# WHY SCIENCE and FAITH NEED EACH OTHER

EIGHT
SHARED VALUES
THAT MOVE US
BEYOND FEAR

ELAINE HOWARD ECKLUND

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# BUILDING BLOCKS

# 1

# From Fear to Understanding

HE GAME IS OVER. Come out now!" Anika yells to her friend. "Come out now, or my mom will give you a spanking!" There is no truth behind her threat, yet my eight-year-old daughter delivers it with incredible conviction. It has its origin in an incident that occurred several years earlier.

Anika was three years old and I was picking her up from day care. That day, I was tired from work and parenting solo while my husband was away. I parked, found Anika, and started to slowly lead her to the car. She begged to stay a few more minutes to play with her friends. I acquiesced.

They started a game of hide-and-seek, and I turned away for a minute to talk with another parent. Daylight was starting to fade, and I expected that at any moment Anika would sidle up to me and wrap her arms around my leg. After a few minutes, when that hadn't happened, I started to look around. "Anika, it's time to go," I called out. No response. One by one, the parents and children got into their cars and drove away. I called again, "Anika, I really mean it; it's time to go!" Still nothing. I

picked up my bag and walked over to where she and her friends had been playing, but I did not see anyone. "Anika! Where are you?" I said, this time louder and with more urgency. A friend left her child buckled in the car and came to help me look. We did not see any movement near the bushes where the children had been playing. Full-fledged anxiety had set in and my heart was beating more quickly. The day care's associate director assured me she hadn't seen any children come inside the building. I kept yelling out as my heart rate continued to rise. "Anika, Anika! Where are you?!" I was now panicking. There were no sounds except my own voice.

I checked up and down the street, opening the doors of parked cars to look inside. "Ma'am, are you trying to break into my car?" I heard a man ask, not particularly angry but very perplexed. I did not answer him. I had a singular mission. With tears streaming down my face, I commissioned this stranger in the search. The associate director checked inside the center and around its perimeter, then activated the safety protocol for a missing child. If we did not find Anika in five minutes, she would call the police.

In that moment, I truly believed that I might not find her. I felt fear like I never had before, and my fear motivated my actions. The mother who stayed behind to help took her son out of his car seat, and they checked a side street. "Anika, where are you?!" I yelled at full capacity. I did not hear what anyone said, and I did not care what anyone thought.

Suddenly, I felt a familiar touch on my right leg, and then I heard, "Mommy, will I have my TV taken away tonight?" I grabbed her and hugged her so tight that she asked me to loosen my grip. Even now, nearly five years later, my heart races as I write this.

It was the little boy who found her. After he was released from his car seat, he walked over to some bushes by the day care center; he told us he had heard her breathing and her giggle as he came near. The entire time I was searching, Anika had been hiding within ten feet of me. She had heard me. She had heard the associate director. She had heard my friend and the others helping in the search. She had heard all of us calling to her, and yet she had chosen not to answer.

I let her down softly onto the sidewalk, then grabbed her arm again, looked into her face, and, again not caring what others thought, yelled, "I am so angry. I want to give you such a spanking!" She started sobbing, and the little boy who found her started sobbing too. "Let's take a step back," the associate director of the day care said as she gently touched my arm. "There is a fine line between fear and anger." I do not spank Anika, and I did not then, but my fear—so palpable just minutes before when I would have done literally anything to find her—had transitioned to anger, and the emotion took over. It made me rash and impulsive, unable to think clearly and wisely.

For a long time after that day, fear was at the center of my relationship with Anika. It wasn't just a feeling; it turned into a way of being, a kind of physical and emotional practice. I was constantly turning my head so that I could keep her in view; my heart would race if she left my sight for more than a minute. I wanted to touch her or hold her hand at all times, just to make sure I knew where she was and knew she couldn't get away. Having her on such a short leash led to conflict and stifled her sense of curiosity about the world.

Over time, I did become less afraid, however, and my relationship with her has changed. She has grown and become wiser about boundaries, and I have learned to let her explore and be curious, to venture off a bit, believing she will still come back to me. I no longer need to turn my head to see her all the time. Little by little, more and more, I rely on trust, prudence, and courage. I would not have wished for the experience of thinking I had lost her, but it did teach me something about

myself: when I feel anger, the more true emotion is often fear. So now I ask, "What am I afraid of?"

# Quelling Anger and Recognizing Fear

I bring this lesson to my academic work on how Christians view science and the relationship between religion and science. Fear can masquerade as anger, leading to conflict, so when we see conflict between religious belief and science, we should examine whether there might be underlying fear and try to understand it. Is there fear that science might contradict or diminish elements of faith? Fear that accepting certain scientific ideas will decrease the strength of faith or lead away from faith altogether? Fear about certain scientific findings and technologies that raise contentious ethical and theological questions? If Christians are responding to science based on such fear, how might we assuage it or replace the emotion with more productive habits or practices?<sup>1</sup>

Sociologists like me are interested in group behaviors. We are interested in how groups have an impact on individuals and how groups can bring changes to society, for good and for bad. One way we study this is by listening to people's life stories and analyzing to what extent these individual stories represent the groups that these individuals are part of. And we understand our own story best when we compare it with the stories of others. Social-scientific research and data also allow us to get past the loud, combative voices that often drive public debate and allow us to gain a more nuanced and accurate picture of what people think, value, and believe. Sociology helps us understand which group practices work best for accomplishing particular aims.<sup>2</sup> Sociology does not have the same tools as philosophy or theology; it cannot tell us the right way to live. But if we know how we want our communities or churches to be different, then sociology can help us change group cultures and engage in practices that help us effect these changes.

# My Studies

For the past fifteen years, I have been studying what religious believers think about science and what scientists think about religion.<sup>3</sup> In total, I have surveyed nearly 41,000 religious believers and scientists (both believers and non-believers) on the relationship between religion and science. I have also conducted 1,290 in-depth, face-to-face interviews with religious people and with scientists, including religious scientists. I became interested in this topic because of how both faith and science have marked my own life and because I think science and faith address the biggest and most important questions of life. Research shows that the views people hold about the relationship between religion and science are important. They can influence whom people vote for and, by extension, public financial support for scientific research. Views on the relationship between religion and science can also influence whether an individual goes to church and whether young people stay in church. Research finds that many youth are leaving the church because they perceive irreconcilable conflict between Christianity and science.4

In the churches I have visited, I have met Christians who keep their children out of certain science classes, afraid that scientific education will lead them to doubt, and ultimately reject, their faith. When helping their children choose colleges and universities, some Christian parents worry about what scientists who teach at those schools will say about faith. Black and Latino/a Christians sometimes worry about being part of science and technology fields where they are underrepresented not only in race and ethnicity but also in faith. Christian women and girls who want to pursue scientific careers wonder if they will be marginalized in their Christian communities for their scientific aspirations and marginalized in the scientific community for both their gender and their

faith. Some Christians worry about certain medical technologies and research, whether they are ethical and whether they take into account the uniqueness of the human being and what it means to be made in the image of God. I have met many Christians who are afraid of how science will impact their faith and how scientists will influence religion and its place in society. I have also met many Christians who want to have more productive conversations about the relationship between science and religion and ways to better engage with science and the technologies that, at times, seem to be taking over our society.

One of my biggest research projects was a major study on the relationship between faith and science that focused on evangelicals in the US, conducted in partnership with the American Association for the Advancement of Science's Dialogue on Science, the Ethics and Religion Program, and the National Association of Evangelicals. My research revealed that while Christians are different from other religious groups in how they view science, evangelical Christians are a special case. While there are many ways to define what it means to be an evangelical Christian, in this book I am drawing from the work of fellow social scientists to define evangelicals as Christians who hold to an authoritative reading of the Bible and accept the Bible as divinely inspired.<sup>5</sup> Evangelical Christians also believe in the literal resurrection of Jesus from the dead. I have found through my studies that evangelical Christians are more likely than members of other religious groups to perceive tensions between their faith and science. They are also more likely than those from other religions to be suspicious of the scientific community and to consult their pastors about difficult scientific issues. They are more likely to perceive tensions between faith and science. Thus, it is important to pay particular attention to how evangelical Christians feel about science.7

## **Behind This Book**

For this book, I analyzed pieces of my data that were particularly relevant to Christian communities and collected new data from Christian scientists at the top of their fields who are also involved in church communities. I also conducted interviews with a large and diverse group of Christians from across the country. I examined what influences their attitudes toward science and the differences in their individual beliefs. I uncovered the scientific issues where their faith has the strongest impact. I wanted to understand what they actually think about the relationship between religion and science, and why.

The content of this book is rooted in social science research, and it is filled with the stories of Christians and scientists who share their experiences with integrating science and faith. Some have reconciled science and religion as systems of ideas. Others have reconciled science and religion in a more personal way. You will hear from those who are both scientists and Christians and who have found ways to communicate or relate to other scientists. (The individuals I quote here from my research studies are meant to represent the views of groups they are part of.) For example, you will hear from scientists who are people of faith or work with religious colleagues and who accept the idea that Christian faith can be reconciled with science. These folks act differently from others when controversial issues related to science and faith arise. They are exemplars I want you to meet.<sup>8</sup>

I have designed this book especially for my own faith community: committed Christians—especially those who are part of a church—and the pastors who lead them. I hope that learning from hundreds of believers around the country who have shared their views on science and religion will provide you with new ways of thinking about scientific issues and the relationship between faith and science. If you are a congregant, this book will show you how a broad range of fellow Christians

approach scientific topics and will introduce you to Christian scientists and non-scientists who have reconciled science and religious beliefs in ways that grow their faith. I hope it will also help you develop practices for engaging productively with the relationship between science and religion in your own life. If you are a pastor, this book can be a resource for including discussions of science in congregational life, sermons, or classes and for generally helping those in your church develop better practices for engaging with science.

When I started writing this book, I searched my house for a notebook from a class I took more than twenty years ago as an undergraduate at Cornell University. In that class, taught by Norman Kretzmann on the philosopher Thomas Aquinas, I began to think deeply about the Christian virtues, which Aquinas saw as practices or habits that tend toward the good. In studying, interviewing, and working with both Christians and scientists, it struck me that they seemed to share many of the same virtues. When Robert Pennock, a philosopher at Michigan State University in East Lansing, surveyed scientists in the US "about the importance of various virtues for the exemplary practice of science and how they are transmitted in the scientific community," he found that scientists believed science should be based on a set of values that included curiosity, honesty, and humility.9 These are indeed some of the same virtues I have seen promoted and cultivated in faith communities around the country, including my own.

Are there other shared virtues between science and religion, I began to wonder, that could help unite the two realms? Could a set of shared virtues make it easier for Christians to communicate with scientists and accept and engage with the ideas, findings, and processes of science? While we Christians see all virtues as ultimately coming from God, are certain virtues better honed in Christian communities and other virtues better honed in scientific communities? Do Christian scientists bring

religious virtues to their scientific communities, and can they bring scientific virtues to their religious communities? I believe the core virtues that guide the practice and habits of science and religion are more similar than we think; yet there are also some key differences. I am proposing a new approach to discussing the relationship between science and faith: I see science and faith not just as sets of ideas but as groups of people, and I am convinced that scientists and Christians share common virtues that, if brought to light, will lead to common ground. I am also convinced that by recognizing the common virtues between our faith and science, and where our values differ, we Christians can begin to develop a more effective and meaningful relationship with science and scientists.

The first three chapters of this book tell us about the building blocks of virtues—how virtues are birthed in our communities and are part of what it means to be human. Starting with chapter 4, this book explores eight key virtues of Christianity—curiosity, doubt, humility, creativity, healing, awe, shalom, and gratitude—and how these virtues are practiced in the scientific community. The virtues of curiosity, doubt, humility, and creativity are crucial to the scientific process and, I argue, ought to be a core part of Christian communities. The virtues of healing, awe, shalom, and gratitude reveal how science and faith come together in redemptive practices.

This book aims to show Christians the values they share with scientists, how Christian scientists see religious values in their scientific work, and how Christian communities might draw on the virtues they share with the scientific community to better connect with science and scientists. At the end of each chapter, I'll provide questions that both lay Christians and pastors can use to continue the discussion.

As the Bible tells us, "There is no fear in love. But perfect love drives out fear" (1 John 4:18). Fear doesn't have to lead to anger and alienation. We can take a step back, respond less

### **Building Blocks**

rashly, think more clearly and wisely, and work to improve the relationship we have with science. I believe that Christians can develop a new and enriched love for science through a new approach that focuses on the virtues that scientific and Christian communities have in common.

# Further Discussion

- 1. Talk together about practices your church has for engaging topics related to faith and science. What does your pastor or another church leader say during sermons about faith and science?
- 2. What topics related to science and faith are discussed in Sunday school classes or other educational venues?
- 3. If science is not discussed at all in your church, why not?
- 4. Discuss science and faith in relationship to fear. What kinds of fears does science raise, if it raises any?