

A House of Many Mansions: How Science Makes Room for Religion

Clay Farris Naff

Abstract

Science and religion are often regarded as being in conflict over their descriptions of reality. Attempts at reconciliation have not been wholly successful, in part because the scientific narrative attributes crucial features of the Universe to random processes, while religions tend to ascribe the same features to God's will. This paper proposes a way out of the conflict based on scientific discoveries and principles. Specifically, it will defend the following claims:

- > Einsteinian relativity demonstrates that, for any two or more observers, material reality differs. The laws of physics may be the same everywhere, but locally available information varies. This, along with developments in quantum cosmology, suggests limits on scientific data and on the universality of religious claims.
- > For rational justification, science depends on the metaphysical reality of certain fundamentals of logic, including mathematical reasoning. However, based on a longstanding physicalist definition of reality, there are rational grounds for accepting other metaphysical entities, including at a minimum, God.
- > Our best knowledge suggests that reality is *multiaxial* in nature. What this means is that, at a minimum, many metaphysical axes intersect with the natural world through the agency of human minds.

The paper will show how this characterization of reality as multiaxial can harmonize many religious worldviews with science, and with each other.

Biography

Clay Farris Naff is an award-winning journalist, community activist, and author. His first book, the 1994 nonfiction title "About Face: How I Stumbled onto Japan's Social Revolution", brought him a National Endowment for the Humanities fellowship. His most recent is a book on gene therapy, due out from Greenhaven Press in Fall 2004.

As a writer, radio commentator and national speaker, Naff focuses on science and religion issues. He directs the nonprofit Center for the Advancement of Rational Solutions (CARS), which seeks to promote rational reconciliation of the world's many religions with science and with each other. A self-styled "hopeful agnostic," Naff reaches out to people of any or no religious faith with equal respect for their dignity, hopes and aspirations. He has engaged audiences from New York to Honolulu.

His wide international experience includes years of living in predominately Muslim and Buddhist countries. In the early '90s, while a Tokyo-based correspondent for United Press International and National Public Radio, Naff reported on tumultuous changes in Japan. After returning to the U.S., he held several university posts while writing a book

on the social upheavals in Japan. Kodansha International published his book About Face in 1994 to favorable reviews in the Washington Post, the Wall Street Journal, Fortune Magazine, and other major publications.

Long concerned about issues of religion, science and their roles in civilization, Naff followed up a 1995 summer stint at Harvard University with an enduring collaboration among scientists, philosophers, theologians and ordinary people aimed at devising a sound basis for reconciling various religious worldviews with emerging science. The events of 9/11 prompted a full-time commitment to this endeavor with CARS.

A magna cum laude graduate of the University of Pennsylvania, Naff now lives in Lincoln, Nebraska, where he serves as executive director of CARS and as on-air editorialist for community public radio station KZUM.

" It is forbidden to decry other sects; the true believer gives honour to whatever in them is worthy of honour."

-- Asoka, King of India, 3rd century B.C.E.

Tolerance of differing worldviews seems to have withered since that benevolent convert to Buddhism, King Asoka, laid down his edict. Even by modern standards of intolerance, though, we live in an extraordinary moment. Not since the 1930s has ideological virulence loomed so large. Then, fascism and communism were attracting the true believers. Today, little more than a decade after some thought liberal democracy had triumphed, politics no longer inspires. Religion, as the noted scholar Philip Jenkins observes, is rapidly replacing political ideology "as the prime animating and destructive force in human affairs."¹ Regretably, fanatical forms of belief are leading the way, especially in Christianity and Islam. The fastest growing varieties of each are the most aggressive, authoritarian and intolerant. Like the 20th century fascists and communists, each perceives two enemies: liberalism and the other.

Remembering that the zealotry of the 1930s ended in the deaths of at least 100 million people, secularists like myself and the moderate religious majority have an obligation to join in a peaceful defense of civilization. This paper represents an attempt to lay an intellectual foundation for such a project.

Science and philosophy, the straw for my bricks, will strike some as ridiculously flimsy defenses against a dark tide of emotion. That may prove true, but we cannot build a seawall on sand. So long as any of us believes in our hearts that, ultimately, only one view of reality can be correct, we have no foundation to build on.

The Lowdown on Tolerance

Here's the dilemma implied by an absolutist view: the more confident we become in our understanding of the world, the less justification we seem to have for tolerance of differing worldviews. The question of human origins provides an example: science has established beyond reasonable doubt that we share common ancestors with chimpanzees, gorillas, and other apes. For that matter, genome analysis shows a considerable genetic overlap between humans and bananas.

Such claims violate the religious sensibilities of scriptural literalists. They are unsatisfied with a revised theological story line in which God picks out two hominids, declares them to be Adam and Eve, and invests them with human souls. I understand why many people reject such *ad hoc* palliatives. Yet I am even more uncomfortable with a sort of New Age tolerance that proclaims, "Hey, reality is whatever you want it to be."

If that were true, we'd all be rich, thin, and good-looking. Letting such false beliefs go unchallenged simply to avoid conflict would be condescending or worse. Still, if everyone feels a duty to remake the world in the image of his or her worldview, we are doomed to cataclysmic strife.

I may have a contribution to make toward a theory of worldview tolerance. In the crucible of the science-religion dialogue, I discovered what I take to be the *multiaxial* nature of reality.* And while this epiphany has not led to any religious beliefs, it does perhaps create an architecture for reconciling many religious and secular worldviews on rational grounds.

* I do not flatter myself that these are truly original discoveries. No doubt scientists and philosophers have mapped this territory, though I have yet to come across their accounts. At an unlikely best, I may have successfully synthesized the thinking of my betters.

Multiaxial reality amounts to a set of Big Claims. Let me specify them:

Claim 1: Science demonstrates that, for any two or more observers, material reality differs. The laws of physics may be the same everywhere, but locally available information varies. This, along with quantum physics, suggests limits on scientific data *and* on the universality of certain religious claims.

Claim 2: For rational justification, science depends on the metaphysical reality of fundamentals of logic, including mathematical reasoning. Once this is accepted, it becomes apparent that there are rational grounds for accepting other metaphysical entities, including at a minimum, God.**

Claim 3: Our best knowledge suggests that reality is *multiaxial* in nature. That is, through the agency of human minds various metaphysical axes intersect with the natural world. The interactions of the metaphysical and the physical are constrained by the laws of logic and nature.

Dallying With Time

The first of these claims may not appear very bold. After all, it's been nearly a century since Einstein introduced the physics of relativity to the world. The basic implications of his theory have been so well confirmed and digested that even a scribbler like myself can readily embrace the idea that if you accelerate relative to me, I'll perceive your clock to run slower and your yardstick to shrink. What's more, there are plenty of commonplace reasons for believing that perspectives differ, even without resort

** To avoid seeming coy or contradictory, let me hasten to say that by "God" I mean here the concept of God or gods, by whatever names believers may use.

to relativity. Your experience of the color green may be quite different from mine. However, the claim I'm making goes a bit farther. Based on a conventional understanding of relativity, I'm arguing that science demonstrates that some events that occur in your world can never, even in principle, be known in mine, and vice versa.

Light Cones

Physicists describe causally linked events as taking place within light cones. Lee Smolin, in his wonderfully intriguing book *Three Roads to Quantum Gravity*, offers this description:

"Since nothing can travel faster than light, the paths of light rays leaving the event define the outer limits of the causal future of an event. They form what we call the future light cone of an event. We call it a cone because, if we draw the picture so that space has only two dimensions ... it looks like a cone.²"

It's a useful depiction, especially since it also serves to capture the events in the past that influenced a particular event. Still, I find it easier and more esthetically pleasing to picture an event – say, the announcement on CNN of the Supreme Court's decision in *Bush v. Gore* – as creating a light bubble. The bubble swells at the speed of light, a mindflipping 700 million miles an hour. Since the earth's radius is about 4,000 miles, the whole planet is engulfed in news within fractions of a second. Of course, satellite relay and signal-processing add to the delay. That is why reporters in Iraq stare dumbly into the camera for several seconds after the East Coast anchor asks a question.

Mind the Gap

Such delays might seem like mere annoyance, but in a universe as big as ours, the speed limit has palpable consequences. Who can say that light cones won't be relevant to humanity in the future? Even now, in a trivial sense, people do not share entirely the same reality. At this moment, there is information streaking across the universe that will reach China first and arrive too late to be part of the world experienced by a dying man in Boston.

If plans to send humans to Mars come to fruition, we won't be able to overlook the gap. At its maximum distance from Earth, Mars is about two-and-a-half times as far away as the Sun. It takes light from the Sun a good eight minutes to reach us. The poor slob on Mars will experience delays of up to 20 minutes before a signal from Earth reaches them.

To any residents of Proxima Centauri, George W. Bush is not, at this writing, the president of the United States. It's not just that they don't know it. In an important sense, for our nearest stellar neighbors, 4.2 light years away, the 2000 U.S. election hasn't happened.

Scale up a bit, add in the accelerating expansion of the universe, and you have events taking place in various regions that will *never* be within the light cones of various other regions. As Smolin observes, "the birth of the worst poet in the universe, on a planet in a galaxy thirty billion light years from us is, fortunately, outside both our future and past light cones."³

There is no universal calendar of events. The present happens only where you happen to be. The farther from you an object stands, the deeper it lies in the past. This has interesting implications for the future of our science *and* religion.

Disjointed Reality

For any observer no physical event becomes real unless and until the light bubble it generates grows large enough to encompass her. Ever since Dr. Johnson refuted Bishop Berkeley's solipsism by kicking a rock, *causal connection* has been the most basic criterion for reality. As physicist Victor Stenger, paraphrasing Johnson, says: "I define something as real when it kicks back after you kick it."⁴

Since no two observers can occupy the same space at the same time, the set of real events accessible to any two observers differs. The realization has at least two ramifications. First, no one can justly claim to be in possession of all the facts for all of humanity. This will become increasingly true in the future if we extend our presence not just to Mars but to the galaxy and beyond. Furthermore, since the universe seems bent on expanding forever, an eternity would not suffice to amass all the facts. However, we don't have to await interstellar travel to adopt the lesson: Material reality alone justifies a modicum of humility. There is so much we cannot know. By the same token, of course, there is a great deal we *can* know, by subsuming whole classes of facts under scientific theories. We don't have to examine every brain to know, more or less, how each one works. And, at the same time, we must bear in mind that every biography is unique. Hence a *modicum* of humility.

Second, our best available science tells us that omniscience by physical means is an impossibility, not just for humanity but for any conceivable physical observer. The Universe itself cannot know everything about itself. Therefore, claims of an omniscient deity can only be justified, if at all, in metaphysical terms. Of course, few if any religions propose a physical deity. Still, a resort to the metaphysical alone does not solve all our difficulties.

To be rational, an account must at minimum provide a coherent explanation of how supernatural powers can interact with the material world. To traduce physical limits by supernatural power would seem to be textbook case of incoherence.⁵ Physicists have had a lot of fun pointing out the contradictions that occur in popular entertainment when writers try to mix the natural with the supernatural. Ghosts who float through walls ought not be able to pick up an object. And when Harry Potter puts on an invisibility cloak and the light passes around him, then he ought to see nothing. Of course, there's an easy response: "Lighten up, buddy, it's magic!" Okay, fine, but this puts us beyond the pale of rationality. If we are to stick with a rational scheme for describing reality, we will have to find a way to make metaphysical action in the material world conform to the laws of nature and logic.

Indispensable Metaphysics

Thus endeth the physics lesson. Does it leave the hope of reconciling religion and science high and dry? I think not. We need not dispense with metaphysics altogether. Quite the contrary: if we want to justify the claims of science, we must *accept* that certain fundamentals of logic are timelessly, immaterially, metaphysically real.

Science depends on logic (including mathematical reasoning) for both investigative methods and interpretation of its findings. Without the ability to *explain* in rational terms the data nature provides, a scientist is just another shaman. So the question becomes, is rationality itself real in some sense, or is it just a language created by our big brains to represent patterns we observe and patterns we imagine? The issue is highly controversial, but I believe we are entitled to provisionally accept a platonic view. By the pricking of our brains, something real this way comes.

Platonic Numbers

In science, math provides the logical linchpin of rational explanation. No one in their right mind would believe in relativity or quantum physics if they could not be presented as a mathematical models whose precise predictions could then be tested by exquisite experiment. Darwin's great theory would be incomplete without the mathematical formulations of heredity and population genetics. But the utility of math is itself an enigma. Einstein famously remarked, "The eternal mystery of the world is its comprehensibility."

Many mathematicians go a step farther. They claim that, like scientists, they are in the discovery business. In a 1940 "apology" for his profession, Cambridge University mathematician G.H. Hardy says, "I believe that mathematical reality lies outside us, that our function is to discover or observe it 317 is a prime, not because we think so, or because our minds are shaped in one way rather than another, but *because it is so*, because mathematical reality is built that way."⁶

Despite the hammer blows of constructivist critics, that view persists. The 1982 Fields Medal winner Alain Connes, in a purely mathematical exploration, discovered that noncommutative algebra provides "new tools to investigate the nature of space time at small distances."⁷ Most astonishingly, it seems to allow scientists to describe some properties of the otherwise inscrutable world inside a black hole's event horizon. Having provided this new instance of the "unreasonable effectiveness" of math, it comes as no surprise that Connes is among those mathematicians who believe they are explorers, not inventors. In a fascinating book-length discourse on the nature of math, Connes stakes out his position:

I hold on the one hand that there exists, independently of the human mind, a raw and immutable mathematical reality; and, on the other hand, that as human beings we have access to it only by means of our brain – at the price, in Valéry's memorable phrase, of "a rare mixture of concentration and desire."⁸

That is precisely the position I defend, except that I would make explicit that if math is real then so is logic. The two are as inseparable as electricity and magnetism. However, I must again note that such platonic claims are hotly denied by many scientists, philosophers, and even some mathematicians. The quasi-empiricists, antifoundationalists, and social constructivists include names as eminent as those on the platonic side. More important, they marshal powerful arguments. Gregory Chaitin has extended Kurt Gödel's incompleteness program, demonstrating that if there is a platonic foundation for math, it is riddled with recursive holes. Evolutionists have argued that mathematics is simply an extension of the modeling equipment nature provides us.

Pragmatism with a Small "P"

Maybe they are right. Still, lower-case pragmatism tells me that, faced with this presently undecidable question, we should accept (on faith, if you like) that mathematics exists on an independent, unchanging, and (mostly) rational foundation.⁹ This foundation necessarily includes the logical axioms that allow rational relations among numbers to develop.

Why, you may ask, *must* we accept these? Don't plenty of scientists go about their business without such otherworldly beliefs? Sure. But, in philosophical terms at least, they and the entire scientific enterprise are vulnerable to devastating attacks. If we take the view that math has no independent existence, that it is just another language that allows us to represent the world, then we cannot refute the charge that science is merely a branch of rhetoric.

In short, unless it can show itself to be self-validating, scientific reasoning itself is impaired. Already, science's flanks have come under attack from the Skeptical left and the Idealist right. Philosopher Richard Rorty, a leading exponent of the academic postmodernism of the left, considers science no more than a powerful form of rhetoric. With a dismissive wave of the hand, he writes, "We are the heirs of three hundred years of rhetoric about the importance of distinguishing sharply between science and religion, science and politics, science and art, science and philosophy, and so on."¹⁰ In Rorty's view, the *object* of science's investigations – an objective, knowable reality, amounts to no more than a mirage:

Truth neither comes nor goes. That is not because it is an entity that enjoys an atemporal existence, but because it is not an entity at all.¹¹

On the right, Philip Johnson, the, ahem, godfather of the Intelligent Design movement, is equally down on the claims of science. He believes that the findings of science are no more than scientists' anticlerical dogmas cloaked in a phony objectivity. "Naturalism is their vehicle to replace the religious clergy with the scientific and intellectual professionals," Johnson tells a sympathetic interviewer, "the priesthood being the people who tell a society its creation story."¹²

These are hardly marginal views. We know that the human mind is able to generate an enormous range of explanations for phenomena in our lives, most of which have little to do with reason or science. The National Science Foundation's annual survey of public attitudes finds that some 70 percent Americans know little about science's methods or discoveries. It concludes: "In 2001, less than 15 percent thought that they were well informed about [science and technology.] ...Belief in pseudoscience is relatively widespread and growing."¹³

Clearly, in both academic and popular circles, science badly needs to re-establish its legitimacy. It's not enough to assert that there seems to be an objective natural world out there. Science must also assert that it can grasp certain metaphysical truths of rationalism and employ them to reliably discover and explain the natural world.

Put simply, if " $a = a$ " constitutes a political position rather than a logical truth, then all is lost. But surely that's not the case. The logical principle of identity exists, eternally, independently, and invariantly. Of course, this claim cannot be proven, but it can be accepted. Moreover, it can be accepted *even if material reality seems at times to subvert it*. In the weird world of quantum physics, for example, a does not always equal a . Thanks to superposition, "to be or not to be" is a question that troubles a not at all. It

can simultaneously be and not be. Yet, metaphysically, the logical truth remains unaltered.

Clearly, then, we have pragmatic reasons to accept that logic, including mathematics, exists, and that it exists in a metaphysical realm, free from quantum botheration. There is no shame in doing so. Nor is there any threat to naturalism. Aside from shoring up science, this stance offers a cornucopia of other benefits. Not least among these is a metaphysical space in which religions can flourish.

Dabbling in Metaphysics

If we accept that foundational concepts of logic and math have a metaphysical reality, this naturally raises the question of whether other concepts might also be metaphysically real. If so, how could we tell? I admit I'm practicing philosophy without a license here, but since even that great standard work in the field, *The Encyclopedia of Philosophy*, assures us that "almost everything in metaphysics is controversial," I feel justified in pushing ahead with a common-sense attempt at resolution.¹⁴

For starters, if metaphysical concepts are real, they are not all *equally* real. Pegasus, the flying horse of Greek mythology, surely lacks the robust, unchangeable reality of mathematical logic. Imagine that a couple of centuries from now, all land mammals, including humans, are wiped out by a collision with a stray comet (hey, this kind of thing has happened before!). Then, let's suppose that after a hundred million years, a new civilizational species arises – perhaps from descendants of the octopus. These "octomen" and "octowomen," if they develop any math at all, are likely to *discover*

eventually that one is greater than zero¹⁵, but the chances that they will reinvent the concept of Pegasus are vanishingly small.

Of course, a skeptic might retort that the environments shared by humans and octomans make numeracy practically a forced move, but leave Pegasus entirely contingent (on there being horse-concepts, for one thing!). I agree. Indeed, research shows that the environment instills (via evolution) some numeracy in various creatures besides us. Even so, we can't attribute to the environment our idea that there is no highest number or that multiplying two negative numbers produces a positive. The environment offers no such guidance. (If I multiply your credit card debt by my credit card debt, do we both get rich quick? Unfortunately, no.) Yet, such mathematical truths appear to be as robust as "one."

Perhaps this distinction between math and Pegasus can help us to discover "real" metaphysical objects. Remember Vic Stenger's definition of reality?¹⁶ If something kicks back when you kick it, then it's real. A pragmatic view if ever there was one. Stenger did much of his research at the highly successful Kamiokande detector in Japan, chasing after tiny particles called neutrinos. Interestingly, he has never seen, touched or tasted a neutrino. Stenger and his colleagues have only been able to detect small flashes of light emitted when one of a vast number of passing neutrinos occasionally interacted with a water molecule in Kamiokande's underground tanks. Yet, just because we have to infer the neutrino's existence doesn't mean that we deny it. On the contrary, we accept that neutrinos are real because we can perceive their effects.

Perhaps, then, an entity's metaphysical *reality* can be measured in a similar way. We kick metaphysical concepts around in our neuronal nets, and now and then some of

them show more than a bit of flash. They kick back. That is, they affect the world by *causing* behavior. Perhaps, in such instances, we shouldn't mistake the flashes for the things themselves.

God at the Meta-nexus

Thanks to the rugged independence of numbers and their logical relations, math works in the real world. It does so consistently regardless of culture, power, or medium. It works on chalkboards. It works computers. It even works, as we learned from the film *A Beautiful Mind*, in the midst of profound delusion. All this amounts to pretty good evidence, I think, against the identity of brain-states and numbers. Many brain states *represent* one, but no particular brain state *is* one. And when we put one and one together, we begin to perform logical operations that have measurable effects in the world. Thus, we infer that math is real.

So too does God exist. One clear fact about the Almighty is that, by whatever name or names, he exists as a powerful concept in the minds of a great many people. It must be conceded that God lacks the consistency of math. Still, through believers, we can certainly detect his effects in the world. In this sense, at least, we may declare God to be manifest at the nexus of the metaphysical world and the human mind.

To say that God acts as a powerful idea through the agency of people should raise no objections from scientific materialists, especially those who accept the idea of the meme.¹⁷ Neither, I hope, will it bring objections from religionists if they understand that I am presenting only *the least* that God may be. It remains to illumine the various splendors and mysteries above that minimum.

Many Worlds

By now, you may be wondering just how these metaphysical entities square with the laws of nature, especially if you are familiar with the arguments against dualism. In particular, how can we avoid violating the conservation of energy principle in describing interactions of the metaphysical with the physical? Let's return to Plato. He might tell us that human brains don't contain the metaphysical entity, they capture shadows of it. To put this in modern terms, brains form representations of the metaphysical, paid for by expenditures of brain power. It takes energy to form a representation, and additional energy to store it in memory. Sometimes, as when I learn about relativity, other brains pay a much heavier toll in advance, and mine gets off easy. But, as Connes made clear, there's no reason to believe that any physical laws are violated in the process.

So it comes down to this. If brain-math is a representation of a true and real entity called mathematics, does the God-concept represent a real and true entity called God?

The whole point of multi-axial reality is that there is no single, correct answer. I hope I've shown that as a simple metaphysical proposition, "God exists" is irrefutable. The character and consequence of that proposition depend on what metaphysical axis of reality the speaker occupies. For the Pope, there is one answer, for the Grand Ayatollah another, and for Dalai Lama a third. Science shows that there is no singularly correct account of physical reality. Similarly, our ability to represent a metaphysical reality in our heads suggests that many metaphysical axes – at least as many as there are human beings – run through the natural world. Since reality differs for each observer, no one

axis can be definitive. Along some lies a world in which God is infinitely powerful and perfect; along others he does not exist at all.

House Rules

This does not mean that anything goes. The laws of nature and logic constitute house rules for the natural and the metaphysical worlds respectively. This is not a radical proposition. Most theologians accept the idea that God can only do what is *logically* possible. That God submits to the law of noncontradiction, for example, has been widely accepted in theology since at least the time of St. Thomas Aquinas.

Under the house rules I am proposing, we accept that the contents of our minds can never be truly identical. Inside our phenomenological chambers, each of us can, to the extent our minds permit, believe in anything or nothing. Fortunately, however, we also share a vast common room which we call the natural world.

Science and Theology in Harmony

Under this scheme, myriad theologies and worldviews may be able to peacefully coexist with science and with each other. The right of everyone to believe whatever they want, however they want, about their private worlds is guaranteed. All the same, I argue that to settle our difference over the nature of the common room, rationality (which is to say, in large measure, science) is the highest good to which we can appeal. To be rational is simply to give primacy to reason and evidence. This has often been seen as fatal to faith. A multiaxial perspective changes that. It allows rationality – the best means we

have of discovering the natural world and of settling differences across ideological lines – to be in harmony with religious faith.

Let me demonstrate this with a familiar hard case. As I noted earlier, it is extraordinarily difficult to reconcile a literal reading of the Genesis story with a scientific worldview. Biological evolution seems to many believers to be a complete repudiation of their faith. Hence, promoters of "creation science" expend a great deal of energy recycling spurious attacks on evolution. Their obsessional attacks on evolution mask far greater difficulties facing biblical literalists. Since Darwin, scientific knowledge of the natural world has marched in seven-league boots.

Consider the challenges an honest program of "creation science" would have in establishing just one biblical claim: the age of Universe. When the Bible was written, some 2,000 stars were visible. Now, with the Big Bang firmly established and billions of *galaxies* documented, can anyone conclude that they were all packed tightly together just 6,000 years ago? What's more, the Hubble Space Telescope peers back billions of years in time and *shows* us primitive stars, deficient in heavy elements, as well as the cradle of stars to come. With continental drift measured at an inch or so per year, can anyone argue that Africa and South America split up just 6,000 years ago? At a whopping two inches per year, they would now be separated by less than a quarter of a mile. And with the enormous variety of human skin color, facial features, and body type, each adapted to a local environment, can anyone believe that we all descended from Adam and Eve to our present diversity in less than 200 generations?

The attempt to force nature to conform to the Bible is futile and tragic. It condemns the faithful to blinkered ignorance and tortured rationalization. *Ad hoc* adjustments, such as lengthening "days" of creation to epochs are nearly as bad.

I suggest that multiaxial reality perspective offers a legitimate alternative. Viewed along the axis of a literalist Christian, the biblical narrative describes true events in a metaphysical realm, while science describes real processes in the natural world. The two narratives – Christian metaphysical and scientific natural – intersect, much as the body and soul are believed to enmesh. That Christians find themselves materially bound to this natural world, so different from the one described in Scripture, should come as no surprise to believers. The Earth's a fine and private place, but the Garden of Eden it ain't. Indeed, having mapped the entire Earth, we can be quite confident that the Garden, along with heaven (and hell, if you must) are located on a metaphysical, not a physical, plane. What's more the Bible conveniently supplies a precise historical moment where that particular metaphysical axis and the natural world first intersect: We call it the Fall.

Many Mansions, One House

A *multiaxial* perspective on reality implies that this is not the only intersection. The Navajo can surely align multiaxial reality with their narrative of a magic reed connecting the underworlds with this world. So too can the Hindus with their narrative of Vishnu and Brahma.

Having established the individuality of every person's reality, we can legitimately accept that all of the metaphysical narratives are real and true for those who believe in

them, *provided* only that they do not assert supernatural actions in the natural realm or logically impossible actions in the metaphysical realm.

Would adoption of this view mean the end of ideological conflict? Obviously not. But just possibly multiaxial reality might be a way to heal old wounds without giving fresh injury to either reason or faith.

NOTES

¹ Philip Jenkins, "The Next Christianity." *Atlantic Monthly*. October 2002.
Online at: <http://www.theatlantic.com/issues/2002/10/jenkins.htm>

² Lee Smolin, *Three Roads to Quantum Gravity*. (New York: Basic Books, 2001) 57-8.

³ *Ibid.*, 59.

⁴ Vic Stenger, "What is Really Real?" *Skeptical Briefs*. September, 2003

⁵ This is not to say that omniscience is impossible, nor even that we are unable to furnish an explanation of it. Still, the claim stands: a *rational* explanation – one that coheres with our body of well confirmed knowledge about the universe – is impossible.

⁶ G.H. Hardy, *A Mathematician's Apology*. (Cambridge: Cambridge University Press, 1940.)

⁷ Alain Connes, "Noncommutative Geometry and Gravitation" (Abstract).
http://www.icra.it/MG/mg08/plenary_abstracts.html#7

¹² Jean-Pierre Changeux and Alain Connes, *Conversations on Mind, Matter, and Mathematics*. (Princeton, NJ: Princeton University Press, 1995.) p. 26

⁹ Readers may notice that I have invoked both coherentism and foundationalism to ground rationality. That may be bad form, but in my defense I'll point out that philosopher Susan Haack has actually combined the two in what she calls "Foundherentism." Not that she should be blamed for any of my errors. See *Evidence and Inquiry: Towards Reconstruction in Epistemology*. (Oxford: Blackwell, 1993.)

¹⁰ Richard Rorty, *Philosophy and the Mirror of Nature*. Princeton: Princeton University Press, 1979.

¹¹ Richard Rorty, "Is Natural Science a Natural Kind?" *Objectivity, Relativism and Truth: Philosophical Papers, Volume 1*. Cambridge: Cambridge University Press, 1991. 46-62.

¹² Stephen Goode, "Johnson Challenges Advocates of Evolution." *Insight*. October 25, 1999.
Online at: <http://www.arn.org/docs/johnson/insightprofile1099.htm>

¹³ National Science Foundation, Division of Science Resources Statistics,
Science and Engineering Indicators–2002. Arlington, VA, April 2002.

¹⁴ W.H. Walsh, "Metaphysics, Nature Of," *The Encyclopedia of Philosophy*. (New York: MacMillan and The Free Press, 1967.) vol. 5, p. 300.

¹⁵ To forestall wisecracks, I must state that "one" conventionally denotes "positive one" and not "negative one."

¹⁶ Stenger is an atheist, and from my conversations with him, I doubt that he would endorse my extending his definition into the metaphysical realm. With respect, however, I feel justified in doing so.

¹⁷ Richard Dawkins' term for a self-replicating unit of culture. The meme (rhymes with "team") is an analogue to the gene. A joke is a good example; it "makes" people want to spread it.