherwise have been planted.

These efforts are examples of a much larger groundswell of activities to bring science and religion closer. Many evangelical groups have aligned with environmental groups to care for nature by cleaning streams, planting trees, and advocating against over-consumption. In his book, *The Creation*, eminent biologist E.O. Wilson articulates that humans must preserve the biodiversity of Earth, whether its creation is explained by the Big Bang theory over millennia or by the hand of God over seven days.

I have also communicated these positive experiences to other ecologists at our professional meetings and in peer-reviewed publications. I suggest that to find an initial contact to a particular church, they might enlist a member of a church or temple (perhaps the scientist him/herself) who can serve as a “reverse ambassador”. I advise them to remove overly complex terminology or jargon, but that bringing handouts that provide greater depth about their science is acceptable, leaving them to be picked up, rather than passing them out. I remind scientists to recognize their own limitations and welcome alternative interpretations, noting that they are only one of the experts in this setting. I remind them to treat the texts, objects, clothing, and settings they encounter with respect. Just as scientists expect visitors to treat laboratory equipment with care, so congregants expect a visitor to treat their relics with respect. When you ascend a church pulpit, show that you honor this as a sacrosanct place, steeped in the hallowed and the historical. Finally, I invite them to present information from different faiths to reinforce the universality of the spiritual importance of trees.

Reflections

The content of my sermons concerned trees, but nearly any aspect of ecology can serve as a springboard for scientists. Although I have published papers in ecological journals and spoken at numerous ecological conferences, I have encountered very few other scientists who have followed these models to create individual sermons or booklets for their local churches. There’s a real stigma within science in terms of engaging with religious communities, and a

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set of barriers exists, spoken or unspoken. However, I have been heartened at higher-level efforts to bring together scientists and faith-based groups, by the well-respected science organization, the AAAS and its Dialogue on Science, Ethics, and Religion (DoSER) program\(^8\). They support and implement workshops all over the country to guide scientists to effectively engage with clergy and congregants. The materials they create are aimed at scientific audiences, and effectively disarm prejudices that arise from both sides.

Thus, I come away from these activities with a general sense of optimism. Despite the pressures of human populations on forests, our unthinking consumption, and the existence of laws that favor those who exploit rather than sustain our resources, there is hope for our relationship with trees. We are taking nascent steps to live more sustainably with our fellow species. We are becoming aware of the importance of knowing more about the natural environment and teaching our children about those connections. Scientists are entering spiritual discussions, and those in institutions concerned with the spirit are listening to the warnings of scientists. These may be happening in only small pockets of the population, but they are happening.

By approaching other worlds outside of academia with the faith that we can collectively find common ground, we will find common ground. And from that, we will be able to share our science, our religious beliefs, our way of knowing, our worldview in new and vital ways with result of better care for the Earth we share.

Acknowledgments

I thank the John Simon Guggenheim Memorial Foundation and the National Geographic Society's Conservation Trust for initial support. I also thank Carol McKinley, Lon Freeman, and Ward Fletcher for providing opportunities to speak. I acknowledge The Evergreen State College for fostering a sense of interdisciplinary thinking that encouraged these activities. Craig Nessan and his colleagues at Wartburg Theological Seminary catalyzed and supported this paper. This work was partially supported by grants from the National Science Foundation (BIR 9975510, DEB 9974035). I am grateful to Wartburg Theological Seminary for providing a venue for this exchange.

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