

Chapter 12

Religion and Faith

“You said we were going to talk about religion,” Sam mentioned when the group got together the next time. “Many of my friends are religious. I’m still trying to decide about all that.”

“I don’t think I have any beliefs that you would call religious,” Gio said.

“Well, as Sam says, *people* sure do have religious beliefs,” Nick replied. “They have had religious beliefs for as long as there have been people to believe. These beliefs have always been part of our models of reality, and of our rituals, culture, and codes of behavior. Some people think that religion, along with a capacity for language and cognition, is what distinguishes humans from other animals.”

“I read an interesting novel with that theme by Vercors,” Mia said. “It’s entitled *You Shall Know Them*.¹ A human-like group of primates is discovered in a remote area, but there is argument about whether or not they are really humans. The religious beliefs of these ‘missing links’ play a role in a court trial to determine whether or not the killing of a member of the group was a capital offense. The prosecution argues ‘because they are religious, they must be human, and therefore killing one of them is murder’.”

“Maybe I should develop some religious beliefs so you won’t pull the plug on me,” said Gio.

“As we all know,” Nick began, “there are many, many different religions

¹Vercors, *You Shall Know Them*, Boston: Little Brown and Co., 1953.

and a great variety of different beliefs. Religions give meaning and purpose to our lives, they provide rich cultures to live in and codes to live by, and some of them offer the possibility of life after death as well as solace during this life.”

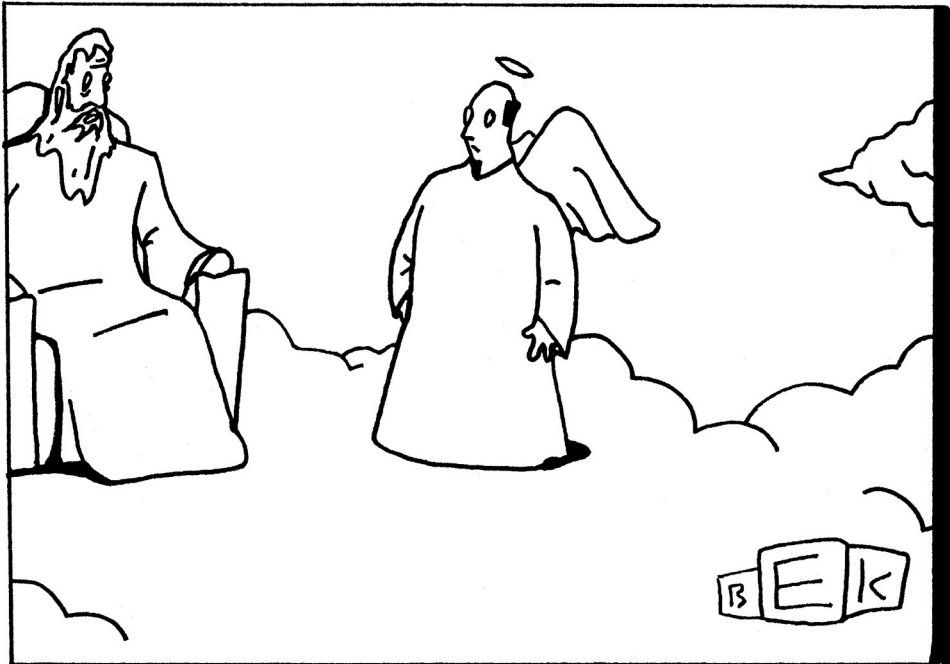
They were kept from becoming mere drudges, slaves to the unceasing demands which the hardships of pioneer life constantly enforced, and were refreshed in their toils by the institution of God’s service, His day and house and word.
—Reverend Van der Veen²

“That reminds me of the analogy you mentioned between clothes and beliefs,” Sam said. “You said that some clothes are worn because they make the wearer feel good. Do you think people have religious beliefs just to make them feel good?”

“That’s part of it,” Nick replied, “but there’s much more. Religions provide explanations for many mysteries—such as how the world began, how living things came to be, what is the purpose of life, is there life after death, why do bad things happen to good people, and how one must think and act in order to be in harmony with one’s society and with the universe.”

“Maybe some things don’t have explanations,” Gio said, “look at this cartoon.”

²Quotation from: Maryellen Glerum Thompson, *Dutch Ancestors: The Glerums*, pp. 53-54, Family History Press, 5318 Chelsea Avenue, La Jolla, CA, 92037, 1988.



“This is a little embarrassing to admit, but everything that happens happens for no real reason.”

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“Well, people would invent explanations anyway,” Nick said. “They seem to be wired-up to seek explanations for things.”

“Barbara Tuchman agrees that religious beliefs are invented to provide explanations,” Gio said.

In the search for meaning we must not forget that the gods (or God, for that matter) are a concept of the human mind; they are the creatures of man, not vice versa. They are needed and invented to give meaning and purpose to the puzzle that is life on earth, to explain strange and irregular phenomena of nature, haphazard events and, above all, irrational human conduct. They exist to bear the burden of all things that cannot be comprehended except by supernatural intervention or design.³

³Barbara W. Tuchman, *The March of Folly: From Troy to Vietnam*, pp. 45-46, New York: Alfred A. Knopf, 1984.

“Doesn’t science have explanations for some of those questions?” Sam asked.

“Yes, but many people find science’s explanations unsatisfying,” Nick replied. “For example, a scientist might say, from a scientific point of view, there is no evidence for life after death, no evidence for any purpose to life, and that bad things happen more-or-less randomly even to ‘good people.’ Religion gives more satisfying answers than those.”

“Barbara Tuchman seems to think that the religious answers are myths,” Sam said.

“Maybe so,” Mia interjected, “but myths play an important role in our lives.”

“I don’t think they play a role in my life,” Gio said.

“That’s because you are a robot, Gio,” Sam said.

Myths are about the human struggle to deal with the great passages of time and life—birth, death, marriage, the transitions from childhood to adulthood to old age. They meet a need in the psychological or spiritual nature of humans that has absolutely nothing to do with science. —Michael Shermer, Author⁴

“I have a quotation from Joseph Campbell about myths,” Gio said. “Mia ought to like this one because it’s about computers.”

I have had a revelation from my computer about mythology. You buy a certain software, and there is a whole set of signals that lead to the achievement of your aim. If you begin fooling around with signals that belong to another system of software, they just won’t work. . . .

You must understand that each religion is a kind of software that has its own set of signals and will work.

⁴Michael Shermer, *Why People Believe Weird Things: Pseudoscience, Superstition, and other Confusions of Our Time*, p. 130, New York: W. H. Freeman and Company, 1997.

If a person is really involved in a religion and really building his life on it, he better stay with the software that he has got.⁵

“I think Campbell is saying that religion is an important part of a person’s culture,” Nick said. “People are born into one or another of these religions and usually stay with the one they started in—the one that works for them, as Campbell says. People don’t change cultures easily. Even people who reject the theological teachings of a religion often continue to practice its cultural aspects.”

“A non-religious Jewish friend once invited me to a Seder dinner,” Sam said.

We all love the incense, the stained-glass windows, the organ music, the vestments, and all of that. That’s neat stuff. I don’t want to give all that up just because I don’t believe in God.⁶

“But my religious friends say they really couldn’t get along without their religious beliefs,” Sam said. “Religion provides a meaning for life.”

Gio said, “Joseph Campbell seems to disagree that humans seek a meaning for life. Here’s what he says.”

People say that what we’re all seeking is a meaning for life. I don’t think that’s what we’re really seeking. I think that what we’re seeking is an experience of being alive, so that our life experiences on the purely physical plane will have resonances within our own innermost being and reality, so that we actually feel the rapture of being alive.⁷

“Some people say we can manage just fine without religious beliefs,” Nick said. “For example, in his novel, *The Ides of March*, author Thornton Wilder imagines Julius Caesar discovering such a possibility.”

“Here’s what Wilder wrote,” Gio said.

⁵Joseph Campbell (with Bill Moyers), *The Power of Myth*, p. 25, New York: Anchor Books, 1988.

⁶James Kelley, as quoted in *The San Jose Mercury News*, p. 2A, August 11, 2004.

⁷Joseph Campbell (with Bill Moyers), *The Power of Myth*, p. 5, New York: Doubleday, 1988.

And finally the moment came when I pushed aside what I had done and started to begin again with the announcement that Jupiter himself had never existed; that man was alone in a world in which no voices were heard than his own, a world neither friendly nor unfriendly save as he made it so.

...

How terrifying and glorious the role of man if, indeed, without guidance and without consolation he must create from his own vitals the meaning for his existence and write the rules whereby he lives.

...

But if our minds can make such Gods and if from the Gods we have made there flows such power, which is no more than a power resident within us, why cannot we employ that power directly?⁸

“But maybe we have to believe that the power comes from *outside* in order to lead a moral life,” Sam suggested.

[It is a moral necessity to assume the existence of God.](#)
—Immanuel Kant⁹

“Maybe so,” Nick replied. “But some religious beliefs also cause people to act immorally. The crusades, launched to wrest the ‘holy land’ from the ‘unfaithful,’ were responsible for much pain and death. Religious wars of all kinds, Moslem against Christian, Catholic against Protestant, Hindu against Moslem, are all fought because some people believe their religion is better than that of others. Heretics were burned at the stake because their religious beliefs were different from those of people in control. How can those acts be moral?”

“Here’s what the author, Sam Harris, says about that,” Gio piped in.

⁸Thornton Wilder, *The Ides of March*, pp. 37, 155, New York: Harper & Brothers Publishers, 1948.

⁹Jostein Gaarder, *Sophie’s World*, p. 332, New York: Berkley Books, 1997.

Our technical advances in the art of war have finally rendered our religious differences—and hence our religious *beliefs*—antithetical to our survival.¹⁰

“Of course,” Mia added, “people, being people, would probably find other excuses for war and violence anyway, so the religious reason may simply be a rationalization for inevitable ‘us-against-them’ conflicts.”

Sam said “It seems that you are not too positive about religious beliefs, Nick, but I’m not sure how Mia feels about them.”

“You will find out more about both of us as our discussion continues,” Mia answered. “We separate religious beliefs into two main categories. Some, we think, are unscientific because they are unfalsifiable. Others make claims about reality that can be tested.”

“For example,” Nick continued, “belief in immortality is unscientific because it is unfalsifiable. It can’t be tested.”

“Here’s something Samuel Taylor Coleridge wrote about a test,” Gio said.

If a man could pass through Paradise in a dream, and have a flower presented to him as a pledge that his soul had really been there, and if he found that flower in his hand when he awoke—Aye, and what then?¹¹

“I haven’t heard that anyone has awakened with a flower,” Nick said.

“Nevertheless,” Mia said, “the belief in some kind of immortality is very strong.”

“That’s mainly because of wishful thinking,” Nick said.

“But there are other reasons too,” Mia replied. “The idea of immortality explains some things. In fact, Nick and I have assembled a list of things for which religions offer explanations. But all of these religious explanations are unfalsifiable—making them unscientific.”

¹⁰Sam Harris, *The End of Faith: Religion, Terror, and the Future of Reason*, pp. 16-17, New York: W. W. Norton & Company, 2004.

¹¹From *New York Times* Book Review Section, p. 24, June 9, 2002. (Original in *Anima Poetae, 1816*). Also see: *The Collected Works of Samuel Taylor Coleridge*, Kathleen Coburn, Ed., Princeton: Princeton University Press, 1983.

“That means there is really no conflict between science and religion regarding these ideas,” Nick said, “but, nevertheless, people do believe them—citing the items on our list as evidence. So even though the explanations are unscientific, the evidence can be used to increase confidence in them, unless of course they can be explained away by more credible scientific explanations.”

“I suppose you guys will explain them away,” Sam guessed.

“You’ll see,” Nick replied. “Anyway, here’s the list.”

1. Strong sense of self
2. Existence of intelligent, complex life
3. The universe is just right for life
4. Why is there something instead of nothing?
5. Mystical experiences and visions

“We’ve already mentioned immortality, so let’s start with that,” Mia suggested. “I think one reason that people believe in immortality is the strong sense of self that people have. It’s so strong that people cannot imagine that it disappears with death.”

[the self] ... a bounded, single individual that changes ever so gently across time but, somehow, seems to stay the same. ... it must possess a remarkable degree of structural invariance so that it can dispense continuity of reference across long periods of time. Continuity of reference is in effect what the self needs to offer. —Antonio Damasio, Neurophysiologist¹²

“Our sense of self seems analogous to Gio’s belief in his own ‘continuing existence’,” Mia went on. “That belief is important for him to link his past with the present and for him to plan for his future. Gio believes that there is such an individual as ‘Gio’.”

¹²Antonio Damasio, *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*, pp. 134-135, New York: Hourcourt, Inc., 1999.

“And, I wouldn’t want to quit existing,” Gio said.

“So people find it hard to believe that their existence ceases altogether when they die,” Nick said. “Instead, they believe that they have some kind of non-physical part, called the soul or spirit, that is their real essence and that survives the death of their physical body. Then perhaps, it enters an ethereal spirit world, or unites with a universal consciousness, or is assigned to be re-born in another person or animal, or re-joins its resurrected body in heaven—there are different, and even conflicting, versions in the different religions.”

“Nick and I think that what Damasio says about ‘the self,’ alluded to in the excerpt Gio showed us, explains away theories of immortality,” Mia said. “It’s all neurophysiology.”

“How depressing,” Sam said.

“There is another feeling that people have that might be cited as evidence for immortality,” Mia claimed. “It’s the convincing feeling that a loved one continues to exist after his or her death.”

“A friend of mine at school died of leukemia,” Sam said. “It sure feels like he’s still around somehow.”

“We explain that away with the idea that people have vivid models of others—especially of parents, siblings, partners, and close friends,” Mia said.

“I have models of many people,” Gio said.

“The models that people have of other people are much more complex than your models, Gio,” Nick said. “Through long friendship and association, people are very good at predicting what others would say in certain situations, how they would act, in fact also how they would feel. To make such accurate predictions, those models have to be extremely life-like.”

“When a friend or relative dies,” Mia said, “the model of that person in another living person’s head does not disappear. It lives on, creating such a compelling impression of the continuing reality of the deceased that it’s hard to believe that he or she doesn’t still exist in some form or other.”

I'll be seeing you
In all the old familiar places
That this heart of mine embraces, . . .¹³

“The naturalist John Burroughs talked about immortality,” Gio said. “Here is his view.”

I wish there were something to light up the grave for me, but there is not. The faith of all the saints and martyrs does not help me. . . . I know that I am a part of the great cosmic system of things, and that all the material and all the forces that make up my being are indestructible as the Cosmos itself—all that is physical must remain in some form. But consciousness, the real Me, is not physical, but an effect of the physical. It is really no more a thing than ‘a child’s curlicue cut by a burnt stick in the night,’ and as the one is evanescent, why not the other?¹⁴

“Can’t argue with that,” Nick said.

“The self sounds like software,” Gio said. “Why can’t people just ‘download’ their brains—just as we robots can have our software transferred to a new chassis?”

“Some futurists think that might be possible,” Mia said. “Raymond Kurzweil is one of them. Can you summarize what he has to say about it, Gio?”

“Here’s what I found,” Gio said.

We will start by freezing the brain of a recently deceased person and then examine one brain layer—one very thin slice—at a time. With suitably sensitive two-dimensional scanning equipment, we should be able to see every neuron and every connection represented in each synapse-thin layer. . . .

¹³From the song lyrics by Sammy Fain and Irving Kahal.

¹⁴From “Facing the Mystery,” as quoted by Charlotte Z. Walker (ed.), *Sharp Eyes: John Burroughs and American Nature Writing*, pp. 35-36, Syracuse, NY: Syracuse University Press, 2000.

By mapping the locations, interconnections, and contents of the somas, axons, dendrites, presynaptic vesicles, and other neural components, we will be able to re-create the human brain, including its memory, on a neural computer of sufficient capacity. . . .

The newly emergent ‘person’ will appear to have the same personality, history, and memory as the person originally scanned. Interacting with this ‘new person’ will feel like interacting with the original. In fact, the new person will claim to be that same old person and will have a set of memories to back up the claim: growing up in Brooklyn, walking into a scanner here, and waking up in the machine there. He’ll say, ‘Hey, this technology really works!’¹⁵

“But,” cautioned Nick, “considering the fact that a person has some 100 billion neurons that combine to make up his personality—to say nothing of the important roles of dynamic, circulating neural activity and hormones and other non-neuronal parts—I think downloading people would be pretty difficult if not impossible.”

“Then there’s cryogenics,” Mia said. “Some people think that if they are quickly deep-frozen upon death, later technology will provide the means to revive them, cure them of whatever made them die, and reconstitute their bodies to make them ageless.”

“It will always be a dream,” Nick said.

“Let’s turn to the next item on our list,” Mia suggested, “the existence of intelligent, complex life.”

“Many people think that the complex life forms we see all around us, including humans, must have been designed by an intelligent creator,” Nick said. “They couldn’t have ‘just happened.’ To put it succinctly, *we* are the evidence for a theory called ‘intelligent design.’ It was most forcefully stated by the Anglican churchman, William Paley, who lived in the latter half of the 18th century in England. In a famous book written near the end of his life, Paley used the metaphor of a ‘watchmaker’ to explain the existence of a watch that one might stumble upon.”

¹⁵Raymond Kurzweil, “Piece of Mind,” *Forbes ASAP*, February, 22, 1999.

“Here’s the quote,” Gio offered.

... when we come to inspect the watch, we perceive ... that its several parts are framed and put together for a purpose, e.g. that they are so formed and adjusted as to produce motion, and that motion so regulated as to point out the hour of the day; that if the different parts had been differently shaped from what they are, or placed after any other manner or in any other order than that in which they are placed, either no motion at all would have been carried on in the machine, or none which would have answered the use that is now served by it. ... the inference we think is inevitable, that the watch must have had a maker—that there must have existed, at some time and at some place or other, an artificer or artificers who formed it for the purpose which we find it actually to answer, who comprehended its construction and designed its use.

...

[living things are even more complicated than watches] in a degree which exceeds all computation. ... The marks of design are too strong to be got over. Design must have had a designer. That designer must have been a person. That person is GOD.¹⁶

“And that sounds pretty good to me,” Gio continued. “We robots didn’t ‘just happen.’ People or other robots designed and built us—something had to design and build people!”

“That view is called ‘intelligent design,’” Nick said. “But it can’t be tested, so it’s not a scientific theory—even though some of its proponents try to pass it off as ‘science’. Besides, intelligent design is explained away by evolution—a very credible scientific theory. Darwin’s theory of natural selection explains how ordinary physical processes account for the great variety and complexity of all living things. Evolution works by building on what’s already there. The evolutionary biologist, Richard Dawkins, uses the metaphor of a ‘blind watchmaker’ to describe the *gradual* development, layer upon layer, of complex life.”

¹⁶William Paley, *Natural Theology: or, Evidences of the Existence and Attributes of the Deity, Collected from the Appearances of Nature*, first published in 1802; available from: Lincoln-Rembrandt Pub.; 12th edition, August 1, 1986.

“Here’s a Dawkins quote,” Gio said.”

A true watchmaker has foresight: he designs his cogs and springs, and plans their interconnections, with a future purpose in his mind’s eye. Natural selection, the blind, unconscious, automatic process which Darwin discovered, and which we now know is the explanation for the existence and apparently purposeful form of all life, has no purpose in mind. It has no mind and no mind’s eye. It does not plan for the future. It has no vision, no foresight, no sight at all. If it can be said to play the role of watchmaker in nature, it is the *blind* watchmaker . . .

We have seen that living things are too improbable and too beautifully ‘designed’ to have come into existence by chance. How, then, did they come into existence? The answer, Darwin’s answer, is by gradual, step-by-step transformations from simple beginnings, from primordial entities sufficiently simple to have come into existence by chance. Each successive change in the gradual evolutionary process was simple enough, *relative to its predecessor*, to have arisen by chance. But the whole sequence of cumulative steps constitutes anything but a chance process, when you consider the complexity of the final end-product relative to the original starting point. The cumulative process is directed by nonrandom survival.¹⁷

“The ‘nonrandom survival’ part of the theory of evolution is very important,” Nick stressed. “Although evolutionary processes are not pulled toward any particular goal, the environment does ‘select’ those organisms that are best able to reproduce—or help their kin to reproduce. And the selection part is nonrandom.”

“Or, rather, you might say those least able to reproduce are ‘de-selected,’” Mia said.

“But,” Sam objected, “certainly whether or not a particular organism survives sometimes depends on chance—can’t some just get lucky?”

¹⁷Richard Dawkins, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe Without Design*, (quotes from chapters 1 and 3), New York: W. W. Norton & Company, 1986.

“Sure,” Mia replied, “chance does play a role in selection, but the odds are stacked against poorly fitting organisms surviving to reproduce. When Dawkins says that selection is nonrandom, I think he means that it’s more like flipping a heavily biased coin than flipping a fair coin.”

“Besides,” Nick said, “there are other arguments against intelligent design. Much in nature doesn’t appear to be that well designed. Take the eye, for example. The light-sensitive parts, the rods and cones of the retina, are underneath layers of other cells and also underneath neurons that do preliminary processing of the image before it’s transferred to the brain. Light has to travel through these layers, and through blood vessels too, before the rods and cones can sense it. That doesn’t sound like intelligent design to me. It sounds like evolutionary bricolage.”

“What’s bricolage?” Sam asked.

“It’s a French word that means cobbling together parts from whatever is at hand,” Mia answered.

“Next on the list of evidence,” Mia continued, “is the fact that the universe seems uniquely suitable for life to evolve. The idea is similar to intelligent design, but instead of the creator designing life forms he, or maybe she, designed the universe so that its physical constants were just right.”

“Another unscientific theory because it’s not falsifiable,” Nick volunteered.

“The idea goes like this,” Mia said. “Even if a creator wasn’t required to design living things, one must have designed the universe because it is so obviously and carefully configured to be hospitable for life. For example, the heavier elements necessary for life are formed inside stars, and they can only escape when the stars explode as supernovas, and supernovas only explode under very special conditions.”

“Here’s what the astrophysicist Paul Davies says,” Gio offered.

if the [weak nuclear force] were much weaker, the neutrinos would not be able to exert enough pressure on the outer envelope of the star to cause the supernova explosion. On the other hand, if it were much stronger, the neutrinos would be

trapped inside the core, and rendered impotent.¹⁸

“Others have pointed out similar apparent ‘fine tunings’ of the physical constants,” Mia continued. “Hugh Ross, the President of the ‘Reasons to Believe’ society, mentions the importance of the exact values of the strong nuclear force, the gravitational force, the electromagnetic force, the ratio of electron to proton mass, the expansion rate of the universe, and other constants.¹⁹ And John D. Barrow and Frank J. Tipler acknowledge that ‘most perturbations of the fundamental constants of Nature away from their actual numerical values lead to model worlds that are still-born, unable to generate observers and become cognizable. Usually, they allow neither nuclei, atoms nor stars to exist’.”²⁰

“Sounds pretty convincing,” Sam said.

“Well,” Mia said, “Barrow and Tipler, among others, explain away this argument with various versions of something they call the *anthropic principle*. Simply put, if the universe didn’t have the properties it obviously does have, then we would not exist to observe them, whatever they might have been. It shouldn’t surprise us that our universe has features compatible with our existence, because, after all, we *do* exist.”

“That sounds a bit circular,” Sam complained.

“Look at it this way,” Nick suggested. “Even if all of the physical constants got their values randomly, by a throw of the dice as it were, they would have had to end up with *some* values. The characteristics of the resulting universe would be those governed by these values. As it happens, the universe, or at least our part of the universe, turned out to have properties that allowed us to evolve to observe them—and to design robots. Lucky us! If the universe didn’t have those properties, there would be no argument because there would be no us.”

“That sounds a little like your example of getting a particular hand in poker,” Sam said. “One has to get some hand.”

¹⁸Paul C. W. Davies, *The Accidental Universe*, p. 68, London: Cambridge University Press, 1982.

¹⁹Taken from the web site: http://www.reasons.org/resources/apologetics/design_evidences/200412_fine_tuning_for_life_in_the_universe.shtml.

²⁰John D. Barrow, and Frank J. Tipler, *The Anthropic Cosmological Principle*, p. 20, London: Oxford University Press, 1986.

“Right,” Nick and Mia agreed.

“But evolution and the anthropic principle don’t prove there *isn’t* a creator,” objected Sam.

“Ok,” Nick said. “But remember, we never *prove* anything, we can only cite evidence for and against various beliefs. Before adopting a belief, I think it’s important to hear and evaluate all sides. The evidence for evolution, at least, seems compelling. And, anyway, belief in a creator carries with it, I think, the necessity to complete the theory with some corollary questions—like whence and whither the creator?”

“But something must have caused the universe to exist,” Sam said, “regardless of what physical constants it ended up with.”

“That brings us to the next item on the list,” Mia said, why is there something instead of nothing?”

“I think our need to talk about *causes* arises because postulating causes is useful in our everyday reasoning,” Nick said. “That’s built in to human psychology. The process of inventing backward links in a causal chain breaks down, though, when we try to reason about the beginning of the universe. So humans talk about a ‘prime mover’—basically an uncaused cause.”

“So *that’s* God?” guessed Sam, “an uncaused cause? You mean we get to stop inventing causes with him?”

“That’s where some people stop,” Nick replied. “But if we get to stop somewhere—as apparently we must—why not stop one step earlier and just assume the universe itself has no cause? Maybe it just sprang into existence all on its own. That seems more parsimonious to me.”

“Why do you say that apparently we must stop somewhere in this chain of cause and effect?” Sam asked. “Just like ‘it’s turtles all the way down,’ isn’t it possible that the universe had no beginning—that it has always existed?”

“I suppose so,” Nick replied. “It’s difficult for us to think about things with no beginning, but, you are right—our mental insufficiencies shouldn’t be used as evidence for or against any cosmological theories. I’m content to leave the question ‘why is there something instead of nothing?’ unanswered.”

“The last item on our list involves mystical experiences and visions,” Mia said. “Some people have had visions and profound feelings of awe and transcendence that convince them of the reality of some ultimate and universal power that they equate with God.”

“I explain that away by saying something strange is going on in their brains,” Nick offered.

“So, do you think mystical or religious experiences are illusions?” Sam asked. “They are just tricks our brains play on us?”

“That is certainly one explanation for them,” Nick replied. “It sounds plausible to me. As evidence that the brain can play tricks, several people report having had religious experiences while under the influence of psychedelic drugs.”

“But they report that drugs have helped them discover deep truths,” Gio said. “For example, here’s what author Daniel Pinchbeck writes about what happened to him after smoking a powerful drug called DMT.”

There was, in that place, rushing toward me, an overwhelming force of knowledge and sentience. I knew it was impossible that my mind, on any level, had created what I was seeing. This was no mental projection. . . . It was a nonhuman reality existing at a deeper level than the physical world. [Beings in this universe said over and over] ‘This is it. Now you know. This is it. Now you know.’²¹

“Sounds to me like the drug stimulated illusions and made the ‘truth bell’ ring loudly,” Nick said. “That would make the illusion seem real.”

“Richard Dawkins thinks that visions of angels are simulations manufactured in the brain,” Gio said. “Here’s how he puts it.”

Throughout history, people have seen visions of angels, saints and gods; and these have seemed very real to them. Well, of course they *would* seem real. They are models, put together by

²¹Quotation from a review in the *New York Times* Book Review Section, Sunday, Nov. 10, 2002, p. 26 by Gary Kamiya of a review of *Breaking Open the Head: A Psychedelic Journey Into the Heart of Contemporary Shamanism*, by Daniel Pinchbeck, New York: Broadway Books, 2002.

the normal simulation software. The simulation software is using the same modelling techniques as it uses ordinarily when it presents its continuously updated edition of reality. No wonder these visions have been so influential. No wonder they have changed people's lives. So if ever we hear a story that somebody has seen a vision, been visited by an archangel, or heard voices in the head, we should immediately be suspicious of taking it at face value. Remember that all our heads contain powerful and ultra-realistic simulation software. Our simulation software could knock up a ghost or a dragon or a saintly virgin in no time flat. It would be child's play for software of that sophistication.²²

"The model-building, simulation software gets disengaged from reality for some people," Mia speculated. "When it goes into 'free-wheeling' mode, people experience illusions."

The human mind evolved to believe in the gods. It did not evolve to believe in biology. —Edward O. Wilson, *Biologist*²³

"Ok, so all of these beliefs are unscientific," Sam said. "Immortality, intelligent design, God as an uncaused cause, and visions of angels. And, according to you guys, evidence for them can all be explained away. Does that mean one shouldn't believe them?"

"Not necessarily," Nick replied. "But there is no reason, other than blind faith, to prefer them to the alternative scientific beliefs. Pretending that intelligent design, for example, is a viable scientific belief just gives people the wrong idea of what science is all about."

"Are there any religious beliefs that you would call scientific then?" Sam asked.

"Sure," Nick replied, "any that make claims about reality that can be tested."

²²Richard Dawkins, *Unweaving the Rainbow: Science, Delusion, and the Appetite for Wonder*, p. 282, Boston: Houghton Mifflin, 1998.

²³Edward O. Wilson, *Consilience: The Unity of Knowledge*, p. 262, New York: Alfred A. Knopf, 1998.

“For example?” Sam persisted.

“Different religions have different beliefs,” Nick said. “Some fundamentalist sects believe that the Judeo-Christian bible contains accurate accounts of creation and of the early history of people on earth. For example, there are the beliefs that the earth is only 6,000 years old, that the sun once ‘stood still,’ and that the waters of the Red Sea parted to aid the Israelites in their escape from Egypt. One religion claims that descendants of the ‘ten lost tribes’ of Israel made their way to the western hemisphere around 600 B.C.E. And some religious people believe that praying for others, even without their knowledge, helps to heal their afflictions. These kinds of beliefs should, in my opinion, be matters open to scientific investigation, scientific standards of evidence, and criticism.”

“I have a quote about science and religion from John Searle,” Gio said.

For us, if it should turn out that God exists, that would have to be a fact of nature like any other. To the four basic forces in the universe—gravity, electromagnetism, weak and strong nuclear forces—we would add a fifth, the divine force. Or more likely, we would see the other forces as forms of the divine force. But it would still be all physics, albeit divine physics. If the supernatural existed, it too would have to be natural.²⁴

“Only if we could think up any tests for the ‘divine force’,” Nick said.

“So science and religion might conflict over those beliefs,” Sam speculated.

“Yes,” Nick agreed, “but if religious people make claims that scientists think can be tested, then they enter the ever-combative scientific arena. They should expect conflict, just like scientists expect conflict over their ideas.”

“Scientists acknowledge that theories should be open to criticism,” Mia said, “but many religious leaders don’t invite criticism of their beliefs.”

“Here’s an example of resistance to criticism,” Gio said.

²⁴John R. Searle, *Mind, Language, and Society: Philosophy in the Real World*, p. 35, New York: Basic Books, 1998.

In one of his sharpest rebukes to liberal Catholics to date, Pope John Paul II today made changes in canon law aimed at stamping out debate on a wide range of passionately discussed issues, including euthanasia and the ordination of women. . . . Reasserting the articles of faith that are ‘definitive’ and binding to all Catholics, the Pope today inscribed those teachings into church law, and warned that those who dissent would be subject to ‘just punishment’.²⁵

“But the Pope was talking there about the cultural aspect of religion,” Nick said, “not the scientific aspect. If you want to belong to the ‘Catholic club’, you should either accept its rules of membership, quit the club, or work for change. Working for change, of course, involves criticism, and popes don’t encourage criticism.”

“Of course Catholics aren’t alone in this resistance to criticism,” Mia elaborated. “Few religions encourage criticism of their basic dogma.”

“When people call for a rapprochement between science and religion,” Nick said, “one should ask which aspect they are talking about. If it’s the cultural aspect, no problem—although science may be interested in studying cultures, it doesn’t pretend to give advice about which one to follow. However, if it’s the ‘model-of-reality’ aspect, then I, at least, would insist on the primacy of the scientific method, including the search for evidence, open debate, and criticism.”

“There are so many different religious beliefs,” observed Sam. “Wouldn’t the inconsistencies among them cast doubt on all of them?”

“I suppose that’s one reason some people give up on the theological teachings,” Nick said. “But, people are ever so creative about digging themselves out of contradictions. Consider the Bahá’í faith, for example. Believers in Bahá’í say that inconsistencies among different religions arose from God’s decision to send ‘different messages to suit different people’.”

“God must have had to compose many different messages,” Nick continued, “because there are so many different religions, each with many variants. Christianity, Buddhism, Judaism, Hinduism, Islam, and the others have spawned several branches—many of them quite hostile to each

²⁵ *The New York Times*, p. 1, July 1, 1998.

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other. In Christianity, for example, there is Catholicism, Eastern Orthodox, Anglicanism, Mormonism, and many varieties of Protestantism. Branching occurs when a group becomes uncomfortable with the way their old religion is being practiced or with some of the interpretations of the teachings of its founder or with its sacred texts. Sometimes the new branch claims it's returning to the original teachings, which it thinks have been perverted, and sometimes the break-away group seeks greater freedom from overly strict customs and orthodoxy. Additionally, there are revivals of some older, primitive religions and some brand new ones. Add to those the variety of religions practiced by Native Americans and other indigenous peoples, and you have almost unlimited variety."

"I found a cartoon about that," Gio said.



"I'm afraid this is auf Wiedersehen, Padre. Estelle and I are setting up our own little religion."

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“It seems that as far as religion is concerned, things don’t move in the direction of consensus,” observed Sam.

“Yes,” Nick said, “it’s interesting to compare debates among scientists with debates among religious believers. Usually the processes of criticism, debate, and testing lead to a consensus in science. However, in religion criticism and debate usually lead to splintering and division into separate sects. Confrontation with reality through observation and experiment gradually forces a consensus in science. Many religious beliefs aren’t about reality at all—at least they aren’t about any reality that can be confronted. Therefore, there is no forcing tendency toward consensus—only the centripetal tendencies of human disagreement.”

“After hearing about all of this variety,” Sam said, “I guess religious belief simply has to be based on faith.”

“Faith has to do with believing things strongly even when there is little or no evidence,” Mia said.

“Here’s how a dictionary defines faith,” Gio said.

1. A confident belief in the truth, value, or trustworthiness of a person, idea, or thing.
2. Belief that does not rest on logical proof or material evidence.²⁶

“I think we are talking about the second definition here,” Mia said.

“Believing based solely on faith, and not even requiring evidence, is thought by some to be a virtue,” Nick said.

You believe because you can see me. Blessed are those who have not seen and yet believe. —Jesus of Nazareth²⁷

“But if people are advised to have faith, how do they decide what to have faith in?” Sam asked.

“Some people think that ‘inner feelings’ point the way,” Nick said. “They believe that intuition can be a source of ‘truth’. But I’d bet that if

²⁶*American Heritage Dictionary*, Boston: Houghton Mifflin Company, 1973.

²⁷From *The New Testament*, John, 20:29

you studied all the inner feelings people have had about things, they would have been wrong more often than right.”

“If I were a human, I wouldn’t know what to believe,” Gio announced. “Maybe I’d believe in God just to play it safe. If people could be rewarded with immortality simply for believing, what’s the harm in that? Sounds like there is everything to gain and not very much to lose.”

“That strategy is known as Pascal’s wager,” Nick mentioned. “Can you get us some information about it, Gio?”

“Here’s a quote from Blaise Pascal,” Gio said.

If you disbelieve in God, you have no eternal life—you yourselves say there is none. But if you believe, you have at least one chance out of two; for if there is no God, you are where you were before; and if there is, you have won salvation.²⁸

“The on-line *Stanford Encyclopedia of Philosophy* analyzes this idea,” Gio continued. “Here are some excerpts.”²⁹

We find in [Pascal’s wager] the extraordinary confluence of several strands in intellectual thought: the justification of theism; probability theory and decision theory, used here for almost the first time in history; pragmatism; voluntarism (the thesis that belief is a matter of the will); and the use of the concept of infinity. . . .

Let us now gather together all of these [previously mentioned] points into a single argument. We can think of Pascal’s Wager as having three premises: the first concerns the decision matrix of rewards, the second concerns the probability that you should give to God’s existence, and the third is a maxim about rational decision-making. Specifically:

²⁸Quoted in Jacques Barzun, *From Dawn to Decadence: 500 Years of Western Cultural Life*, p. 220, New York: HarperCollins Publishers, 2000.

²⁹Alan Hájek, “Pascal’s Wager”, *The Stanford Encyclopedia of Philosophy* (Spring 2004 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/spr2004/entries/pascal-wager/>.

1. Either God exists or God does not exist, and you can either wager for God or wager against God. The utilities of the relevant possible outcomes are as follows, where f_1 , f_2 , and f_3 are numbers whose values are not specified beyond the requirement that they be finite:

	God exists	God does not exist
Wager for God	∞	f_1
Wager against God	f_2	f_3

2. The probability that you assign to God existing should be positive, and not infinitesimal.
3. Rationality requires you to perform the act of maximum expected utility (when there is one).
4. Conclusion 1. Rationality requires you to wager for God.

“But,” Mia said, “this way of putting the matter assumes that one’s choices are limited either to belief in a god, who would then, if he existed, dispense a reward of infinite value, or disbelief in him with finite, perhaps negative, rewards whether he existed or not. But there are many, many choices for beliefs, some of which might even entail infinitely negative rewards depending upon which belief, if any, is ‘true.’ Just setting up the matrix of possibilities influences the result.”

“I’m still trying to guess what you and Mia believe, Nick,” Sam said. “Are you atheists then?”

“As I understand the word,” Nick replied, “an atheist is pretty sure there is no supreme being. I put close to zero credibility on the theological beliefs of all of the religions I know about. They all sound like ‘just so stories’ and are pretty dubious and improbable to me. Yet, I wouldn’t presume to speculate on how the universe came to be or what we might eventually discover about it. I simply don’t know, and I don’t think anyone else does either—presuming questions like that make any sense at all.”

When we call the power back of all ‘God’ it smells of creeds and systems of superstitions, intolerance, persecution; but when we call it Nature, it smells of spring and summer, of green fields and blossoming groves, of birds and flowers and sky and stars. I admit that it smells of tornadoes and earthquakes, of jungle and wildernesses, of disease and death, too, but these things make it all the more real to us.³⁰

“Me too,” Mia agreed, “but I wouldn’t try to talk anyone out of their religious beliefs.”

“I’m not so sure,” Nick countered. “I think many religious beliefs are actually harmful to society and to individuals and should be actively discouraged. Especially dangerous is the belief that one ‘knows’ God’s will or that one is acting as God’s ‘agent’.”

“Well, you’ve given me a lot to think about,” Sam said as the evening got late. “It’s all been very interesting, and I’m not sure I’ve digested it all or even agree with it all.”

“Everyone should come to his or her own conclusions,” Nick said. “But remember, ‘belief fitness’ is just as important as body fitness. We hope these discussions have helped—whatever you decide to believe. To remember us by, maybe you’d like to have this short article Mia and I wrote that summarizes what we’ve been talking about.”

“Ok, I’ll try to get around to reading it,” Sam said. “Now I have to go pack up and get ready to head back to school.”

“Anytime you’d like to talk some more let us know,” Mia said. “You can e-mail us. Good luck next term!”

[The next chapter is the article that Nick and Mia gave Sam.]

³⁰Charlotte Z. Walker, (ed.), *Sharp Eyes: John Burroughs and American Nature Writing*, “Accepting the Universe,” pp. 33-34, Syracuse, NY: Syracuse University Press, 2000.