

**“THE INTERSECTION OF SCIENCE AND RELIGION:
1) SCIENCE AND RELIGION IN CONFLICT”**

by the Rev. Roger Bertschausen

Fox Valley Unitarian Universalist Fellowship 2600 E. Philip Ln.

P.O. Box 1791

Appleton, WI 54912-1791

(920) 731-0849

Website: <http://www.focol.org/~fvuuf>

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Call to Gather:

“When we consider what religion is for (humanity) and what science is, it is no exaggeration to say that the future course of history depends upon the decision of this generation as to the relations between them.”

—Alfred North Whitehead, 1925¹

Readings:

From *The History of the Conflict Between Religion and Science* by William Draper, 1874

Will modern civilization consent to abandon the career of advancement which has given it so much power and happiness... Will it submit to the dictation of a power (religion)... which kept Europe in a stagnant condition for many centuries, ferociously suppressing by the stake and the sword every attempt at progress; a power that is founded in a cloud of mysteries; that sets itself above reason and common sense; that loudly proclaims the hatred it entertains against liberty of thought and freedom in civil institutions...

Then has it in truth come to this, that Roman Christianity and Science are recognized by their respective adherents as being absolutely incompatible; they cannot exist together; one must yield to the other; mankind must make its choice—it cannot have both.²

From the First Vatican Council—

Let him be anathema...

Who shall say that no miracles can be wrought, or that they can never be known with certainty, and that the divine origin of Christianity cannot be proved by them...

Who shall say that human sciences ought to be pursued in such a spirit of freedom that one may be allowed to hold as true their assertions, even when opposed to revealed doctrine.

¹ Whitehead quoted in John F. Haught, *Science and Religion: From Conflict to Conversation* (New York: Paulist Press, 1995), p. 2.

² Draper quoted in Stephen Jay Gould, *Rock of Ages: Science and Religion in the Fullness of Life* (New York: Ballantine Publishing Group, 1999), pp. 118-119.

Who shall say that it may at times come to pass, in the progress of science, that the doctrines set forth by the Church must be taken in another sense than that in which the Church has ever received and yet receives them.

Every year when I dive into the sermon series, I always discover again how pathetically little I really know. Even this, the one opportunity I have each year to delve more deeply into a particular subject, shines a bright light on the limits of my knowledge.

This year's topic is certainly no exception! The relationship between science and religion has been a huge topic for a long time, spawning countless controversies and books written by people a lot smarter than I am over the past five hundred years. I could do a whole year of sermons on this topic and still only scratch the surface of the issue.

So I've had to focus rather narrowly in order to make this work. Let me tell you my game plan. My main focus will be the relationship between science and religion, with special attention to those points of intersection. I will spend the first three sermons exploring different views of the relationship between science and religion. This week's focus will be on the view that the relationship is fundamentally in conflict. Next week I will look at two other views of the relationship: the segregationist view that science and religion are and should be totally separate, and the opposite view that they should be fused as one unity. During the third sermon I will examine another model for the relationship: that science and religion are metaphorically separate patches of the same quilt called wisdom. Then the final sermon will look at a fascinating point of intersection between science and religion: prayer and healing from illness.

There is a unity through all these sermons, but each sermon will also hopefully be able to stand on its own. If you do miss a Sunday and want to read what you missed, please feel welcome to take a printed sermon from the shelf across from the bathrooms or check our web page. I'll try to make the sermons available within a week through these media.

One more preliminary observation before we dive in. I think our discussion about the relationship between science and religion will be fascinating because this is an area where we in this Fellowship hold truly diverse views. We range from one end to the other. Take the question of purpose in the universe. Some believe that scientific discovery has rendered the idea of a purpose (divine or otherwise) irrelevant, while others hold that everything that happens is part of a master plan. I look forward to the gentle challenges we will provide one another during these next four weeks.

All right! Let's begin! There's no better place to begin this exploration than with two astronomers named Copernicus and Galileo. Their work launched a revolution so deep and powerful that five hundred years later, we're still struggling with its implications. The fact that Galileo's condemnation by the Catholic Church was only recanted in the last ten years is a potent symbol of how long it's taking us to sort through the new, dramatically different worldview these two astronomers left in their wake.

Before Copernicus and Galileo, religion and science were one and the same in Western culture. Both science and religion confirmed and reinforced the same view of the world. My colleague Judith Walker-Riggs summarizes this view well:

The universe was a three-storied apartment house, with heaven on the top floor, full of gods and stars; earth in the middle, full of people and animals and plants; and hell in the basement, full of terrible and scary things. God had nothing else to do but sit up there watching us. We were the center of attention. We were his people.³

The discoveries of Copernicus and Galileo completely overturned this worldview. With the new understandings that the sun is a fixed star around which the earth moves and the earth is just one of many planets in a little, insignificant, out-of-the-way solar system, the three-storied apartment house worldview collapsed. The place of humanity in the universe, the role of God and the relationship between God and humanity: everything changed.

And the church leaders knew it! Digging in their heels, they yelled an emphatic “No!” The church leaders went after Galileo, harassing and imprisoning him until he finally recanted in 1633. Galileo, kneeling before the religious authorities, said:

“I, Galileo, being in my seventieth year a prisoner on my knees, and before your Eminences having before my eyes the Holy Gospel, which I touch with my hands, abjure, curse, and detest the error and the heresy of the movement of the earth.”⁴

Legend has it that Galileo whispered as he was getting up from his knees, “But still, it moves.” Whether true or not, history does reveal that he did not have his heart and mind in his recantation because he knew he had been right.

With Galileo’s kneeling before the religious authorities, the war between science and religion commenced. Many people right up to our own time view warfare as the defining characteristic of the relationship between science and religion. With Galileo’s trial, the unity that had been science and religion split in two. Instead of a unity, there were now two armies arrayed against one another on the field of battle, one waving the banner of science and technology, the other the banner of the traditional church.

If Galileo’s struggle with the church was the First World War in the clash between the powers of religion and science, then Charles Darwin’s theory of evolution is the Second World War. This war rages vigorously right up to our own time. The latest focus of this war is what Stephen Jay Gould cleverly calls the “oxymoronic ‘creation science.’”⁵ The Arkansas trial in the early 1980s about requiring equal time for “creation science” in public schools was a battleground in this war. So was the more recent attempt by the state school board of Kansas to include creation science in the curriculum.

³ Judith Walker-Riggs quoted in John A. Buehrens and F. Forrester Church, *Our Chosen Faith: An Introduction to Unitarian Universalism* (Boston: Beacon Press, 1989), p. 155.

⁴ Ken Read-Brown, “Science and Religion: No Contest,” *Quest* (publication of the Church of the Larger Fellowship), LVII (7), March 2000, p. 1.

⁵ Gould, p. 140.

Cosmologically, Darwin represents a continuation of Copernicus and Galileo. Now humanity is so unspecial that we, like every other life form on the planet, descended from other related species through the evolutionary process. Rather than being specially placed here by God—the wonderful product of God’s unique creation—we suddenly found ourselves related to monkeys and apes. The theory of evolution is an exclamation point to the new worldview that started with Copernicus and Galileo.

And once again, many in the traditional church have understood this implication and dug in their heels against it. The lingering image from this war was frozen in time in the play “Inherit the Wind:” a brilliant, atheistic, thoroughly scientific Clarence Darrow arguing at the Scopes Trial against a fading, pathetic William Jennings Bryant. In this view, science was ascending to the mountaintop while religion was on its way down.

When it comes to the relationship between the two, the image of religion and science locked in mortal combat is probably the dominant image in the West. But is this really the best image? Is it helpful? Is the relationship between science and religion as black and white as this image suggests? Or is it considerably grayer?

Let’s take another look at the two key wars in this conflict: the first revolving around the place of the earth in the cosmos, the second around Darwin’s theory of evolution. Both, it turns out, were more complicated than the black and white image of science and religion at war suggests.

Take Galileo. His struggle with the church was not simply a clash between science and religion. It is important to consider the historical context. The backdrop of intense church and state politics engendered by the Protestant Reformation played a big role in Galileo’s fate. So, according to one recent biographer, did patronage dynamics in the Pope’s court. Once a rising star in the Pope’s court, Galileo just as precipitously fell from favor at least as much because of court politics as his discoveries.⁶

The black and white reading of the uproar over Darwin’s theory similarly turns gray on closer look. For one thing, it’s not as if *all* Christians believed in the literal truth of the Bible before Darwin. Many noted Christian scholars and theologians began questioning the literal truth of the Bible long before Darwin—and not just Unitarians, either. Furthermore, many Christians met Darwin’s theory not with fury but with favor. My own home church in Grand Rapids, Michigan, is an example of this. Having been destroyed by a fire around 1920, the church built a beautiful new building. This all happened in the midst of another flare-up in the war over evolution, with the Scopes trial underway in Tennessee the same year the church dedicated its new building. And what did this Baptist church do? It devoted a stained glass window to Charles Darwin. There is Darwin, shining from a window with the likes of Jesus and Moses. Darwin was not cursed in every church.

As the evidence has mounted supporting the theory of evolution, more and more religious people have reconstructed a theology that acknowledges the validity of evolution. Five years ago, for example, Pope John Paul acknowledged that evolution “is more than a hypothesis.”⁷ And many leaders from a wide variety of religious perspectives opposed Arkansas’s plan in the 1980s to teach “creation science” just as vigorously as scientists did. Indeed, save for a very outspoken minority on the fringe of

⁶ Ian G. Barbour, *Religion and Science: Historical and Contemporary Issues* (San Francisco: HarperSanFrancisco, 1997), p. 77; Gould, pp. 72-73.

⁷ Barbour, p. 66.

Christianity, religion and science were on the same side of the issue. If we tune out that fringe for a moment, we will see that the very people we thought were at war are actually allies. Some war!

All scientists don't think alike, either. Certainly some dismiss religion as contemptuously as William Draper did in the reading I shared, but many do not.

It turns out even "Inherit the Wind's" black and white portrayal of Clarence Darrow and William Jennings Bryant is misleading, too. Stephen Jay Gould, a scientist not overly inclined to be sympathetic toward Bryant, persuasively argues in a recent book that on one level Bryant's crusade against evolution was justified. Bryant was motivated not just by his desire to preserve the literal truth of the Bible, but also because of the brutal way many social scientists and politicians of his day used Darwin's theory. Believing that human beings are locked in the struggle for survival just like other species, they rejected efforts to help the less fortunate. The attitude was: Let the fittest survive and the rest suffer and die if need be. And many of these same folks used evolution to promote a racist agenda: whites have evolved to the top, and the rest of the races are inferior. Listen to this passage from the very textbook John Scopes tried to use in his Tennessee classroom:

At the present time there exist upon the earth five races or varieties of man, each very different from the other in instincts, social customs, and, to an extent, structure. These are the Ethiopian or negro type, originating in Africa; the Malay or brown race, from the islands of the Pacific; the American Indian; the Mongolian or yellow race, including the natives of China, Japan, and the Eskimos; and finally, the highest type of all, the Caucasians, represented by the civilized white inhabitants of Europe and America.⁸

Gould argues that Bryant, a man passionately committed to justice and equality for all, fought evolution partly because of the horrible way it was misused to promote tyranny, racism and indifference to the troubles of the less fortunate.

I don't mean to say that there has never been any conflict between religion and science, but reality is whole lot grayer than the warfare image suggests. Certainly there have been and continue to be points of conflict. Where this happens, the root cause is a kind of arrogant and misleading imperialism. This happens when religious people believe that their faith invalidates science and when scientists believe their work invalidates religion. These two imperialisms, though opposite, actually have much in common. In the scholar Ian Barbour's words:

Both believe that there are serious conflicts between contemporary science and classical religious beliefs. Both seek knowledge with a sure foundation—that of logic and sense data, in the one case, that the infallible scripture, in the other. They both claim that science and theology make rival literal statements about the same domain, the history of nature, so that one must choose between them.⁹

⁸ Quoted in Gould, p. 168.

⁹ Barbour, p. 78.

The authors of the Vatican One document I shared in the reading are one example of religious imperialism. Another obvious example is “creation science.”

There is an interesting variation of this religious imperialism that is not unheard of in UU churches. It is the view that science and technology are inherently destructive, that they have emptied the cosmos of meaning. This imperialism sees modern life as empty and meaningless, and blames science for this calamity. Science and religion are once again irreconcilable; it is another black and white view.¹⁰

On the other end of the spectrum some scientists view all religion as worthless at best, terribly destructive at worst. The reading from William Draper is an excellent example of this view. Scholars like Draper scoff at people who are religious, saying it’s impossible to be both a scientist and a religious person because science renders religion intellectually implausible. William Provine, a professor at Cornell University embodies this arrogance when he says we have to “check our brains at the church house door” if we are to be both a scientist and a believer.¹¹ Such scientists deny the existence of a spiritual dimension; instead, they view matter and energy as the fundamental reality of the universe. Frances Crick, co-discoverer of DNA, expresses this well when he writes about the hypothesis

That “You,” your joys and your sorrows, your memories and your ambitions, your sense of identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules. As Lewis Carroll’s Alice might have phrased: “You’re nothing but a pack of neurons.”¹²

So much for the soul!

For scientific imperialists, the scientific method is the only reliable path to knowledge. They reduce religion to an illusion people use to explain things they do not yet understand. At his worst, Carl Sagan was an example of such thinking. Another example is Edward O. Wilson, who reduces all human behavior to genetics and biology and dismisses religion as nothing more than a now archaic survival mechanism.¹³

It is imperialists on both ends of the science and religion conundrum who unfortunately fuel the conflict between them. But there are other angles on the relationship between science and religion—angles that are far richer and more intriguing than the simplistic warfare model. But, alas, these other angles will need to wait for another week.

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¹⁰ Haught, pp. 11-12.

¹¹ Haught, p. 12.

¹² Frances Crick quoted in Haught, p. 72.

¹³ Barbour, pp. 79-80.

**“THE INTERSECTION OF SCIENCE AND RELIGION:
2) Separate but Equal? One and the Same?”
by the Rev. Roger Bertschausen
Fox Valley Unitarian Universalist Fellowship 2600 E. Philip Ln.
P.O. Box 1791
Appleton, WI 54912-1791
(920) 731-0849
Website: <http://www.focol.org/~fvuuf>**

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Reading: from *The Luminous Web: Essays on Science and Religion* by Barbara Brown Taylor

After I arrived at high school, my interest in science waned. When I balked at dissecting the same kind of mice I had spent months breeding, a classmate helpfully explained the problem to me. In the first place, he said, I was a girl, and girls were notoriously bad at science. In the second place, he said, I made A's in English, which was a sure sign that my mind was tuned more to words than to mice. His advice was that I should save myself a lot of grief by steering clear of science altogether. What use would someone like me ever have for logarithms or the periodic table?

Taking his advice, I avoided math and all the other sciences along with it, which meant that I did not see much more of him. I spent my time with the editors of the school literary magazine, who wrote poetry and read Kafka. When we walked by the chemistry lab we held our breath, to avoid inhaling sulfurous fumes. As far as we were concerned, we were as different from the people inside as birds were from bats. I cannot remember anyone in high school who violated this academic caste system. If you belonged to the Drama Club, you did not join the Science Club. If you were good at trigonometry, you assumed you would never understand the allegory in *Moby Dick*.

The Standardized Achievement Test I took in my junior year confirmed these divisions. The math part of my brain and the verbal part of my brain were apparently so alien to one another that they required different tests and earned different scores. I deduced that I did not possess one intelligence but two—one a Ford and one a Ferrari—both housed in the same garage. I drove off to college with this schizophrenia intact and continued the pattern I had begun in high school. I satisfied my science requirement with a course in geology, sleeping well at night while my roommate wrestled the angels of organic chemistry...

In this manner, I learned that my being was divided in yet another way. Not only was my mind divided into the (woefully inadequate) mathematical part and the (much more promising) verbal part measured by the SAT, but my entire being was also divided into the physical part that I could see in the mirror every morning and the spiritual part that no one but God could really see. This latter division between body and soul seemed to apply to the whole wide world, as well. There was matter and there was spirit, I was taught, but they were not the same thing.¹⁴

¹⁴ Barbara Brown Taylor, *The Luminous Web: Essays on Science and Religion* (Cambridge, MA: Cowley Publications, 2000), pp. 4-6.

Some of the questions that came up both in last week's services and in the companion class to this series have to do with definitions: what do I mean by "religion?" What do I mean by "science?" This is a good place to start today.

A definition of religion seems especially difficult. And is religion even the right word? Some talk about the relationship between science and religion. Others talk about the relationship between science and theology; still others substitute "spirituality" for religion or theology. Religion, theology and spirituality are related but have very different senses to them.

I chose the words "science and religion" for this series because I think they best name this very significant problem at the heart of Western civilization. I wanted to avoid the exclusivity of the term "theology." The problems inherent in this relationship have a lot to do with questions surrounding the existence and nature of God, but not everything. Theology limits the discussion too much to God. And I don't think "spirituality" captures enough of the five hundred year history of this problem. A major player, for example, in much of this history, organized religion has been organized religion—and our understanding of "spirituality" today does not include organized religion. So I'm sticking with "science and religion."

But what do I mean by "science" and "religion?" Contrasting the two concepts may be the best way to illuminate how I view them. Science focuses primarily on how the world works; religion focuses more on why questions, on meaning and value and purpose. Religion also focuses on ethics and morality. The goal of science is to understand better the workings of the world; the goal of religion is to live a more ethical and moral life and to find meaning in life. Religion often leads toward some sort of personal transformation and reorientation. Words like salvation, fulfillment, liberation, and enlightenment are various names for this personal transformation and reorientation. Science is more objective, religion more subjective, though we increasingly understand that even science can never be completely objective. The questions we ask in science and the way we think about them always colors the results of scientific investigation.

Last week I explored the most common understanding of the relationship between science and religion: the view that they are enemies, always and forever locked in conflict. I used the image of two armies arrayed on a field of battle, one with the banner of science unfurled overhead, the other with the flag of science. Though popular, I don't think this is either a very accurate or helpful image.

Today I want to consider two more understandings of the relationship between science and religion. The first solves the conflict between religion and science by completely and permanently separating them from one another. Imagine again the two armies facing each other on the field of battle. Agreeing never to invade one another again, both armies disengage and permanently pull back from one another. If both sides keep their promise and stay in their own domains, if both sides recognize that they are distinct and separate, there will never again be a war between the two. The conflict between them is over.

I call this the segregationist view. If this sermon series' companion class is any guide, it is a view embraced by many in this Fellowship. In this view, both science and religion are valid enterprises with an integrity and an internal logic of their own. Both have much to offer humanity, and both also have the potential to harm humanity.

The trick is to keep science and religion separate, as one writer puts it to seal them uncompromisingly into separate containers.¹⁵ This is seen as the only way to handle the relationship between the two because they are so fundamentally different. The questions they ask and their content, methodology, basic principles and language are so different that it makes no sense to compare them or to place them in conflict. One writer puts it this way:

Two things can be opposed to each other only if they are playing the same game. For example, it makes no sense to compare a move in chess, either favorably or unfavorably, with a play in baseball. A completely disparate set of rules governs each game, and so it is senseless to say that one is better than the other. Likewise, since science and religion do not belong on the same playing field together, there is no point in comparing one with the other. We should not place them in competition or conflict with each other.¹⁶

In this view, then it makes as much sense to compare a play in baseball to a move in chess as it does to use science to address the question of God's existence. It's useless to use science to talk about God, and equally useless to use religion to talk about evolution or other scientific matters. The scientist Richard Phillips Feynman put this very well in an address he gave to the National Academy of Sciences in 1955: "I believe that a scientist looking at nonscientific problems is just as dumb as the next guy."¹⁷ And Pope Urban VIII looking at Galileo's discoveries was also just as dumb as the next guy.

So the rule is: stick to your own domain—and know the limits of your domain. Be faithful to your domain. Have a healthy respect for the other. But don't talk to each other. Then there will be no conflict.

Forgetting these rules opens the door to conflict. That's why Galileo was condemned and why creation science is such a fallacy. That's what happens when imperialist scientists make sweeping theological claims on the basis of what science has discovered—for example when a scientist such as Stephen Jay Gould uses evolution to argue that there can't possibly be a personal, caring God. Mixing and confusing these two separate fields is the source of both the scientific and religious imperialisms I talked about last week.

Pope John Paul II's admission that the church had erred in condemning Galileo offers a good view of the segregationist viewpoint from a religious perspective. The Pope said that there are "two realms of knowledge." The inquisitors of Galileo failed to

¹⁵ John F. Haught, *Science and Religion: From Conflict to Conversation* (New York: Paulist Press, 1995), p. 15. In this book, Haught addresses important issues in the relationship between science and religion by writing from one of four perspectives on the relationship: conflict, contrast, contact, and confirmation. This quotation comes from a section in which he is writing from the contrast viewpoint.

¹⁶ Haught, p. 15.

¹⁷ Richard P. Feynman, *What do you care what other people think?": further adventures of a curious character/by Richard P. Feynman, as told to Ralph Leighton* (New York: W.W. Norton and Co., 1988), p. 240. My thanks to Cindy Duckert for giving me this citation.

understand this and as a result transposed “into the realm of the doctrine of the faith a question that in fact pertained to scientific investigation.”¹⁸

A 1981 policy statement from the National Academy of Sciences offers the segregationist view from the other domain:

Religion and science are separate and mutually exclusive realms of human thought whose presentation in the same context leads to misunderstanding of both scientific theory and religious belief.¹⁹

I summarize this viewpoint by employing the old terminology used by racial segregationists in our country: science and religion should be separate but equal. I like this terminology because I have a sneaking suspicion that those who advocate for the complete separation of science and religion don’t always truly respect the other domain—just like whites who touted separate but equal didn’t really view blacks and whites as equal. I suspect this may even be true of the Pope and many in the National Academy of Sciences.

There are other problems with the segregationist view of science and religion. As with the conflict view, the segregationist view is a black and white picture of a world that is a whole lot more complex and gray. As Ian Barbour writes, “We do not experience life as neatly divided into separate compartments; we experience wholeness and interconnectedness before we develop particular disciplines to study different aspects of it.”²⁰ The segregationist view perpetuates more of the old raging dualism that has so long cursed the West—the splits between the sacred and the profane, soul and body, spiritual and physical, male and female, civilized and primitive.

And too often, this segregationist dualism strikes again by separating ethics from science. Sure, scientific experimentation itself isn’t about values, but it certainly better be guided by values. The segregationist viewpoint too often excuses scientists from thinking about the ethical ramifications of their work.

Segregating science from religion can create peace, but at too high a cost. Worst of all, it cuts off possibilities for growth on the part of both domains by cutting off the possibility of creative dialogue between them.

The second view of the relationship between religion and science I want to discuss this morning is what I call the “fusion” viewpoint. This view—the polar opposite of the segregationist approach—suggests that religion and science truly are one and the same. Proponents of this view argue that as we learn more about our world through science, particularly physics, we increasingly find that religion and science are one. In this view, scientific insight is accepted and then often used to validate religious understandings. Okay, the something like the Big Bang probably happened. Now let’s use that event to validate particular understandings of God. Okay, evolution is probably a fact. Now let’s try to read God into it. In this view everything comes together into a blissful unity if we only search deep enough for the connections. And many call this unity God. If this sounds a lot like the Hindu notion of the universe’s head-spinning

¹⁸ Pope John Paul II quoted in Ian Barbour, *Religion and Science: Historical and Contemporary Issues* (San Francisco: HarperSanFrancisco, 1997), p. 15.

¹⁹ National Academy of Sciences policy statement quoted in Brown Taylor, p. 11.

²⁰ Barbour, p. 89.

multiplicity that ultimately comes together in the oneness of Brahman, you're right. The insights and beliefs of Eastern religions are an important religious foundation of fusion. So are many New Age ideas. With the interest many of us in this Fellowship hold in Eastern and New Age religions, I suspect a good number of us embrace this take on the relationship between science and religion.

In truth, it seems like much on the cutting edge of science today seems to lead to a merger of science and religion. String theory and some of the other new physics come to mind. But unlike my old graduate school roommate George, I have a difficult time grasping the science of such endeavors, let alone their theological implications.

Beyond those highest realms of the new science, much of the other evidence of science's and religion's merging seems to be based on rather flimsy science. Take the theory of morphogenetic fields developed by the British biologist Rupert Sheldrake. This theory suggests that nature has a kind of memory which is conveyed through time and space by something he has dubbed "morphic fields." These morphic fields explain how pigeons find their way home and how your dog knows you're coming home before you're home. Here's a description of this theory from a recent article about Sheldrake in the *Utne Reader*:

These (morphic) fields shape everything, from atoms and molecules to hurricanes and jaguars. How a jaguar looks and behaves, for instance, is not so much about its genes as about the memory of jaguarness carried in its morphic field. Rather than being encoded with certain traits, genes may be tuned, like transistors, to the jaguar channel—all jaguar, all the time. The process of converting this memory into an actual thing, out of the past into the present, is what Sheldrake calls "morphic resonance."²¹

I am attracted to Sheldrake's theory because it brings alive the cosmos and seems to read Carl Jung's collective unconscious into the reality of nature. Not surprisingly, however, Sheldrake, like James Lovelock, the creator of the "Gaia Hypothesis," finds little support for his morphic fields in the scientific community.²² Maybe this is because Sheldrake's theory represents a paradigm shift too radical for science. Or maybe it's because the evidence to support his theory is more anecdotal than rigorously scientific. Maybe it's because his theory appears more the product of wishful thinking and an attempt to read into science a fusion with religion than hard science.

The problem with trying to fuse science and religion is that doing so violates the internal logic, the methodology, the language and the distinctiveness of both domains. Fusion is the opposite of the black and white world of the segregationist and conflict views of the relationship between science and religion. Fusion is a melting pot, where science and religion merge together in a dull, homogenized soup.

I don't think the fusion view or the segregationist view or the conflict view are adequate approaches to the relationship between science and religion. There has to be a middle way between the black and world of the conflict and segregationist views and the dulled melting pot of the fusion view. There has to be a way of recognizing and respecting the differences between science and religion while also allowing room for

²¹ John David Ebert, "The Natural Channel," *Utne Reader*, January-February 2001, pp. 67.

²² Barbour, p. 100.

dialogue between them. That's the place where true creativity can take place. And that's the place I'm heading next week.

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**“THE INTERSECTION OF SCIENCE AND RELIGION:
3) DIFFERENT PATCHES OF THE SAME QUILT”**

by the Rev. Roger Bertschausen

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Appleton, WI 54912-1791

(920) 731-0849

Website: <http://www.focol.org/~fvuuf>

February 11, 2001

Call to Gather: from *The Marriage of Sense and Soul* by Ken Wilber
And we all know how to wonder, don't we? From the depths of a Kosmos too miraculous to believe, from the heights of a universe too wondrous to worship, from the insides of an astonishment that has no boundaries, an answer begins to suggest itself, and whispers to us lightly. If we listen very carefully, from within this infinite wonder, perhaps we can hear the gentle promise that, in the very heart of the Kosmos itself, both science and religion will be there together to welcome us home.²³

Reading: Responsive reading #530 in *Singing the Living Tradition*: “Out of the Stars” by Robert T. Weston

In the first two sermons of this series, I discussed and rejected several different ways of viewing the relationship between science and religion: the conflict view that sees science and religion locked in an eternal war; the segregationist view that sees them as totally separate; and the fusion view that sees them as one and the same.

Today I want to propose another way of looking at the relationship, a way that I find far more compelling and illuminating. It is a Middle Way between the more black and white views of the first two sermons. In his book *Rocks of Ages*, Stephen Jay Gould suggests a metaphor for describing this middle way.²⁴ Imagine a beautiful quilt. Science is one distinct patch on the quilt; religion is another; and there are others as well. All the patches—each separate and each with a distinctiveness and coherence of its own—

²³ Ken Wilber, *The Marriage of Sense and Soul: Integrating Science and Religion* (New York: Broadway Books, 1998), p. xii.

²⁴ Stephen Jay Gould, *Rocks of Ages: Science and Religion and the Fullness of Life* (New York: Ballantine Publishing Group, 1999), p. 178. Though Gould offers this wonderful metaphor, in my judgement his work often violates the spirit of the metaphor.

together create a beautiful quilt. The whole quilt represents wisdom. Each patch is greater because it is part of this greater unity called wisdom.

Gould's metaphor suggests that no single way of knowing can possibly hold all the answers or all the truth about life. Life is just too complex for one way of knowing to capture its truth completely.²⁵ Each patch represents only partial truth, only one angle on the complexity of life.

An important part of wisdom is realizing the limitations of each individual viewpoint. When we deny this truth, then we make the mistake of lifting up one particular viewpoint as the whole truth—one particular patch as the whole quilt. This is idolatry: worshipping a part as the whole. Scientific imperialists who believe only science reveals truth make an idolatry of science; religious imperialists who believe only religion reveals truth make an idolatry of religion.²⁶ Both kinds of imperialists miss the larger beauty and coherence of the whole quilt and as a result; both lack the wisdom of the whole.

This metaphor tells us, then, that both science and religion are part of the search for truth. It tells us that though distinct, religion and science are related to each other just as two patches of a quilt are related to one another. Indeed, for as long as they have existed, both science and religion have helped shaped one another—at times for good, often for ill. They have always been and will always be in relationship with one another. The question is whether the relationship will be positive and creative or negative and destructive.

Artistically, there is a kind of dialogue between different patches of a quilt as they interact together to form a whole. This suggests the ideal mode for the relationship between religion and science: dialogue. Dialoguing with religion nudges scientists to think about not just the science of their work but the ethics of it as well and even the implications it might have for life's meaning and purpose. And dialoguing with science nudges religious people to look at the implications of science for their faiths and to think more rationally about their faith.²⁷ I believe that the mutual challenge dialogue affords both science and religion produces a creative tension that deepens both.

It's not easy to pull off this dialogue. It's so tempting to lapse back into the segregationist or fusionist viewpoints or into an imperialism. This dialogue is, as one writer suggests, a difficult "high-wire act."²⁸ What are some rules of engagement that will keep the dialogue between religion and science productive and creative?

The first rule is humility. Arrogance leads to being imperialistic about religion or science, to claiming that your one patch of the quilt contains the whole of truth. Be humble: know that your domain does not and never will contain all the answers. Know your domain's boundaries and its limitations, and leave room for the other. This rule tells both scientist and theologian to avoid sweeping claims and reducing the other's domain to the terms of one's own domain. For example, the scientist must not reduce prayer or meditation to neurological behavior or reduce religion to humanity's attempt to explain

²⁵ Gould, pp. 169-170.

²⁶ John A. Buehrens and F. Forrester Church, *Our Chosen Faith: An Introduction to Unitarian Universalism* (Boston: Beacon Books, 1989), pp. 160, 171.

²⁷ Barbara Brown Taylor, *The Luminous Web: Essays in Science and Religion* (Cambridge: Cowley Publications, 2000), p. 16.

²⁸ John F. Haught, *Science and Religion: From Conflict to Conversation* (New York: Paulist Press, 1995), p. 19.

what we don't yet understand scientifically. The theologian must not say religion alone gives all the answers to the workings of the universe. The scientist must not claim that only the scientific method yields truth; the theologian must not claim that only God's revelation expressed through holy scripture yields truth.

Humility and a realization of the limits of one's own domain lead to the realization that both patches of the quilt are important parts of the beauty of the whole. Neither can totally explain everything on its own. Take meditation and ritual. An article in *Newsweek* a couple weeks ago reported that some neurologists now conclude that spiritual experiences such as meditation and participation in religious ritual "are the inevitable outcome of brain wiring." "The absorption of the self into something larger [is] not the result of emotional fabrication or wishful thinking," two neurologists write, but springs instead from neurological events.²⁹ Now I find this research interesting, and I believe it helps illuminate some of what happens when we meditate or participate in a ritual. But to reduce these activities to neurology misses the whole quilt by making ultimate one patch of the quilt, in this case science. It is idolatry.

I think the same can be said of making love. Scientists continue to study sex and discover all sorts of fascinating things about the physiology and neurology of sex. But surely lovemaking is more than the stimulation of nerves and messages to and from the brain. In understanding and appreciating making love, we need to look at the whole quilt, not just the one panel of science. As the transcendentalists might say, there is a beauty which escapes scientific analysis. Let's not forget about that beauty.

The second rule of dialogue requires both science and religion to remain open to criticism from the other and to the possibility that their ideas will need to change as our various understandings grow. This may sound like I'm universalizing the scientific method, but openness to criticism and growth is not just characteristic of science. Much of religion assumes just this sort of openness. For thousands of years, for example, Jews have gathered to debate and discuss the meaning of their scriptures and life. No questions have been ruled out in these discussions; everything—even the existence of God—is fair game. For Jews, it is in the discussing and debating that truth comes to light. Our liberal religious tradition is built on the foundation of this same spirit. This second rule, then, asks both religion and science to remain open to the respectful questions and challenges of the other domain. This, too, is essential for a creative dialogue between the two.

If science and religion are two patches on the same quilt, I would argue that because their histories have been so intertwined, they directly border one another. The boundary between them, a boundary that is more fluid and ambiguous than unchanging, is a fascinating place to contemplate. This boundary is where science and religion intersect in illuminating ways.

One such boundary is ethics. Science today, with the massive implications so many of its discoveries have for humanity, must have a strong ethical component. Religion, which has traditionally focused heavily on ethics, can contribute much to the exploration of ethics in science. A good example is the ethics panels that most hospitals have today. Medical people representing the scientific domain are essential to these panels: an ethics panel needs members who have a deep understanding of the medical options available and their probable effects. But it's also important to have religious voices on the panel—people who attempt to understand religiously the mysteries of death and pain and have deep experience in ethical decision-making. In these panels the scientists and the religious people don't merge as one; rather, they dialogue about the

²⁹ *Newsweek*, January 29, 2001.

problems they face, each speaking from the distinct perspective of his or her particular domain. Both domains are needed to see the whole, and seeing the whole is essential to making good decisions. In their dialogue, the whole quilt becomes apparent, not just the particular panels. Through dialoguing, they can find wisdom.

Human cloning is another example of an ethical dilemma that needs the perspectives of both science and religion. According to Wednesday's *Christian Science Monitor*, an Italian fertility clinic doctor and a professor from the University of Kentucky plan to hold a conference next month to "jump-start one of the most controversial projects researchers have ever proposed: to clone whole human beings as a way to help infertile couples have children." The pair organizing this conference indicate they may be able to implant a cloned embryo in a woman within the next 18 months.³⁰ Now here again is an ethical problem that cries out for a creative dialogue between the religious and scientific realms. Just because we have or will soon have the technology to clone humans doesn't mean we should do it. We need to look at the whole quilt and discuss whether this is a good thing for the whole.

I would argue that religion, too, benefits from dialoguing with its neighbor domain of science. Take the Big Bang. This scientific theory offers incredible implications for religion to ponder. Contemplating some of the implications of the Big Bang and the process that created the universe, the theologian Barbara Brown Taylor writes about how supernova send into the cosmos oxygen, carbon, hydrogen, and nitrogen. "If you remember your organic chemistry," she writes,

then you know that these are the four elements most necessary for life. Our bodies are 65 percent oxygen, 18 percent carbon, 10 percent hydrogen, and 3.3 percent nitrogen, plus a smattering of the elements you can find listed on the bottle of your multi-mineral pills. Where did all these elements come from? From the creation of the cosmos. From the ashes of stars. Chemically speaking, the only difference between us and trees or rocks or chickens is the way in which our elements are arranged... We are all made out of the same stuff. We are all children of the universe...

In the same way that the elements inside us link us to the stars, so our metabolisms link us to every other living creature. Every cell on earth, whether it belongs to a patch of blue-green algae or a human brain, consists of the same fifty organic molecules. Humans get their fuel from sugar while algae get theirs from the sun, but the basic reactions are the same. We all use four kinds of nucleotides. We all need twenty amino acids. We all carry our blueprints inside of us in the form of DNA or RNA. The cells in our bodies are living fossils over 3.5 billion years old. What they suggest is that all life comes from the same source, which makes us all kin: algae, tadpoles, skunks, and blue jays, not to mention elephants and cats.³¹

³⁰ *Christian Science Monitor*, February 7, 2001

³¹ Brown Taylor, pp. 38-39, 42.

In this passage, Brown Taylor uses the richness of science to make a case that everything is related, that we are indeed part of the interdependent web of all life.

Hearing how Brown Taylor dialogues with science in her theology points to another crucial point of intersection between science and religion: wonder. Both science and religion can lead us to a powerful sense of wonder at the incredible nature of life and the cosmos. People like Aldo Leopold, Loren Eisley, Albert Einstein and Barbara Brown Taylor use their deep familiarity with their particular patch of the quilt to dialogue with the other patches. Then they are able to see the beauty of the whole quilt—a beauty far more powerful than the beauty of their single patch. Such people see the world with the sensibilities of all the patches of the quilt. And it awakens in them a powerful sense of wonder, reverence and gratitude.

I think an important source of such wonder is mystery. Aldo Leopold looks at the environment here in Wisconsin, Loren Eisley looks at evolution, Albert Einstein looks at physics of the universe, Annie Dillard looks at her backyard and they each see not just that which they know but also mystery. They see the mystery of the whole, beautiful quilt that is always more than the sum of its parts.

I'm convinced this mystery will never go away, no matter how many gains are made in science or how deep our religious insight goes. Fellowship member Ed Calhan shared with me a favorite metaphor of his for this mystery, a metaphor that comes from Chet Raymo, a science professor and writer. (You can tell I did better on the verbal end of the SAT's, because I can't resist throwing in another metaphor here!) Raymo writes about knowledge as an island in a sea of inexhaustible mystery. The island of knowledge is limited, the sea effectively infinite, just as our brains are finite but the universe is effectively infinite. The idea that science or religion—or even both of them together—will ever figure out all the mystery of the cosmos is incomprehensible. So the infinite sea of mystery surrounds and always will surround the island that is our knowledge.

Raymo notes two corollaries to this metaphor: “(1) The growth of the island (of knowledge) does not diminish the sea's infinitude, and (2) the growth of the island increases the length of the shore along which we encounter mystery.”³² I love this second image in particular. The more knowledge we gain, the more we encounter mystery. Even as the island of knowledge grows, the shore along which we encounter mystery grows, too. This surely is the lesson Albert Einstein learned. He was a man who pushed the boundary of the island significantly further into the sea of mystery, claiming from the sea land much as the Dutch do with their dikes. Yet he realized this enabled him to encounter more, not less mystery. This is surely the lesson of science these past few hundred years. May it ever be so.

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³² Chet Raymo, *Skeptics and True Believers: The Exhilarating Connection Between Science and Religion* (New York: Walker and Company, 1998), pp. 46-49.

**“THE INTERSECTION OF SCIENCE AND RELIGION:
4) Healing, Prayer and Medicine—A Test Case”
by the Rev. Roger Bertschausen
Fox Valley Unitarian Universalist Fellowship 2600 E. Philip Ln.
P.O. Box 1791
Appleton, WI 54912-1791
(920) 731-0849
Website: <http://www.focol.org/~fvuuf>**

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Last Sunday I talked about picturing wisdom as a beautiful quilt. Each individual panel of the quilt of wisdom is distinctive, yet each is also part of the unified whole of the quilt. Religion is one important panel, science another. Other panels may include literature, the arts, history and philosophy.

Not surprisingly given my calling, I focus my attention most on the panel of religion. By this I don't mean organized religion—Unitarian Universalism after all is more accurately called disorganized religion. Rather, I mean I focus on the pursuit that lies at the heart of religion: the search for meaning and purpose in life.

My work on this patch of religion has always been and always will be greatly influenced by dialoguing with the neighboring patch of science. My dialogue with science does much to keep my patch of religion fresh and evolving.

Today I want to examine the impact of this dialogue on three questions that I characterize as primarily religious in nature. The first two questions are necessary preliminaries to discussing the topic contained in the sermon's title.

The first question is: What impact, if any, does science have on my understanding of God? Maybe first we should consider a precursor question: Does all of the scientific discovery since Copernicus and Galileo rule out the existence of God? To this I answer emphatically no. Those from the scientific realm who answer yes to this question—and there have been quite a few—are scientific imperialists. Saying that science rules out the existence of God is a violation of the integrity of each particular patch of the quilt. Now some scientists and others may say that they personally cannot believe in God because of how they interpret science. That is acceptable. But they must not universalize their conclusion to say that science rules out the existence of God.

That said, I can say that science does significantly impact my understanding of God. The insights of science have pushed me to look at God in different ways. For this I am thankful. Here I want to speak personally: How has my dialogue with science impacted my understanding of God? Others will come to different conclusions. I am not in any way ruling out others' conclusions.

I cannot personally square the insights of science with the existence of a traditional, anthropomorphic God—the proverbial white haired old man up in the heavens, omnipotent and omniscient, pulling all of the strings that govern our lives and world. Given the way the universe seems to work, this just doesn't make sense to me. This view of God fits what we knew in pre-Copernican times, not what we know today. And unlike the Deists who also rejected this view, I don't see God as a kind of grand

watchmaker, either: as the creator of the cosmos who set everything in motion and then retreated far away to watch passively how it all unfolds. I find such a God meaningless and completely irrelevant.

Where is God for me, then? Chet Raymo writes about “watching attentively for the light that burns at the center of every star, every cell, every living creature, every human heart.”³³ To me, that light is God. That’s where God lives: not up in heaven or some removed sphere, but right here, in the center of every star, every cell, every living creature, every human heart. God is not a human-like ruler in the sky, but part of the inter-relatedness that science increasingly reveals to be at the heart of the universe. God is in the midst of evolution, in the midst of continents shifting together and moving apart, in the midst of our ever-changing relationship with nature and with each another. God is alive and embodied within and between us and all around us.

And what form does God take when God is alive in our relationships with our inner selves, one another and the natural world? Not the form of a white-haired grandfather, but the form of spirit and love. And so I say: God is spirit. God is love.

To me, this picture of God makes sense given the scientific insights of the last five hundred years. Of course, this view of God is not a brand-new, modernist viewpoint. Jesus said as much when he talked about the kingdom of God being within. Rumi said as much when he said, “God is right here, closer than your breath.” The Hindus have said this for thousands of years, going back to the ancient Vedas. Native Americans have said this for who knows how many hundreds or thousands of years. If you seek God, look within and around you, not just up to the sky.

Embracing this picture of God, I consciously throw out the idea of God as omnipotent. This traditional attribute of God just doesn’t make sense to me. How can there be an omnipotent God pulling all the strings and an earthquake in India that kills thousands of people? How can there be an omnipotent God and Auschwitz? How can there be an omnipotent God and a baby who dies of cancer? How can I say that God saved me in a car accident because God loved me and ignore the fact that the people in the other car died, or that God saved my plane that suffered mechanical problems but allowed another plane in the same situation to crash? To me, it just doesn’t make sense to say God is omnipotent.

So this says something significant about my view of the nature of God’s power, doesn’t it? Rather than talking about God as all-powerful, I have to talk about God’s power as the power of persuasion and influence. I call God’s power love—a love that attracts and evokes rather than compels. To some extent each of us possesses the free will to decide whether or not to be persuaded and influenced by love. Martin Buber calls life a dialogue with God in which we respond with our actions.³⁴ Our actions show whether we try—always imperfectly, of course—to follow love’s path or turn against it.

In my view of God, then, God doesn’t cause the good and the bad in life to happen. Rather, for me, God is a participant or companion in everything that happens. Maybe that’s the mythological point of Jesus’ gruesome death on the cross. John’s gospel paints that event as a glorious one; Mark’s Gospel, I suspect, comes far closer to the truth when the distraught Jesus says, “My God, my God, why hast thou forsaken

³³ Chet Raymo, *Natural Prayers* (St. Paul: Ruminator Books, 1999), pp. xiv-xv.

³⁴ Ian Barbour, *Religion and Science: Historical and Contemporary Issues* (San Francisco: HarperSanFrancisco, 1997), p. 299.

me?” And the answer that Jesus may hear whispered is that God was there with him, up on the cross. God didn’t cause the atrocity and couldn’t prevent it, but God could be there sharing the pain and suffering.

Finally, I want to say that for me, God is not the word I use for what we don’t yet understand scientifically. I reject this “God of the gaps” view. I know that many people here embrace this viewpoint; it has been articulated eloquently each of the last three weeks in the congregational response. This view sees the religion patch on the quilt of wisdom as steadily shrinking as the scientific patch expands and deepens. Because we didn’t understand eclipses a thousand years ago, we attributed them to the mystery of God. Now that we understand them scientifically, we see that they have nothing to do with God or religion. Because we didn’t understand 2500 years ago the science of thunderstorms, we attributed them to the gods. Scientific knowledge has filled these gaps; they are no longer in the realm of God. What gaps remain today, we call God. One day, we will unravel most of the remaining mysteries of the universe. Then religion and God will cease to exist. “God has left the building!” we will announce, “never to return.” The patch of religion will shrink to nothingness.

I think this view contains a serious misreading of much of religion and particularly mythology. The most important aspect of mythology is not what it says about the physical workings of the world—thunderstorms and eclipses, for example—but what it says about life’s meaning and purpose. Those of us who dismiss religion as a lame explanation for what we do not yet understand make the exact same mistake in confronting myth that we accuse the fundamentalists of making: we read the myths literally. In so doing, we miss the art and the deeper wisdom in them.

The second question I want to ask today is: Does the universe have a higher purpose? Even if one embraces the theory of evolution, this is an arguable question. Some scientists—Stephen Jay Gould, for example—argue that evolution (among other scientific breakthroughs of the last five hundred years) shows that there is no higher purpose. Other scientists such as the British biologist Robert Wright disagree with Gould’s assessment and find evolution to be, as Wright concludes, even “vaguely suggestive” of a higher purpose.³⁵ I don’t think evolution or any other aspects of modern science rule out the possibility that the universe has a purpose. Nor do they prove that the universe has a purpose. I do believe that if the existence of a higher purpose is dependent on an omnipotent and omniscient God, then there is no higher purpose. But I don’t believe the existence of a higher purpose is dependent on this traditional understanding of God.

Dialoguing with science can be helpful in answering the question of higher purpose. So much in science today points to the elemental interdependence and interconnection of all parts of our world. Maybe that’s where we can find purpose: not in the personal success and wellbeing of any individual or even our species or planet—there’s no guarantee there—but in the nature of the universe that at its very essence is interdependent. The seventh principle of Unitarian Universalism—respect for the interdependent web of all existence of which we are a part—is a faith statement that grows out of this burgeoning understanding of life’s basic interdependence. The

³⁵ Stephen Jay Gould, *Rocks of Ages: Science and Religion in the Fullness of Life* (New York: Ballantine Books, 1999); Robert Wright, “The Accidental Creationist: Why Stephen Jay Gould is bad for evolution,” *New Yorker*, December 13, 1999, pp. 56-57.

principle is the product not only of our religious heritage but also of Unitarian Universalism's dialogue with science.

My third question today is this: Does science rule out prayer? Prayer—particularly as it relates to healing from physical illness—is the focus of much scientific investigation today. On the one hand, scientists are studying the physiology of prayer and meditation. A *Newsweek* article a few weeks ago suggested that some researchers feel they are making great strides toward completely explaining prayer and its efficacy physiologically. Prayer and the absorption of self into something larger that can happen when a person prays spring from the wiring of our brains.³⁶ Many inclined to see science as dominant over religion have jumped on such studies as proving their point of view.

On the other hand, many researchers in the past several years have researched the efficacy of prayer for people who are suffering serious physical illness. Such prestigious and clearly scientific-oriented journals as the *Annals of Internal Medicine* and the *American Journal of Medicine* have devoted considerable attention to the spiritual aspects of healing. These journals label spiritual aspects of healing “distant healing,” which includes prayer, Therapeutic Touch, Reiki healing, and qigong. In one famous study on the coronary care unit at San Francisco General Hospital, researchers assigned patients randomly either to “a usual care group, which received no organized prayer, or to an experimental, intercessory prayer group, which received remote (from outside the hospital) prayer from persons unknown to them.” The study reported “a statistically significant beneficial effect of intercessory prayer.”³⁷ Many inclined to see the validity of religion even in the face of modern science jump on such studies to prove their point. On the other hand, another study of the effects of distant healing for skin warts “produced no evidence” that distant healing helped heal skin warts.³⁸

An *Annals of Internal Medicine* review of twenty-three scientific studies focusing on the efficacy of distant healing reports that thirteen of the studies (or 57%) showed a positive treatment effect of distant healing. Listen to these words from the review:

No experiment can prove or disprove the existence of God, but if in fact [mental] intentions can be shown to facilitate healing at a distance, this would clearly imply that human beings are more connected to each other and more responsible to each other than previously believed. That connection could be actuated through the agency of God, consciousness, love, electrons, or a combination. The answers to such questions await further research.³⁹

So we have some scientists pointing to the possible clinical efficacy of prayer while others suggest that any positive results of prayer are simply the result of

³⁶ “Searching For the God Within,” *Newsweek*, January 29, 2001, p. 59.

³⁷ William S. Harris, et al., “A Randomized, Controlled Trial of the Effects of Remote, Intercessory Prayer on Outcomes in Patients Admitted to the Coronary Care Unit,” *Archives of Internal Medicine* vol. 159(19), pp. 2273-2278. My thanks to Mark Marnocha for giving me copies of this and several articles from medical journals on the question of “distant healing.”

³⁸ Elaine F. Harnkness, et al., “A Randomized Trial of Distant Healing for Skin Warts,” *American Journal of Medicine*, vol. 108(6), April 15, 2000, pp. 448-452.

³⁹ John A. Astin, et al., “The Efficacy of ‘Distant Healing’: A Systematic Review of Randomized Trials,” *Annals of Internal Medicine*, vol. 132(11), June 6, 2000, pp. 903-910.

physiology. Maybe it's God. Maybe it's electrons and neurons. I have the sense that both angles somehow miss the point. Both angles, it seems to me, lose sight of the distinctiveness of the two unique realms of science and religion and unnecessarily blur them. I don't believe science now or will ever prove or rule out the efficacy of prayer.

Dialoguing with science from my place in the religion patch, here's what I believe: I believe that prayer can be helpful in healing. So can medicine, and I would never suggest prayer as a replacement for medicine. I believe prayer is partly helpful because of its internal psychological and physiological effects—if something helps you feel better psychologically, then it has a healing power. And I believe that the power of prayer and other spiritual healing processes that connect people have power because they embody the interconnection that lies at the heart of the universe. Prayer can connect a person with the sacred depths of him or herself, with others and with the natural world. If God lives in relationship, then prayer can connect a person to God. The traditional words that end many Native American prayers acknowledge this beautifully and succinctly: “Mitakye Oyasin—All my relations.”

For me, the best of kind of healing prayer recognizes that God is present with me in my suffering. That's where God's power is—not in causing or stopping the suffering. So I often pray to feel the presence of God in my suffering, which I feel in connectedness to others and the world.

The other aspect of prayer that I find most healing flows from how prayer can open me to wonder, awe, and gratitude at the incredible gifts of life. As I said last week, the place of wonder, awe and gratitude is a powerful intersection of science and religion. Prayer, thinking about the wonders of science—both can get me to this place of wonder in short order.

One day this past week I sat at our kitchen table talking with our ten-year-old daughter Hattie about the Big Bang. She couldn't remember hearing about it before and found the idea fascinating. I talked to her about the different elements that make up our bodies: primarily oxygen, carbon, hydrogen, and nitrogen—plus some of the elements listed on the back of the bottle of multi-vitamins I held in my hand. “I'm not a scientist,” I told her, “but I think the Big Bang tells us that all of the elements that make up your body and my body were there at the beginning. For however many billion years since the Big Bang, these elements that make up you and me traveled from that core of the universe. And here we are now, sitting and talking at this table, made stuff that was there at the Big Bang. And it's the same stuff that other animals and even the planets and the stars are made of.”

She thought this was pretty amazing and awesome. So do I.

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