



## PROFILES IN SCIENCE ENGAGEMENT WITH FAITH COMMUNITIES

# Nalini NADKARNI

*Nalini Nadkarni is a professor of Biology at the University of Utah. We spoke with her about engaging with faith communities as a non-religious scientist, finding common ground with others, and listening instead of assuming. All images courtesy N. Nadkarni.*

### **You engage several different kinds of communities. How did you prepare to engage faith communities specifically?**

I have been carrying out public engagement activities with people who do not or cannot gain access to traditional informal science education institutions. My work with faith-based groups has been trying to help people understand the importance of trees and forests in their lives. I think there's a great deal of overlap between the values of the ecological aspects of trees and forests and their religious or spiritual values. I decided to try to uncover that common ground by drawing upon the authorities of religious texts rather than just scientific texts, and then to provide that information to faith-based communities. I started by first reading the Old Testament, the New Testament, the Koran, 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.

If I gave a sermon to Baptists, for example, I would highlight the Christian, Bible-oriented references. If I gave a sermon to Buddhist people in a temple, I would highlight the Eastern religious texts. But I also tried to emphasize that this was not just specific to a particular sect, that in fact all of the world religions value trees and forests. Trees are used as temple adornments, for eating, analogies to God, as place markers. For example, I found that there were 328 references to trees and forests in the Old Testament alone, and many of those verses were metaphorical references to God. In the Song of Solomon, God is equated with an apple that is cherished because of its sweet fruit and its relationship to how people loved apples. There were references to certain trees, like a tree of Mamre that described a location. That was very important to people because in the time of the Old Testament, the habitat was a desert, and the few trees in the landscape were actually location markers.

#### **How did you approach the religious publics you wanted to engage?**

After I had compiled all of this information, I started knocking on doors of different places of worship. I tried to not try to 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 I didn't think that that was necessary; I felt that 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, and I felt that was really important.

I had difficulties at first getting into these religious groups because I was not of their faith. Because of a personal connection, however, I was able to gain footage to make my first sermon in a Christian church, a Unitarian church. After I gave a sermon there and the congregation realized that I wasn't trying

to dissuade them from their own religious convictions, I was then invited to other Unitarian churches. After those, I was invited to other Christian churches—Presbyterian, Episcopalian, and Catholic. And then I was invited to other religions, Jewish and Buddhist faiths.

So, I learned that sometimes a scientist can't get into another world without a personal connection. You need the enlistment of what I call a reverse ambassador. That first relationship is very important because it can lead to other meaningful relationships in that world. Once you establish yourself, then you can stand on your own interactions and relationships. That's really important—to think about scaling the work that you want to do.

#### **How did you connect with the people of faith who heard your sermons, and how were your efforts received?**

I wasn't trying to convince them of the importance of trees based on science. Rather, I was relying on their authorities, their scriptures, to tell them what they already know, what has already been written.

And then, because of my scientific expertise, I was able to also offer them the opportunity to have further discussions about climate change, or deforestation, or the importance of forest canopies in terms of sequestering carbon. I didn't push that on them, but I invited them to come to me after the sermon to have discussions about that. I brought handouts with me that I did not distribute, but kept in a place where if they were interested, they would be able to pick them up. I tried to refrain from the typical academic desire to shove scientific information down their craws, and instead say, "I invite you to think about what we as scientists have come to understand about the scientific importance of trees and forests, just as I have come to understand the religious importance of trees and forests by reading your Holy Scriptures." I think that allowed me to interact with faith-based groups in a way that was not confrontational.

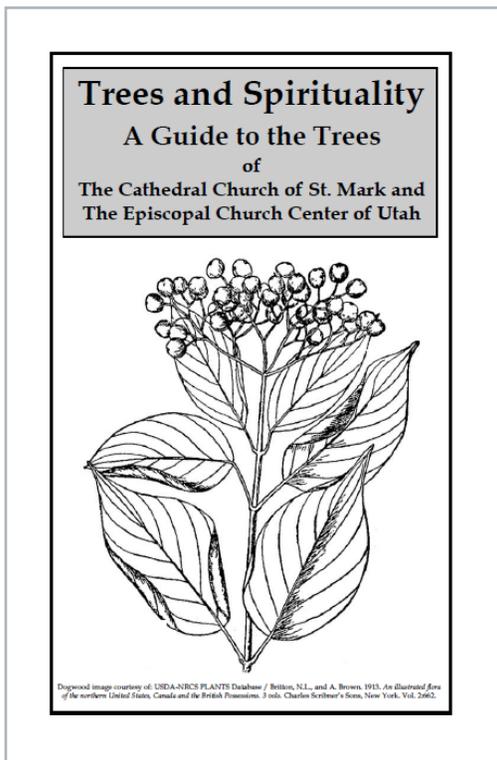
There was never, in all of the 40-plus sermons that I've given, any mention of creationism versus evolution. Instead, it was, "Hey, wait a minute, you forgot about

.....  
**"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 I didn't think that that was necessary; I felt that 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."**



*Nalini Nadkarni in a tree canopy.*

.....  
**“I think that scientists who want to do public engagement have to think about being silent for a little while and listening, and being accepting of other ways of knowing.”**



*The cover of one of the booklets Nalini Nakdarni created for local churches with information about the churchyard trees and related bible verses.*

a hymn that we sing about trees,” it was always about offering more information about the importance of trees to me as a scientist and as a person who’s concerned with trees. I found that to be such a welcome and open invitation to exchange.

**Were there other activities you engaged in apart from giving sermons to faith communities?**

Yes, so this approach of trying to find common ground led not only to sermons, but also 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 where the Torah is, the cross of Christ, or the images of Jesus. That’s all interior space. Many churches have exterior space—they protect churchyards. And a lot of those churchyards support trees. 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 amazing 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.”

So, we brought out our surveying tools and mapped every tree in the churchyard of, for example, the Episcopal Cathedral in Salt Lake City, the Unitarian Church in Salt Lake City. We created booklets that had not just the location of the trees in the churchyard, but also 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 found that there were locust trees, and the fruit of the locust is what Saint John the Baptist ate while he was in the desert for those 40 days. And the locust tree fixes atmospheric nitrogen and actually enhances the fertilizer effect of trees in the surrounding soils.

We provided these pamphlets to the congregation, and congregants who read them would then be informed that the ecological value of these trees and the religious value of these trees are

actually congruent and complementary. And it’s ongoing; we continue to print the pamphlets as the church needs them so that the pastor can distribute them to the congregation.

**What have you learned from your engagement efforts?**

The pamphlets also 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.” And I was just blown away, because here was a faith-based group that was actually doing more in terms of conservation and carbon sequestration than me and my students had done on our campus.

So, in contrast to my assumption that I was being proselytized to, I was actually being invited to an activity that was already being organized by this faith-based group that I and my students could contribute to. And from then on, I realized that I should not assume that tree conservation and understanding is restricted to me in my academic environment, but rather that there are groups, many of which are faith-based, that also have this idea of conservation. Maybe it’s for a different reason than me, but the result is the same; we all dug little holes and put seedlings in the ground and fostered a set of trees that would not otherwise have been planted.

**What advice do you have for scientists about how to better engage with faith communities, or how to make their engagement efforts more inclusive?**

I think that academics, and scientists specifically, tend to think of themselves as the authorities. We are so used to taking the lecture podium and thinking, “I need to increase science literacy in the general public,” that we do not understand that if we would just listen to other groups in society, whether faith-based communities or incarcerated populations, recreationists

or sports fans, that we might in fact learn something from them. And because not everybody embraces the scientific way of knowing, I think that scientists who want to do public engagement have to think about being silent for a little while and listening, and being accepting of other ways of knowing. Even if the scientists don't subscribe to those other ways, at least listen to them. That's a really hard thing for academics to do, but it's really necessary. I don't have to become a Baptist and a Catholic to listen to Catholics and Baptists, just as Baptists and Catholics don't have to become scientists to listen to what scientists might have to offer.

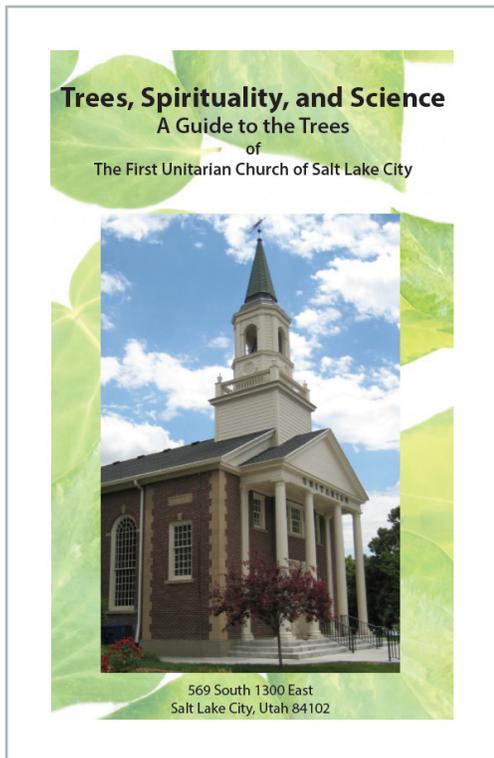
I think the way to defuse conflict is to allow common ground to arise in which conversations can happen, even though there might be accompanying sets of beliefs that are not congruent. And faith-based groups might listen to me, then, when I talk about how trees are important in terms of ecology, and that allows us to celebrate trees and to think about helping trees in ways that are completely congruent and non-confrontational.

**Is there anything else that you think is important to cover?**

There's a real stigma within science in terms of engaging with religious communities. I think there's a set of barriers, spoken or unspoken. That is real, and I recognize that. There are going to be irreconcilable differences between certain beliefs of people who ascribe to a God or religion, and those who do not, and many scientists don't. But I think that we as scientists should understand that there are opportunities to find common ground, and if we can find and build on that, we can have conversations that avoid confrontation.

By approaching other worlds outside of academia with the sense that we can find common ground, we will find common ground. And from that, we'll be able to share our science, our way of knowing, our world view in ways where we can also learn from other people, and I think that's what public engagement of science is all about. ~

.....  
**“We as scientists should understand that there are opportunities to find common ground, and if we can find and build on that, we can have conversations that avoid confrontation.”**



*The cover of a booklet Nalini Nakdarni created for local churches.*

For more DoSER resources, including more about Dr. Nadkarni, please visit:

[scienceligiondialogue.org](http://scienceligiondialogue.org)

Learn more about DoSER:

[aaas.org/doser](http://aaas.org/doser)

[AAAS\\_DoSER](#)

[AAAS.DoSER](#)

Suggested citation format:

AAAS Dialogue on Science, Ethics, and Religion, in *Profiles in Science Engagement with Faith Communities*, R. Kline, R. O'Malley, Eds. (AAAS, 2020)

Interviewers: Liz Crocker, Rob O'Malley  
 Editors: Rachel Kline, Rob O'Malley