

Can Rhetorology Yield A Truce Between Science And Religion?¹

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As anyone who has thought about science and religion could predict, the subject of how to relate them has, for me, led to dozens of approaches and scores of titles. That problem is by no means uniquely mine. Every effort to relate science and religion, whether rhetorically or metaphysically, can be described as overly ambitious. The topic deserves, and has been receiving, many books, all with astonishingly different titles. (See my Bibliography, which refers to some works not closely relied on here).

As anyone who has thought seriously about any controversy knows, our world is riddled with 'failures of communication.' Wherever we look, we see quarrels and even literal warfare between enemies who obviously make little effort to understand one another and then aim their clever ripostes or their automatic rifles at targets that are not really there. And our books and journals are full of advice, useful and useless, on how to turn warfare into dialogue. (For an intelligent representative in politics, one that completely ignores the term 'rhetoric', see Gutmann and Thompson.)

There has been an astonishing flood of books and articles in recent decades about diverse conflicts between religion and science, either continuing the age-old, flat-out war (usually with science the proud victor) or attempting to arrive at some armistice, truce or full conciliation. I have an eight-foot long shelf containing books on the subject, most of them published since Capra's *The Dao of Physics*, in 1975. The wealthy Temple Foundation is now giving \$100,000 prizes for the best books relating science and religion, and I am told that they are flooded with applicants and recommendations.

As readers of any of these books know, the war is not likely to end soon. Whether the controversies are labelled as reason vs superstition, blind dogmatic rationalism vs genuine human values, secular humanism vs religious fundamentalism, atheism vs theism – no matter what the terms – the conflict between hard thought about natural law and hard thought about the source and grounds of nature and value will outlive you and me and our grandchildren.

Unless, of course, this attempt to find common ground revolutionizes the world and settles the war once and for all.

Approaches to the conflict are overwhelmingly diverse. Some books still take the extremist line that the enemy of truth, i.e. religion, which is, in turn, superstition, will finally die. Predictions of that kind were prominent until the mid-twentieth century. And we still have books like Michio Kaku's *Visions: How Science will Revolutionize the Twenty-First Century*, that predict science's solution to every problem, including how to achieve immortality. At the opposite extreme, some authors have even attempted to prove that genuine science is compatible with a particular religion, like John Polkinghorne, a brilliant particle physicist and priest, who purports to unite his version of hard science and his version of Christianity. Some, like Ian Barbour in his Temple Foundation prize-winning books, dig deeply into scientific method and theological arguments, claiming to find, in the tradition of Whitehead and Hartshorne (process theology), a meeting ground. And of course, many have one or the other of the three most tempting approaches: diplomacy, tolerance, or sheer relativism.

Some diplomats say, in effect, "if you will grant us our territory, we won't impose on yours." Stephen Jay Gould, perhaps the most popular of all biological rhetoricians, has recently done a book, *Rocks of Ages: Science and Religion in the Fullness of Life*, claiming total validity for both religion and science but with absolutely no overlap. He invents the acronym NOMA, for Non-Overlapping Magisteria. His approach is, in effect, an analogy for what two nations do if they decide to quit fighting and say, "You go your way, legitimately, as I go mine, even more legitimately."

Tolerance is slightly different: "I know that my views are the only correct ones, but I'll not interfere with yours – provided you don't attack me too strongly." Most serious scientists spend no time in attacking religion; there is probably a larger percentage of religious believers who spend energy attacking science, especially evolutionary theory. But my hunch is – with no statistical evidence to back it – most believers take the tolerant line: "Let those folks pursue their narrow bits of truth, while we deal with the more important stuff. Let them deal with the dinosaurs and fruit flies, while we deal with the soul."

The extreme form of accommodation, complete relativism, is not just tolerance. It is indifference: "There is no real truth in either direction, no ultimate reality, so why not just stop arguing? If it's all mere guesswork, or cultural dogmatism, why argue about it?"²

Whichever line is taken, the results seem about the same: "You go your way, on your mental territory, and I'll go my way on mine, and if we encounter conflict over the borderlines, all we can do is either bargain, tolerate, or just scoff."

“Rhetorology” as a fourth route

Diplomacy, toleration, and sceptical relativism at least diminish the open warfare, but they simply ignore the plain fact that when one examines the rhetoric of scientists and religious thinkers, one inevitably finds lots of overlap in the deepest convictions of the combatants. Science and religion are not totally separate enterprises. Whenever the deepest of human interests are engaged, and seem to clash, especially when the clashing is not about mere physical territory but about ideas and human values, deep rhetorical analysis is invited. Diplomacy, for many the only available tactic, gets us nowhere when the quarrel offers no bargaining chips, nothing to “give up” in exchange except the very ideas we care about most. It gets us nowhere if we are discussing whether Plato’s ideas really exist, or whether God is really dead, or whether pursuers of scientific truth and those of religious truth can ever discover that they are on the same path, or whether, contrary to the relativists, truth of any kind really exists, or even whether, as many like Steven Weinberg and Kaku argue, hard science will ultimately arrive at a final theory that explains everything, and leave life itself pointless.

What we obviously most need is a sharpening and deepening of a version of rhetorical study usually at best hinted at: neither mere persuasion, nor merely the more responsible kinds of persuasion, and not the study of how this or that author has persuaded, but the probing of the deepest convictions underlying both sides in any conflict to discover where they might join. We need to push the pursuit of understanding, of genuine listening to the opponent, to its furthest possible limits; to the depths where our ultimate commitments, our “religions,” or “faiths,” or “ultimate passions” seem to clash, but perhaps do not. And because the usual terms in rhetorical studies carry narrower implications than that, I propose that we label this kind of rhetorical inquiry with the ugly neologism, rhetorology. Maybe you can think of a better word, but I cannot. Dialogue is too narrow, dialogology even uglier and discourse analysis totally uninformative and unchallenging. I am told that someone has attempted, with understandable failure, to establish “rhetoristics.” Dialectics or dialecticalism are perhaps the best rivals, but from Aristotle through Bakhtin, they seemed to have left rhetoric behind. And so on, through hermeneutics, or what Steven Mailloux has called cultural hermeneutics - challenging, but still misleading. So why not *rhetorology* – the probing for shared grounds underlying any two rival rhetorics?

As is obvious by now, my rhetorological pursuit of shared ground by scientists and religionists is already based on a bias: the assumption – the hope – that there is, after all, some ground that is shared. I am a passionate believer in science – of most kinds. I am also a lifelong pursuer of religious truth, one who is often dismissed by religionists because of my reliance on terms like metaphorical, symbolic, analogical, or mythological. But I consider myself genuinely religious³

The Need for Aristotle's Four Causes, and Burke's Addition of Scene

What are the rhetorological paths for ploughing through this mess? I like to fall back on a very rough parallel with Aristotle's four causes, which too many scientismists⁴ reduce to one or two (the efficient and material causes), leaving out final and formal causes, especially when these same scientists are in the laboratory. If we want to find out where the differences and similarities lie, we have to ask not only Aristotle's four questions, but at least five kinds of questions.

First, "What are the rival goals or ends of this or that project?" Then, "What are the rival methods for pursuing the goals?" Then, "What are the rival definitions of the subject-matter at issue?" And then "What are the rival general principles or deepest assumptions underlying the arguments?" This is what John Gage, at the Rhetoric Society of America conference this year called "an entire belief structure", of both speaker and audience. And finally, borrowing the word "scene" from Kenneth Burke's dramatic pentad, which was actually based on Aristotle's four questions, we who are living in the time of cultural studies must add a fifth: the *scene* of any dispute is the range of cultural influences playing upon the disputants.⁵

One could not in a short essay cover more than a fraction of all the ways in which the best scientific inquiry and the best religious inquiry overlap or genuinely conflict on all of these five fronts. I have attempted, for some years, to write a book on the subject – more than five hundred pages lying inert in a drawer full of notes. In this essay, after a brief section on overlapping methods in the sense of argument style, I'll narrow it down to a crucial one of the five, that is, the definition of the subject.

How Scientists Argue

All students of rhetoric will acknowledge that a closer look at methods of argument by scientists and religionists reveals a great deal of overlap. But most scientists seem radically unaware of just how dependent they are on non-scientific methods. So, as a hint at overlapping methods, I now offer one brief example of what every rhetorician already knows.

Listen to the famous biologist Ernst Mayr making his case - against some philosophers of science who questioned scientific certitude - that only scientists, not philosophers or historians of science or religionists, can "explain the natural world":

"Why are philosophers of science still, today, so worried about the way that scientists construct and test their explanations?"⁶

Well, why does Mayr choose the word "worried" rather than, say, "annoyingly persistent", or "aggressively embarrassing", or "challenging"? Because, to call his opponents "worried" weakens their case: it is their fault, not ours.

"After all, science has had an almost unbroken series of successes ever since the Scientific Revolution."

Here again, why the use of "almost unbroken" rather than at least mentioning one of the "broken" ones? And what is Mayr's evidence that the series is "almost unbroken"? Right now, major cosmologists are in deep disarray about major mistakes they have made in the past and presumably are still making. Cosmologist Lawrence M. Krauss has recently announced that he was flatly wrong about the flat universe, in a book published only five years ago. Claiming that the universe may "be forever shrouded in mystery", he now claims that it is "a stranger and more interesting place than human imagination alone can ever foretell."⁷ If I compare the chemistry I was taught as a "Chem Major" in college with what I find proclaimed today, I would say that the scientific triumphs might better be described as "consistently broken". But to honestly admit that would have weakened Mayr's rhetorical case.

"Of course, occasionally an erroneous theory is temporarily adopted, but it is soon refuted in the contest among competing theories."

Well, why "of course" rather than "I find it painful to have to admit" or "some Nobel Prize winners would claim that . . .". Well, it's because "of course" tells us that the following point is extremely minor, one that only a fool would overlook, but unimportant. And why say "is soon refuted" rather than "after long debate and the deaths of dogmatic defenders of the mistaken view" or "is refuted decades later"? Because "soon refuted" emphasizes the rapid, triumphant march of science, with no setbacks. Thus he goes on:

"Cases of a refutation of a major scientific theory are remarkably rare".

Why "major"? The choice of what constitutes a major and what a minor scientific matter is undemonstrable by scientific evidence, lab test, or strict logic. It is a value judgment - one quite legitimate here, I think, but it is not science by the scientist's narrow definition. And why "remarkably"? Who finds it remarkably rare? Well, I do, and Mayr does, but we have no scientific evidence for our judgmental adverb. Would he call a survey of 300 scientists who said "Yes, it is remarkable", scientific proof? He and I would both consider it a kind

of proof, rhetorically.

“Overall, the reliability of the major claims of science is unquestionable.”

Why “overall” as a transitional summary, rather than “Though it is true that many major scientific claims still remain in heated dispute, still one can summarize my case by saying that so-and-so . . .”? Because “overall” implicitly and swiftly rules out the dissenters - a ruling unbacked by empirical claims but not needing them in this rhetorical context.

Why “unquestionable”, when he has just admitted above that many respected philosophers of science and some scientists question it? Why employ such dogmatic contradiction of what he has just said? Because of all the scientists he respects, most would never question it. He is here relying not on scientific evidence, but on authority or testimony - key rhetorical resources. He knows that everybody who is anybody will agree.⁸

“Giere (1988) suggests that the heritage of Cartesian scepticism during the Scientific Revolution is responsible for the continuing doubts of the philosophers.”

Why quote Giere? What does it mean to quote a philosopher of science to refute other philosophers of science, in a passage questioning the authority of philosophers of science? Well, that is a fine rhetorical move: an appeal to recognized authority.

Now I find absolutely nothing wrong with this passage, as rhetoric. Indeed, Mayr’s whole book, *This is Biology: The Science of the Living World*, is well worth reading. It makes a plausible case for the successes of science and the unreliability of many philosophers of science. But where is the science in it? It is all responsible rhetoric, supporting a position that the careful reader must take seriously, even though none of it has been in any sense scientifically demonstrated.

His points are by no means pointless. They simply dramatize how this scientist cannot make his case ‘scientifically’. Like the rest of us, and like me, in this treatment of a man I greatly admire, he is working as a rhetor, sharing resources that every theologian depends on. (I could easily quote other passages where he is much more ‘unscientific’ in tone, if by ‘science’ we set up the ideal of “knowing nothing unless it’s empirically demonstrated”.) He is especially non-scientific – and convincing – in his attacks on the reductionism of some particle physicists who reduce all the causes to the efficient cause: mere bumps and grinds through the ages, ignoring the formal and final causes that biology depends on.

In short, even the most reputable scientists in their defences of science live

with rhetoric and by rhetoric as a method, day by day, moment by moment, sentence by sentence. The study of rhetoric is thus, as I have perhaps said too many times before, the most important of all possible studies, even more important to us than science.

Problems in Definition of Subject Matter

Turning now to our main problem – the search for common ground yielded by a definition of the subject matter: Do scientists share with religionists, at the deepest definition of their project, any common ground, any deep topoi or marks that define the subject being pursued and their relation to it?

In concentrating on this special kind of definition – not a simple verbal formula but a collection of topoi – the other four rhetorical categories will of course be implicit throughout, most obviously the search for shared general principles. But for now, the question is simply whether, in any definition of a genuine religion, one can find that all religionists and at least some scientists – and rationalists, and secular humanists, and atheists – call them what you will – whether they in some sense concur, even when they don't know it.

The search for common ground of definitions between entire belief systems is appallingly difficult. Even those who look only for the ground shared by explicit religions face a daunting task, as William James learned when preparing his Gifford Lectures on *The Varieties of Religious Experience*. But his search was in a way simpler than ours, because as a psychologist he was looking for a definition that concentrated on religionists' feelings. For him religion is:

“the feelings, acts, and experiences of individual men [and women] in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine.”⁹

It is not hard to understand why James found the pursuit of that psychological definition almost overwhelming. But ours is even more difficult. It can sometimes feel like sheer madness. It has often made me wonder whether any reader anywhere would dare plunge with me into such rolling waters. In fact it has sometimes made me feel as Coleridge must have felt when writing periodical religious essays on the relation of reason (sometimes appearing as an assassin of religion) and understanding (religion's rescuer): “I am most conscious,” Coleridge says, “that I tread upon my own arguments, and leave, at last, on my auditor an impression of dazzle and crowd, where so much has been said that little or nothing can be distinctly remembered.”¹⁰

What has kept me going, and what I hope will keep readers with me even when there are hurricane warnings, is the immense importance of reducing, if

possible, the blind misunderstandings that flood our controversies between science and religion.

It is hard to think of any terms more slippery, more polymorphous – even perverse – than “religion”, “religious”, and “religiously”, let alone “spiritual”, “devout”, “belief”. For instance, “She practiced the violin religiously for five years, and then quit”. “Those statisticians Greg referred to express religious fervor.” “Hemingway was absolutely religious in his writing - every day standing at that desk, writing his 400 words.” “I watch 60 ‘Minutes’ religiously,” said a letter to the *New Yorker* recently. “Spiritual” was the word that TV star Rosanne thought best fitted her experience when she was offended by the sexism of “Saturday Night Live”! After three frustrating attempts hosting the show, she said, she “got really spiritual” and wrote her protest letter. We could go on to crazy varieties of the use of “faith”, “devotion”, “believer”, and so on.

I have several friends who claim to be enemies of, or at least indifferent to, what they call religion, but who clearly fall under or embrace the seven marks of genuine religion that I am coming to here. Of course it usually annoys them when I call them religious, though sometimes they admit that my claim has challenged them to some thinking. On the other hand we all know partisans of one or the other official religion who claim that all other so-called religions do not really deserve the name. In my emerging definition, some of these self-proclaimed religionists do not even deserve the name “religion” that they grant themselves – not in the immensely broad definition of religion and the religious that I am moving toward here. They reduce everything to the question of whether their church gives them moments of feeling high or whether it serves their private souls – which for me is at best only one of the seven marks to be found in all genuine religions. For such reductionists we need some other label – perhaps *gee-ligion*, with an exclamation point, or *dis-ligion*. Some of these, the ones who offer little more than a self-praising cheering up before Sunday brunch - “I’m OK, you’re OK!, the world’s OK!” - we might call *me-ligions* - or, in the extreme forms, narcissism, or even “spiritual autism”. (Jacques Derrida, in *The Gift of Death*, uses the term “irresponsible orgiasts” for the *me-ligionists*, those who have no sense of responsibility to “the other”.)

But there I go already, rejecting one belief system, *me-ligions*, as a non-religion, when the whole point of my project is to produce more and better rhetorology among rivals. My judgment dramatises the fact that no matter what definition of religion we settle on, we ourselves will, by the very act of defining, be committing problematic evaluations of the kind I just committed. If our definition is accepted, that means that a new friend has earned our badge of approval. We join in the “religious community”. If our definition is rejected, it will be because this “outsider” is sure that it was chosen in order to eliminate his or her absolutely religious religion.

The three standard ways of dealing with this near-chaos of both overlap-

ping and contradictory definitions are; first, avoid definition entirely, since “religion” is nothing more than a catch-all term – what I’ve even heard called a “garbage-bag”. Richard Rorty claimed that whenever religion enters the discussion, any sensible person would just withdraw because real conversation would have been blocked. Secondly, one can do what I would have done at the age of fourteen or so as an officially devout Mormon if asked to define religion: just proclaim the one true definition that best fits my one true church. Finally, one can attempt an ecumenical definition like James’s, one that uncovers the analogies among seemingly contrasting believers without becoming so broad as to be meaningless. Obviously, whether or how one uses the label “religion” in referring to any or all of the movements that I’ll touch on here will depend on which of these paths we choose. (One of the very best discussions of the ambiguities in all religious language – a kind of “deconstruction” and “reconstruction” – is in Matthew Arnold’s *Literature and Dogma*, a book that William James knew well.)

On the one hand are those who believe you have not in any real sense defined a religion as genuine until you have described it in its full particularity, including the precise details of its unique foundation story and its unique rituals. A genuinely religious believer under this definition, whom we might call a *uniquist*, is one who is certain about the unique validity of his or her particular foundation story and about most or all of the details of doctrine which that story is claimed to embody. Like the devout young Mormon, Wayne Booth, such *uniquists* take for granted that religious inquiry consists mainly in the pursuit of what one true story has to say about our origins and how we should live our lives. Other religions can be tolerated, even respected, but you cannot fit them under any umbrella that covers you. The best they deserve is something like “misguided religions” or “partial religion”. In other words, religion for them is not to be found in any ecumenical or pluralistic definition of common characteristics but in the full, intra-textual, thick description of the details of one faith, one ritual, one communal practice, and one scriptural embeddedness. Can you imagine how shocked that young Mormon was when he learned that some of the benighted churches actually used wine instead of water in the sacrament? Can you imagine how miserable he felt when a favorite scout master on a tour with the boys sinfully ordered a cup of coffee?

Any one detail of that kind can seem enough to credit or discredit any religion as sinful: my religion bans pork, while your fake religion bans alcohol; mine offers a sacrament consisting literally of the blood and flesh of Jesus Christ, while yours is so silly as to call such sacrament only metaphorical, and so on. Even when an ecumenicist like me attempts to do full justice to particularity, the result will always look a bit “thin” from the perspective of such *uniquists*, since it is still bound into a project that puts aside superficial differences and stresses the common core.

Though ecumenicists who are explicitly religious will usually, at some point,

succumb to making judgments about relative worth, what is at their centre is what is shared, not what makes the different religions peculiar. And if they make value judgments against some professions of religion, as I have already revealed that I do, they are still likely to leave not a single one clearly at the top of the hierarchy, but rather a plurality of the “great religions”, contrasted with the not so great or utterly defective.

The difficult search for shared ground always makes me think of an experience of my colleague and Catholic Theologian, David Tracy, as he met for several years with leaders of other “great religions”, hoping to find common ground. Meeting annually with Buddhists, Muslims, Jews, Catholics, and Hindus – no Mormons, of course – Tracy would return looking discouraged. “We found little or nothing this year.” But one year, not long ago, he came back much buoyed up, looking positively optimistic. When asked what they had agreed on, he said, as I remember it, “We all agreed that something is radically wrong with creation”. (I can be quite sure that Tracy would by now report this experience rather differently. After all, he himself did not witness his own face on his return from the two different experiences. And I wonder how Leibnitz would respond, as he worked out his theory of “the best of all possible worlds”. But of course his whole project was based on the acknowledgement that, when judged from the human perspective, a very great deal “went wrong” in creation.)

No matter how we feel about this quest, our choice between the particularist and the shared-groundist definitional routes will determine how we treat any one religion, or secular rival, or opponent of religion. If we follow James and Tracy and pursue ground shared, ignoring particularist differences, we follow what is to me not just an interesting intellectual route but a moral command implicit throughout. Our task is not to discover whether all faiths or devotions or passions or commitments show, when lumped together, that they have somehow contributed to a grand, common world-wide project; obviously many have not. Rather, we must ask whether any one of them – most particularly one or the other “scientific” view – when probed to the core, exhibits the common elements we claim are shared by all genuine religions, and that inevitably raises moral questions.

Definition through shared “marks”

Throwing all caution to the winds, I shall now suggest not a verbal definition, but seven absolutely essential marks of genuine religion, which encompass not only the emotional experience but the beliefs underlying those experiences – beliefs, assumptions and principles, that I think are found in all who believe in and practice some sort of religion. My list of marks (I would label them *topocs* if the classical definition of *topos* had not, in modern times, been so loosely broad-

ened) is sure to leave out something the reader considers essential to religion. But remember, we are not here defining "good" or "complete" or "best" religion, just genuine religion. As soon as one adds the various "blessings" that this or that denomination claims to grant, you move closer to uniqueness, and then Wittgensteinian "family resemblances" must take over. This handful overlaps with that handful, which in turn overlaps with a further handful, but none share all qualities with all the others. I shall look briefly at some of these towards the end.

Mark One: Insistence that the world as we experience it is somehow flawed, as compared with what would be better. Something is wrong, deficient, broken, inadequate, lacking. Something is rotten not only in the State of Denmark, but everywhere. As the popular licence plate puts it, *Shit Happens*. (I recently saw a plate that said "Defacatory Disasters Inevitable".)

I do not have to tell you that in one form or another everybody in the world believes in and actually experiences this mark, except perhaps in moments of ecstatic oblivion. As David Tracy and his fellow religionists from four other world religions agreed, something is wrong, or something *went* wrong, with creation.

Now there is obviously implicit in the notion of wrongness, a value judgment: if something is judged to be wrong, there has to be a notion of something more right, which leads us to Mark Two.

Mark Two: The flaws must be seen in the light of the unflawed, some truth, some notion of justice, or "goodness", or of some possible purging of ugliness. One cannot say that something is wrong without implying that some standard for the judgment exists. Again it is obvious that all, or almost all scientists would agree with us here: they have the standard of scientific truth and personal integrity in the pursuit of science. Which leads us to ...

Mark Three: Insistence that there is some supreme order or cosmos or reality; something about the "whole" of things that provides the standard according to which I make the judgments of Marks One and Two. (Most religionists call the cosmos God, but some prefer the term "Being".) In other words, when Marks Two and Three - the "rightness" and the cosmic source of that rightness - disappear, there is no genuine religion. Some *me-ligionists* fall off the boat here, but most scientists do not. Have you seen how many books have been coming out about the quest for a final theory that will explain everything? Most scientists, even the most ardent atheists, believe in Mark Three: there is a cosmos. As Matthew Arnold's truncated definition puts it, religion is belief in some power "greater than ourselves, making for righteousness." The word "righteous" will put some people off these days, meaning something like "dogmatic" or arrogant. But what Arnold meant was "something more right than wrongness", and every scientist has to believe in that or else give up the quest for truth.

These three marks, intertwined, are nicely revealed by the David Tracy anecdote: "Something is radically wrong with creation." His report of the discovery was not just that "something is wrong with the world", or "there's a lot of stuff in the world that I personally disapprove of or grieve over". Everybody believes that: not just devout Muslims and Catholics and Calvinists and Mormons but also the *me-ligionists* and atheists and drug addicts and serial killers: everybody thinks that something could and should be better about the world - even if it is only that "I ought to have more drugs available" or "I don't have enough corpses buried in my cellar" or "Why can't I get the feelings I get in that new entertainment church on Sunday morning everyday?"

No, I repeat: to qualify as a religion, a belief system has to relate the first mark to the second and third. It must at least imply a story, some sort of master-narrative that says things like, "Something went wrong with creation", or "Something ought to have been righter", or at least, "I can see what would have been better". It is not just "I don't like some things about it", but rather, "Some things are wrong when judged by what would be right; by what a full rightness would demand; by what the whole of creation, as I see it - my cosmos, my God, my view of nature - implies as the way things should be but are not."

In more traditional language, there was, and in some sense there still is, a fall, a brokenness, a decline from what would have been better to what is, in fact, at best a combination of the better (some ideal) and the worse. Some Buddhists, I gather, would reverse this temporal scheme as not a 'fall' but a 'rise'. But doing that does not destroy the real meaning of "something went wrong": it either was or could have been better. (My hints of a kind of temporality here - echoing the Bible story - of the Fall, needn't be taken literally. As Kenneth Burke makes clear in *The Rhetoric of Religion*, stories about temporal rising and falling can always be translated into non-temporal, vertical ladders: temporally, we were up there and now we're down here trying to climb back up; non-temporally: we're standing on that ladder, in a fixed, "eternal" moment.)

Religious believers, in this sense, experience a kind of double vision: on the one hand, a vision of a possible past, present or future order or cosmos, superior to the way things actually work now, and on the other hand, an awareness that much of what we experience seems out of whack in that order - the times are out of joint, disordered. The cosmos has moved toward chaos, or has always been doing so, and is threatening to be doing so now. The origins, or what might have been the origins, have gone askew, developing a vast collection of flaws. It is not just - to repeat for the umpteenth time - that I would like it to be different for personal reasons. 'It' *ought* to be different, because there are real reasons for seeing 'it' as flawed. What's more, I have at least a dim notion of what it might mean to be fixed, and I know that what's wrong about it is wrong, not just unpleasant.

Lamentation thus moves toward religion only when it is linked with the

second and third marks, i.e. only when the lamenter realizes not just that “shit happens” but that “shit’s happening”, and its definition in relation to what is not shit but genuine nourishment is somehow built into the very structure of things: some cosmos! Shit has always happened, from the beginning (or, for some, almost from the beginning, but there was or is a place from which the fall can be judged as ‘fall’. It is defined by an elusive notion of its opposite, an order or cosmos which in some sense judges the event as wrong.

Mark Four, emerging from the first three: All who are genuinely religious (not just complaining) will somehow see themselves as, in some inescapable sense a part of the brokenness.

It’s not just other people, those terrorists out there, say, who are out of joint. *I* am. I am not as good or kind or effective, or smart or learned or organized, or courteous or alert or wise as I ought to be. Even the best of us, even the strongest, the purist, the humblest, are inherently lacking, deficient, in need of further repair, or, if you prefer, sinful or guilty. I am an inseparable part of a cosmos that produced this flawed fraction of itself, me, including in that fraction a sense of regret about my flaws. I may or may not feel deep gratitude to my “Creator” for creating me: that mark would have to be given under an entirely different list, labelled something like ‘blessings’ or ‘rewards’, some shared by some religions but not by others. But it is lacking in many genuine religions, none of which lack *Mark Three*. As we see in all honest scientists, this mark is revealed as lamentation about personal ignorance: what I don’t know and ought to know!

Mark Five, following inescapably from the first four: The cosmos I believe in, the cosmos I may or may not feel gratitude towards for its gift of my very existence, the cosmos that is, in its manifestations in my world, in some degree broken – my cosmos calls upon me to do something about the brokenness.

I must do what I can in the repair job, working to heal both my own deficiencies and to aid my fellow creatures in healing theirs. In some scientific religions that I would hope to discuss in any book emerging from this project, this sometimes means no more than “I have a duty to work at removing my own ignorance”. More often, even for scientists, it becomes a moral command to remove the world’s ignorance. For some official religions, as in versions of Judaism and Mormonism - still naggingly active in my soul - it produces floods of daily self-reproach: that which I have done I should not have done, and that which I have not done I should have done. In many denominations, perhaps especially Mormonism, it produces missionary work. But regardless of our various feelings, we are granted by any genuine religion, a sense of at least this one indisputable meaning of life: a purpose that transcends our particular feelings of the moment.

I have never yet met a genuine scientist who does not share this sense of a passionate purpose for improvement – of *something*. (Steven Weinberg has ex-

pressed the fear that the sense of purpose in life may well disappear for him and other devout scientists once they have obtained the full “final theory”. Cosmologists have responded in contrasting ways to that fear. (See Lightman.)

Mark Six, an inescapable corollary of the other five: Whenever my notion of what my cosmos requires of me conflicts with my immediate wishes or impulses, I ought to surrender to its commandments.

Rather than pursuing what is easiest or most pleasant or most reassuring to my present sensations or wishes, I obey or pursue *It*. Our impulses, our immediate wishes, ought to be overridden whenever they conflict with responsibility to cosmic commandments. We have obligations not just to others but to *the Other*. Religious talk dwells on this; for scientists it is often only implicit. But next time you meet a scientist who is furious about a colleague who has cheated, ask him or her why cheating is really wrong. For example, if I am a scientist, and I am tempted to make a reputation or fortune by falsifying my results, I have an absolute command, not just from my conscience but from my cosmos, to combat the temptation.

Finally, *Mark Seven*, a mark that everyone, not only William James would make essential to all religions: the psychological or emotional feelings connected with all of this – specifically, all genuine religions either openly or subtly offer spiritual highs that result from contact with the ultimate, the cosmos, the *whole* of things. I could fill the rest of this talk with quotations from scientists about how thrilled they are when they make full contact with what they consider reality or scientific truth or the challenge of the ultimate mysteries or beauty. Both words, “mystery” and “beauty” fill Steven Weinberg’s book, *Dreams of a Final Theory*.

Most religions have offered in their myths, unlike the truncated stories told by many sciences, explicit acknowledgement of finally irresolvable mystery, since the wholeness of the invisible cosmos is beyond total rational demonstration. The order was always some kind of numinous *mysterium_tremendum*.¹¹ A few contemporary scientists have captured something of this mysterious wonder, admitting that no human being will ever grasp the “incomprehensible” whole. But many, like Kaku, aggressively claim that “in principle” our “religion” (without using the word) will capture it all. But even they usually reveal a spiritual sense of awe or glory or gratitude for that “all”.

The Non-Universal Blessings

It is obvious that many religionists will feel impatient about all that I’ve left out here: this or that reward or blessing that their religion considers essential. Even among common groundists who might happily accept my seven marks, there would be striking differences as soon as we turn to the relative value of various psychological or emotional rewards in addition to the spiritual highs. “Yes, I

agree that a passionate, honest scientist's faith exhibits all those seven marks, but they completely overlook what are for me the essentials, such as my sense of gratitude for Jesus's love". Or: "You've left out the radical sense my religion provides of the sacredness of the holy shroud, or of the blessed sacraments". In some religions this has led to protective, detailed rules, commandments dictating precisely how to live, what to touch and not to touch, what to eat and not to eat. To true believers these are at least as important as anything I've said, though they seem absurd to most scientists and to devotees of rival religions: "My rules makes sense; yours are silly." "You think not drinking coffee is an essential religious requirement? *Oi vey!*" "You think it's sinful to eat pork? That's crazy." "You think that cows are sacred and must not be killed, while people are starving? That's cruel." "You think that worshipping privately, without ever joining a congregation, is a holy act? You're just plain wrong." And so on.

Some religionists will think my marks deficient for not mentioning any sacred book, or even any sacred stories except that of the 'fall': I could have included that mark, maybe, noting just how too many scientists these days treat the evolutionists' narratives, the shattering story of what was in the beginning, almost as if it were a sacred text.

It may even seem that I've left out what for some theologians has been the supreme gift, the gift of character guidance. I have not mentioned courage, which is the one grand unifying gift of religion in Paul Tillich's *The Courage to Be*, proclaimed as an effort to interrelate science and religion. What's more, I have left out humility. Most of the genuine religions, in contrast to some of what I have called the *me-ligions*, have provided a critique of unrestrained hubris: we are puny as compared with Supreme but Mysterious Reliability. The cardinal sin is pride, the cardinal virtue genuine humility, which at its best is not a crushing of self-esteem but a releasing sense that "I need not worry about competing. My precious ego, and its place on any competitive scale, is insignificant when compared with the wonders of my cosmos - including all the other creatures who are as important as I am". Now that one happens to be high on my list of blessings from religion, and one of my strongest criticisms of my Mormon upbringing is that it implanted in my arrogant young self the notion that if I kept my nose clean I would someday become God of another planet!

In my view, genuine science, especially now when almost all of the most penetrating scientific thinkers admit to deep puzzlement about consciousness, should teach humility to any arrogant Mormon scientist who lacks it. But somehow many scientists, though not all, seem to learn from science the religious arrogance that I learnt from my Mormon upbringing, singing the song:

A Mormon boy, a Mormon boy,
 I am a Mormon boy.
 I might be envied by a king,
 For I am a Mormon boy.

We could fill hundreds of pages listing other blessings shared or not shared by religions and by the sciences. Hope, for example, or the wondrous comfort of joining a loving community or of finding ultimate truth; or the stabilizing effect of regularly experienced ritual, like the research team meeting regularly; or the blessed daily reminders of the importance of learning to love your enemy, or remembering to engage in charitable giving (this one is hard to find in scientific rhetoric). It is just that none of these are essential.

The Most Controversial Blessing of All

Of all the religious blessings I have so far ignored, no doubt the most striking and annoying to most scientists is belief in a God who intervenes in human affairs, willing to violate our view of natural law. A great majority of people in most countries believe that if and when we pray in the right way for intervention, God hears us and acts, and that he allocates good fortune to us according to what we deserve. For many this is not only one of the blessings, but absolutely the number one mark of religious belief: if you believe in a Great Meddler, you are religious; if you don't, you're an atheist.

Most prophets of most traditional religions would agree. They see *their* foundational cosmos as not so tightly organized as to prevent divine intercession in the order of things: a powerful god or gods is/are both able and willing to perform unpredicted, or at least inexplicable, acts of grace or punishment that modify the original creation providentially, or even, as one reading of the story of Job has it, capriciously. Thus, in most official religions the Gods have been seen as manipulators of our lives - sometimes actually increasing the brokenness, day by day: I pray for rain and it rains here, while others around the world suffer drought; I pray to be saved from the hurricane and I'm saved, while you are killed.

In religions that place at the centre this blessing, a providential lord attending to petitions or providing a healing in the literal future, our final hope rests only on what God or Allah or Yahweh has in mind, or has had in mind from the beginning, and on how close we can come to harmonise with his or her will and power. While it remains true that we must do what we can to heal ourselves or the world, you do not have a genuine religion unless you fit into whatever is the ultimate divine plan.

I have no interest here in refuting any one belief that many call 'superstition'. Indeed, I think that many beliefs that rationalists like Hume once consid-

ered superstitious would now be respected by even the most hard-nosed scientist. But the nasty fact is that disagreement about this blessing produces perhaps the most pointless battles in the destructive warfare between the religious and those who think they are not religious. To make this mark essential to religious belief rules out of religion many that my shared-groundist project wants to rule in. Fortunately, many of the most serious theologians even within the Christian-Judaic tradition have condemned *praying for providential gifts* as a reduction to a kind of cheap bargaining or bribery: our reason for obedience to our God becomes, many have lamented, merely an attempt to get paid back at the end.¹²

Vigorous rejection of this mark has been a major goal of many scientists and philosophers for centuries now. Some have even defined the so-called warfare between science and religion precisely as a battle between what some would call true belief in Providential intervention and what others see as rank superstition.

To grapple with this conflict would require a whole book. I can only suggest, in concluding, that thinkers on both sides should rhetorologically probe the deep grounds of just what is meant by "Providence" and "Intervention". All of us in the long run will, I hope, give up the notion that if we pray to God as the hurricane approaches, He will save us while killing all of our neighbors. But must the true scientist give up the notion that some power greater than ourselves, some Cosmos *provided* the conditions of his or her research, and still *provides*, daily, the whole range of possibilities that life itself yields? If I am saved in the hurricane, that God – the range of blessed possibilities – was *providential*: He/She/It provided the circumstances. If I prayed for a condition of soul suitable for dealing with threatening disaster, that God provided the condition of my soul enabling me to utter that prayer. (Of course that God also provided the conditions that led to the hurricane – which lands us back in the old messy waters of theodicy – how to pardon God for creating evil - not the subject for this essay.)

So I conclude only with three rough questions to all readers: Is not the scientist who believes that a given science can solve all our questions exhibiting rank *superstition*, *overbelief*, *überglaube*? And is not the atheistic scientist who passionately pursues truth, supported by a faith in a cosmos that includes truth and the moral command to pursue it, religious? And last but not least, the question underlying this whole project: Can we hope that by practicing rhetorology of some kind, pursued more skillfully than I have done here, we can diminish at least some of the pointless demonizing that diverse 'sides' commit, as they attempt to destroy the other 'sides'?

Notes

- ¹ This is a considerably revised version of a talk given at the conference of Rhetoric Society of America, in May 2000. Other versions, especially of my attempt at a definition of religion, have appeared elsewhere, and will continue to appear - perhaps finally in book form.
- ² For a splendid questioning of utter cultural relativism, probing the religious issues it raises, see Shweder (1999).
- ³ I do not like that word religionist, but it is hard to find a better one: call them the believers? Well, scientists are believers? The faithful? Well, scientists are pursuing their faith. The devout? Sounds pejorative. The theologians? Sounds too exclusive. So it will have to be religionists - even though one of my dictionaries says that *that* word sometimes means simply bigots. For those who want the term religionist to mean *bigot* I would like to revive a term I invented decades ago, *scientismist*, for bigoted scientists.
- ⁴ See footnote 3.
- ⁵ Mayr, p. 47. Note that the following citations are all from Mayr page 47.
- ⁶ New York Times, June 6, 2000, p. D5.
- ⁷ See Michael Polanyi's wonderful - and sadly neglected - discussion of how scientists depend on "non-scientific" authority and trust, in *Personal Knowledge*.
- ⁸ James, W, 1960. *The Varieties of Religious Experience*, p. 50.
- ⁹ Coleridge, Samuel Taylor. Letter to Rev. Joseph Hughes, Nov. 24, 1819, in *The Friend*, p. 503.
- ¹⁰ Otto, pp. 1-30.

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