

ACCOMMODATIONIST AND PROUD OF IT

BY MICHAEL RUSE

INTRODUCTION

I have been called many things in my time, but I truly believe that “clueless gobshite” is a first. In a way, I am almost proud of this. After all, if you are in your seventieth year and someone feels so strongly about your ideas that they refer to you in this way, then you must be doing something right. Or if not exactly right, you must have ideas that others want to challenge so strongly that they pull out this kind of language. Can you imagine going through life and absolutely nobody ever cared about what you thought or did? You could take your clothes off in Harvard Square, make your privates anything but, and people would not even bother to cross over to the other side? But clueless gobshite, now that is different. Someone is seriously cheesed off.

The writer is one of the more incandescent folk on (what for want of a better term I shall call) the intellectual scene at the moment. He is P. Z. Myers, a professor of biology at the University of Minnesota Morris, who runs one of today’s most successful blogs, [Pharyngula](#). He combines really interesting snippets of information about the biological world with rages against any and all religions, religious people, sympathizers, and so on and so forth. He must have a large readership, because the comment list is always lengthy and, if you glance through it, it is clear that he is resonating with some group out there. I should say that he is not alone in doing what he does. For instance, the University of Chicago biologist Jerry Coyne runs a similar blog, [Why Evolution is True](#). He too combines bits and pieces of information about the world of biology with equally hostile pieces about religion, especially but by no means exclusively Christianity. He too is no fan of Michael Ruse when I am writing on the science-religion relationship, and periodically swipes away at me. I “gibber on” and my ideas are “quickly approaching their sell-by date” (November 2, 2009).

And then of course there is the grandfather of them all, Richard Dawkins. He too is an ardent evolutionist, author of the truly great *The Selfish Gene*. He too is an ardent atheist, author of the smash-hit best seller *The God Delusion*. I particularly am picked out and the reader is somewhat condescendingly told that Dawkins does not think I am “necessarily dishonest,” but my actions (my writings especially) have much the same effect. I am identified as one of the leaders in the “Neville Chamberlain School of Evolutionists,” so named after the pusillanimous appeaser at Munich, and we are told that perhaps “there should be a First Rule of Science Journalism: ‘Interview at least one person other than Michael Ruse.’”

Why are these people so upset? A priori, you would think that we would be natural allies. Like them, I am an ardent evolutionist and near-fanatical Darwinian. I really think the theory of evolution through natural selection is one of the all-time great achievements in science and that it explains the living world, now and in the past. I have written book after book on the topic expressing my admiration for Charles Darwin and the present-day version of his theory. Like them, I am a total non-believer. If you were to ask me straight out, I would probably say I am an agnostic or a skeptic. I personally prefer the second term, because too often “agnostic” means “I don’t care a bit about the topic,” and that is not me. I care and I don’t believe. Truly though, when it comes to Christianity, I think “atheist” is probably a better term. Loving God, Jesus as His son, resurrection and the promise of eternal salvation – not for me, I am afraid.

And yet, I am excoriated at every turn. Why? Simply, because I am an “Accommodationist.” I think that some kind of intellectual meeting is possible with religious believers, including Christian religious believers. As it happens, I believe that in America it is tremendously important politically to bring evolutionists together with people of religious commitment, but I absolutely and completely would not argue for a position that I thought wrong because it was politically expedient to do so. I would not say that

emotion plays no role in my position. It does indeed. That helps me to take a stand that I think right against folk with whom I would much rather be a friend than a scorned enemy. But I think one can make a sound case for the position I have taken and still accept strongly today. In this essay, I try to explain what I believe and why I believe it. Why I am an “Accommodationist,” whatever that might mean, and proud of it.

Please understand: this piece I am writing now is not so much a response as a reaction. What I mean by this is that I don’t want to whine about being mistreated or misunderstood. As I have already intimated, to respond in such a way would be almost hypocritical, because I rather like the fact that I stir people up so much that they want to strike out as they do. But I think there is some value in trying to see where I have come from, what I believe at the moment, and why I have raised the ire of people who in most respects you would think would be my natural allies. I am going to write this in a rather personal way because above all it is rather personal. I think, however, even those of you who think writers should never reveal anything of themselves will be able to strain through the personal and see the arguments underneath.

A CHRISTIAN CHILDHOOD

So let me start at the beginning. I was born in England in the Midlands at the beginning of the Second World War (1940), and grew up in a lower-middle-class family. My father was a conscientious objector during the war (he had been a communist before the war and went to Spain to fight, although I don’t think he ever did).

After the war he worked for the government as a transport officer, and my mother returned to school teaching, when the government for the first time allowed married women into the classrooms. Also after the war, my parents joined the Religious Society of Friends, the Quakers.

It has been a long time since I had anything to do with the organization, but I do know that many American Friends are fairly agnostic on the God business. Let me say unequivocally that back then in England this was not the case at all. Quakers did believe in God and believed also that Jesus was his son.

Quakers have never been big on the Bible, in the sense of *sola scriptura* like most Protestants after the Reformation. They have always placed much more of an emphasis on the Holy Ghost and its workings – the Inner Light and that of God in every person. So I can’t tell you a lot about the theology. But my guess is that the emphasis (as I believe was also true of the Church of England at that time) was more on the Incarnation than the Atonement.

In other words, Jesus was seen as God coming down to be with us, rather than as a sacrificial lamb whose death made possible eternal life. Not that there was no belief in eternal life. It was just that a blood price was not part of the theology. As you probably know, Quakers do not have a communion service nor do they make a special thing of Easter (or Christmas for that matter) – although they are not stuffy about this, and we certainly celebrated Christmas at home and had Easter eggs in the spring and all of that sort of thing.

Quakerism is very much a middle-class sort of religion and in our meeting and the larger group to which we belonged (technically, the Warwickshire Monthly Meeting) there were large numbers of schoolteachers and the like. The care and education of the children in the group was taken as a sacred duty and I was duly enrolled in “Junior Young Friends” and would go (from a very early age) to Birmingham once a month to join in discussions and so forth. There were also weekends at conference centers and summer camps at Quaker boarding schools.

We may not have done much Bible study, but we sure did a lot of discussing of morals and society and that sort of thing. Not, I should say, in an American evangelical sort of way that focused on sex and personal purity and so forth, but on larger issues. Quakers are pacifists and after the war against Hitler and the Nazis it was by no means obvious that pacifism was a moral stand. So we discussed these sorts of issues in detail.

I should say that although Quakers taken overall are about as far from biblical literalists as it is possible to be, my memory is that we took the Sermon on the Mount in a very literal fashion. I remember many years later reading a book that explained that the Sermon was almost certainly not given on one single occasion and was put together by the followers of Peter to stake out a theological position. I found this deeply upsetting! You will learn that although I am a not a believer I am a very conservative non-believer.

The one thing I do want to emphasize, and this is very important for my present story, is that the whole atmosphere – family, friends, co-religionists – was deeply loving and supportive, taking seriously the intellectual things of life but putting everything in a context of self worth and care for others. I can truly say that this has lasted me all of my life. I have nothing but gratitude and fond memories.

This is probably reinforced by the fact that just as I was entering adolescence, at time when I might have started to question and break away – because that is what adolescents do, and we were certainly encouraged to think for ourselves – my mother died suddenly. Without getting too heavy-handed on the psychology, I suspect that this reinforces my positive feelings about my childhood and no doubt Photoshops a lot of the blemishes. Causes real or apparent, the feelings today are very positive.

HIGHER EDUCATION

This is not a simple autobiography, so I want to skip now. At the age of thirteen I went to a Quaker boarding school in the north of England and at the same time my father became bursar at another Quaker boarding school, also in the north of England. Interestingly, as I now became completely immersed in a Quaker environment — as a child I went to the local state schools — the whole religious thing became a lot less intense and far less meaningful. At my school, ability at games and who your father was were all-important. It wasn't a bad school, at all, but it wasn't what I think a Quaker school should be. Probably I should not blame them as much as I do. After all, they were running a business and they needed customers. If there had not been an emphasis on competition, whether in games or work, then parents would have sent their kids somewhere else. And you ask yourself if you wouldn't be just as well off at a state school. I think looking back I would have been, and although I have on a couple of occasions put my own children in private schools for a year or two (to get over rough times, especially when my first marriage broke down) generally speaking I have a prejudice in favor of public education, including at the university level.

As an undergraduate, I went to university in England and studied mathematics and philosophy. I earned a masters degree in philosophy in Canada, and then my doctorate back in England. It would be obvious to infer that, as a child, having had the kind of training that emphasized discussion about the big issues, I came naturally to philosophy, something that has filled my adult life, as a researcher and as a teacher. There may be some truth in this, but I don't think that there was a simple line. Philosophy was never a childhood avocation or anything like that. Indeed, I got into philosophy by chance. At my undergraduate university, as was typical in England at that time, I did nothing but the major – mathematics – in which I had enrolled. Eight hours a week, and not even a physics class for recreation. Within hours,

realizing that I was a good high-school mathematician but no university mathematician, I basically quit doing anything seriously. Fortunately the university had an alternative, a joint major in mathematics and philosophy and in my second year I enrolled in that. Just to get away.

I should say, however, that from my first class in philosophy – on Descartes’ *Meditations* – I was hooked. There really were people who worried, as I had long worried, about whether they are awake or asleep, and if the whole of life is simply one great illusion. (My wife tells me that everyone thinks about this at least once in a lifetime, but fortunately most are sufficiently sane never to worry again.) I should say also that there was something of a paradox. I love philosophy, I really do, but I find most Anglo-American philosophy intensely boring. I did back then and I do now. Perhaps, given the technical nature of so much contemporary philosophy, my feeling was a function of the vaccination against mathematics, something I have never wanted to pursue again. What I really like to do is to tackle philosophical problems through the history of ideas – in a way that Arthur Lovejoy and Isaiah Berlin used to do (without at all saying that I want to follow their ideas particularly). More on this shortly.

I never took a biology course in my life. When I was a schoolboy in the 1950s, the brightest kids took Latin and Greek, the middle rangers (of which I was one) took Mathematics, Physics, Chemistry and German, and what was known in those happy days as the “late developers” took geography, Spanish, woodwork, and biology. I kid you not, in those days if you were not too bright you were steered towards medicine. “Not too conceptual and good for those with people skills.” However, like everyone, when it came to dissertation time, I looked for an ecological niche which had some problems and some literature (not too much and not too high a quality). I wanted to work in the philosophy of science – these days I would probably have been drawn towards ethics but back then ethics was all emotivism and prescriptivism and metaethics, where the only discussion of real issues was whether it is always morally desirable to return one’s library books on time. (“What if you are working on nuclear physics and there is some crazy Middle-Easterner trying to get hold of the book you have signed out? Do you have a moral obligation to take the book back?”)

In those days, the philosophy of science literature was dominated by abstruse technical questions about paradoxes of confirmation and the like. (“If you define ‘grue’ as ‘green before time t and blue after,’ why, when t is sometime in the future, do we not accept ‘All emeralds are grue’ but do accept ‘All emeralds are green’ when the evidence is the same for both?”) I had done some of this for a master’s thesis and didn’t want more of the same. Fortunately, I had a supervisor who suggested that I might look at evolutionary theory, since nobody else had ever done so. I did and the rest as they say is history. I read John Maynard Smith’s little introduction, *The Theory of Evolution*, published by Penguin books, and found it fascinating. I went on to the other books he recommended and have never stopped. I became a fanatical Darwinian and still am. I not only got a dissertation out of this, but also my first book, *The Philosophy of Biology*, and have written and rewritten books on like topics from that day to this – including *Darwinism Defended* and *Darwinism and its Discontents*.

FROM HISTORIAN OF SCIENCE TO CREATIONISM FIGHTER

In the mid 1960s I got a job at a new university in Canada, where I stayed until 2000 and then left (for Florida State University, my present home) only because I was coming up against Canadian compulsory retirement laws.

For my first sabbatical, in the early 1970s, I went back to England. I had a special purpose because now I was becoming increasingly interested in the history of evolutionary biology. The most influential

work around in my field was Thomas Kuhn's *The Structure of Scientific Revolutions*, and I wanted to look at some of the issues he raised from the viewpoint of biology rather than physics and chemistry, which were his sciences of expertise.

I went to the University of Cambridge, retooled as a historian and spent long, happy hours in the manuscript room of the University Library studying the unpublished manuscripts of Charles Darwin. I ended the decade by publishing *The Darwinian Revolution: Science Red in Tooth and Claw*.

I always describe this book as the book I wish I had had ten years before when I first started into Darwin studies, and I think that that is a pretty good characterization. The field had been going long enough that the major ideas and interpretations were now out on the table, and I synthesized them. For this reason, although obviously dated in some respects, it is still basically reliable and still in print, selling a respectable number of copies each year.

Then came Creationism. I guess as a child or teenager I had certainly heard of Creationism, and if pushed might have been able to say something (a very little something) about the Scopes Trial, where a young teacher was prosecuted for teaching his class that Genesis is not literally true. But I thought it was all in the past, a bit like weeklong dance marathons and Prohibition.

Out of the blue, I was asked to debate a couple of Creationists. I started right at the top as it were, taking on the leaders in the field Henry M. Morris (co-author of the work that sparked the modern movement, *Genesis Flood*) and his side-kick, Duane T. Gish (author of *Evolution: The Fossils say No!* 150,000 copies sold, something of an order of magnitude better than I ever achieve).

I had found my métier. On the one hand, my training in the history and philosophy of evolutionary biology had prepared me for their arguments, better I suspect than a training in straight science; on the other hand, my personality, honed by a decade of heavy teaching loads facing many, many undergraduates, made me a natural for the stage, realizing that in these circumstances a good joke will get you much further than a long serious argument. I cannot say I ever won a debate—that would be a miracle indeed given the audiences at these sorts of things—but I did do a lot of Creationism bashing.

I should say, incidentally, and this is important for the case I am making, that I never found that these encounters were made tense by personal differences. We might say the most dreadful things about each other on stage or on the radio – and believe me, Duane Gish is a master at this, setting out deliberately to rattle you to the full extent – but off stage everyone was unfailingly polite. Friendly even.

I think Creationism is truly dreadful and absolutely should not be taught in schools. I accept (as you will see) that I think there are all sorts of moral issues at stake here. But to this day, I cannot see the Creationists — or their successors the Intelligence Design theorists — as evil people. They are not Hitlers. I think they are profoundly mistaken and I want to fight them, but at another level I can see that the sacrifices they make for their beliefs are genuinely driven by their faith.

Dawkins and company would say that this is the very point—they are profoundly mistaken and should be fought—and at one level I agree. But I have always found it easier to hate ideas than to hate people. More than this, as a philosopher I am committed to rationality and debate. It may be right for a scientist to have little or nothing to do with Creationists—I can certainly see how people like Dawkins and Gould with their high profiles are unwilling to get entangled—but as a philosopher without that profile I feel that I must continue to engage in discussion of some kind.

I took this to the extreme, some would say over the extreme, when a year or two back I co-edited a book with the leading ID theorist William Dembski. *In Debating Design: From Darwin to DNA* both sides

had their say, although there was a joint introduction. It was a funny experience editing a volume and including material that I really did not think merited publication, and yet wanting it in because it showed just how weak was the position of the other side!

I think I was right in working with Dembski, although if someone says otherwise I am not sure I have a good response. Having said that, I have tried not to burn all bridges between me and Creationists and fellow travelers, though I think Ben Stein who made the movie *Expelled* is intellectually slimy. He lied to me about what he was doing when he asked to interview me (as I gather he did to many others also) and clearly was not at all interested in the truth. If I have a criticism of my Creationists friends it is that they did not stand up for me when that movie appeared, as I think I would have stood up for them.

ARKANSAS AND AFTERMATH

The year 1981 saw the Arkansas Creationism Trial, when the state passed a bill insisting that if students of the state were taught evolution then they must also be taught Creationism. The ACLU brought suit on the grounds that it violated the First Amendment of the Constitution, crossing the separation of Church and State, and in the end the law was thrown out. I was the philosopher witness for the ACLU, along with people like the late biologist and writer Stephen Jay Gould, the late theologian Langdon Gilkey, and the population geneticist Francisco Ayala. A few years after the event, I put together a collection, including the law, the judge's ruling, my testimony, as well as some historical material and reactions by philosophers to the trial.

This had been an early experience of being publicly chastised by those whom I would have thought my (intellectual) friends. On the witness stand, I had argued that one can distinguish science from religion, that Darwinian evolutionary theory falls on one side of the divide, and that Creationism (or, as it was often known, Creation Science) falls on the other side. To make my case, I laid out a number of criteria for calling something a science, including reference to laws of nature, being testable (or falsifiable) and so forth. A number of people, including Larry Laudan, the well-known philosopher of science, were extremely irate at the content of my testimony. They felt that any attempt to demarcate science was bound to fail. They felt rather that one should argue that Creationism is bad science and has failed. These critics were indifferent to the fact that this line of argument would be useless in a court of law – the First Amendment bars the teaching of religion, not bad science. In *But is it Science? The Philosophical Question in the Creation-Evolution Controversy* I reprinted the critics' complaints as well as my responses.

I guess that this was not only an early experience of being attacked by friendly fire, as it were, but also an early realization that that would be about the last thing to make me back down. I use the critics to sharpen my own thinking and to plough on even more strongly. Incidentally, *But is it Science?* is still in print and in fact has just come out in a second edition covering also the recent trial in Dover Pennsylvania, a rerun of Arkansas with Intelligent Design theory now taking the role of traditional Creationism. (The collection now has a co-editor, Robert Pennock, a philosopher who did in Pennsylvania what I did in Arkansas.)

THE SOCIOBIOLOGY CONTROVERSY

I have written just above of an "early experience of being attacked by friendly fire." It was not the only one. The middle of the 1970s saw the explosion of controversy over Edward O. Wilson's *Sociobiology: The New Synthesis* (and perhaps a little bit, relatedly, over Richard Dawkins's *The Selfish Gene*). The critics,

who included two members of Wilson's own department at Harvard (the geneticist Richard Lewontin and the paleontologist and the shortly-to-be phenomenally successful popular writer Stephen Jay Gould), took umbrage particularly at Wilson's presumption to extend sociobiology, the study of social behavior from a Darwinian perspective, to our own species. They argued that it was racist, sexist, unfalsifiable, false (a little conflict here!), capitalist, and much more. Unabashed Wilson then went on to spell out in some detail his thinking about humans, in his Pulitzer Prize winning *On Human Nature*.

Naturally and appropriately, philosophers became interested in this controversy – after all, a lot of the discussion was as much methodological and metaphysical as purely scientific – and I got caught up in the middle. Or rather, I got blind-sided. Coming from England, it had never occurred to me that there might be any objection to extending Darwinism to humans – in the 1950s the leading biological intellectuals like Julian Huxley and J. B. S. Haldane had no qualms about seeing us as products of our past as shaped by natural selection. Far from being some rightist ideology, it was common sense to people of the left as much as to those of the right. In America however things were different. The American left has a much greater component of pure Marxism (as opposed to the softer, neo John Stuart Mill, Fabianism of English socialism) and also for what it is worth includes a much higher component of Jews, people whose close relatives had died in the Holocaust. For people like this, claims that we are products of our genes as fashioned by natural selection are not just wrong but hurtfully wrong. I just walked in naively, thinking that it was obvious that a Darwinian (as I was, enthusiastically) would welcome attempts to see our own species from this perspective. To this end, I wrote a not-entirely-bad little book, *Sociobiology: Sense or Nonsense?* on the topic, expressing my enthusiasm for the ideas, including those that apply to humankind.

Needless to say, by about 1980, I had run into rough water here too, and more than one was holding me up as a dreadful example not to be emulated. Needless to say also this fazed me not one bit. I was a tenured full professor at a really supportive medium-sized university in Canada, a country where English values had not been entirely swamped by the large neighbor to the South. I went on with what I was doing. After my first sabbatical in Cambridge in the early 1970s, I think I had become so enthused by the history of science, I really thought I was moving over from philosophy to history. I found however by the early 1980s that in fact this was not so. Philosophy was still all-important, although as noted above working now more from a history of ideas sort of perspective than from a purely analytic stance.

The encounter with sociobiology led me to think about the big problems, epistemology (theory of knowledge) and ethics (theory of morality), and this led me to write a book on the topic, trying to show how Darwinism throws light on these issues. It goes without saying that the professional philosophical community had only contempt for *Taking Darwin Seriously: A Naturalistic Approach to Philosophy*. Smugly let me note that it is still in print almost twenty-five years later and although (as I forecast) the science now seems a bit dated, there is a growing number (as I also forecast) who agree with the general position that I took. Recently I put together a collection of articles showing the tradition within which I was working, as well as offering some of the best of the contemporary work. I hope that *Philosophy after Darwin: Classic and Contemporary Readings* lasts as long as the earlier work.

RELIGION REENTERS MY LIFE

Let me get back on track, pointing to the present. The really important thing for my story here is that, as a result of the Arkansas trial, I was brought into contact with liberal Christians who were interested in the relationship between science and religion. Many of them were centered on the Lutheran School of Theology in Chicago and were members of a group known (somewhat pretentiously) as The Institute for

Religion in an Age of Science (IRAS). They met once a year in July at a conference center in New England (on Star Island, off the coast of New Hampshire) and they invited me along. Thirty years later I still go occasionally, although less than before mainly because so many of my original friends are now dead and because the group is increasingly interested in soft-side philosophy (emergence and that sort of thing) and less in the science-religion relationship.

Strange as it may sound coming from one who is able to tolerate whole belief systems he rejects, I find that some kinds of thinking – emergence and holism at the head – really give me the intellectual creeps. Those looking for a psychological explanation might feel the need to go no further than the fact that my much-loved mother was replaced by a German step-mother (with whom today I have a deeply loving relationship) whose family were devotees of the philosophy of Rudolf Steiner, anthroposophy. My father indeed left the Quaker school where he worked and for many years was bursar at a Waldorf school in the south of England.

What was my religious position about this time (the early 1980s when I was in my early forties)? I said earlier that I had no religious beliefs. Let me say a little more on the topic. Childhood Christianity just faded away in my early twenties. There wasn't any kind of Road to Damascus experience in reverse, nor was it a direct function of taking up philosophy. I didn't read David Hume and become an instant skeptic. It was rather like baked beans and stamp collecting, two other things I had been passionate about as a child. The feelings and beliefs just went. They have never returned.

I thought perhaps that as I got older, I might start believing again. I cannot honestly say that if I were on a hijacked plane I would not start praying again, but I find actually that a gentle skepticism is really very comforting as I move into old age. For some strange reason, my non-existent God has always been a bit of a Presbyterian – the kind who created the earth and its denizens and then regretted it mightily. I suspect that this may be bound up with a loathing for my boarding-school headmaster. If you were not one of the chosen – good at games or well connected – he was cruel in his indifference. Calvinists know all about this.

Taking Darwin Seriously was important here. In that book I was trying very hard to find a substitute metaphysics for the Christianity of my childhood. You may think I was trying to provide a rival religion. I don't think so, for reasons that I will talk about later. Although if you insist, I am not going to lose any sleep. But I was trying to find a rival conceptual scheme, especially when it came to ethics. This was especially important because I saw the fight against Creationism as a moral crusade, and I needed a foundation from which to work. A philosophy of what I like to describe as Humean skepticism brought up to date by Darwinian selection theory was what I needed and accepted.

I should say that this required a major shift in earlier thinking. In *Sociobiology: Sense or Nonsense?* I had rejected the possibility that any science, Darwinism specifically, could be the starting point for ethics.

Now I swung 180 degrees. Although I had not swung to traditional evolutionary ethics, the kind embraced by thinkers from Herbert Spencer through Julian Huxley and on to Edward O. Wilson, that sees moral claims (what we in the trade call "normative ethics") being supported or justified by the fact of evolution. This traditional view relies on a progressivist reading of evolution, a kind of movement from the least (the worthless blob) to the most (the worthwhile human), a reading that always struck me as highly dubious. Rather, in the tradition of Hume, I embraced a form of ethical skepticism (as it is known) where one denies that there are moral foundations at all. One sees morality as (to use a phrase that has gained a certain notoriety) "an illusion of the genes to make us cooperators." You may think that this is not much of a foundation for ethics, and in a sense you are right. That indeed is the point of the whole thing. At

another level, although you don't have foundations in the traditional sense, everything works just fine. As Hume pointed out, what our philosophy fails to find is filled very nicely by our psychology.

SCIENCE AND VALUES

From childhood on, no doubt as the offspring of lower-middle-class parents striving to succeed both for themselves and for their children – mine was the first generation when, thanks to crucial educational acts, it was genuinely possible for people from my socio-economic strata to go on to higher education – I have regarded the warning of the talents as the most important of Jesus' parables. To this day, wasting time is not simply foolish but immoral. In particular, I have always taken the immortal words of Marlon Brando in *On the Waterfront* as my warning of doom. The ex-boxer is talking to his crooked brother, who was part of the group who made huge amounts of cash by making him throw his fights. Brando asks, why did you do it to me? I missed out on the possibility of real title fights. "I could've been a contender." I don't want to get to my deathbed muttering: "I could've been a contender." At least I don't want to get to my deathbed muttering that, when I know the main reason why I was not a contender was because I did not work hard enough (never really an issue in my case) or because I failed to have the synthetic imagination (always an issue in my case because I am forever taking on jobs for others that use up my time).

By my mid-forties, I had got out of a disastrous first marriage and into a very happy second one (that has my silver wedding anniversary on the near horizon). I was healthy and well paid. I loved my job and I was busy. I had just started a journal *Biology and Philosophy* and that alone was taking time. I was suddenly getting lots of leave, first a Guggenheim and then a Killam (the Canadian equivalent of a MacArthur). All of this was a red flag. I needed a big project, one into which I could put much effort and if successful feel that I had been a contender.

Serendipitously my interests in the history of evolutionary biology came together with my interests in the philosophy of biology through the concept of biological progress, something which, as just noted, I had been thinking about seriously in the context of evolutionary ethics. The big conceptual issue in the history of science in the 1980s was that of "social constructivism." Is science a disinterested reflection of objective reality, as virtually every scientist thinks and as most philosophers think, or is it an epiphenomenon of the culture of the day, with about as much literal connection to a real world as a Van Gogh painting or a Jonathan Edwards sermon? I decided to take the concept of progress in evolutionary biology and trace its history through from the beginnings of evolutionary thought (in the eighteenth century) to the present.

This would be history, but history with a purpose. I take the concept of progress to be a culturally value-laden concept – we start with the social notion of progress, namely that we can and should improve things, and then read it into biology, as a move up the ladder of life from the worthless to the very worthy. If progress appears in evolutionary biology, then I take this to be a positive score for the social constructivist. If it is not in evolutionary biology, then this is a positive score for the scientific objectivist. My interest then was the philosophical question of what happens to the cultural notion as embedded in evolutionary biology through the course of time and what does this tell us about the nature of science?

I started with what seem to be two solid facts. First, the birth of evolutionary thinking was drenched in progress. Everyone was a progressionist, blob to human. Second, professional evolutionary thinking today is not progressionist. Open up a copy of *Evolution* or of *American Naturalist*, and you do not find biological progress. (I am not unaware of the irony of starting with two "facts" as one engages in the

question of whether you can ever really talk about unadorned facts. In a sense, this was not quite my problem. In another sense, I regard all philosophical inquiry as circular in a feedback sense. You have to start somewhere, and if you run into trouble then one of the things you do is go back and look again at your starting point.)

Now, where do you go from these two facts? As the title of one of my already mentioned books makes clear, I think of myself as a naturalist. By this I mean that I think the philosopher should make his or her philosophy as close to science as possible, drawing on the results of science and also emulating its methodology. (Again the circular issue of looking at science using its methods, but there is no other way. As you will see in a moment, this does yield results.) Science works hypothetico-deductively, or as Popper used to say, through bold conjectures and rigorous refutations (or attempts thereat). You come up with a hypothesis, you put it to test. If it works, fine and dandy, and if it doesn't, then try something else.

Along with my facts, I went into my inquiry with two hypotheses. One was what I would say is a standard one for the philosopher, namely that culture obviously rides high in science when it is just started, but then over the years as new information comes in and as new successful theories are proposed, the culture gets washed out. According to this hypothesis, there is something to social constructivism, but frankly not very much. Evolutionary theory seems to be a paradigm example of this. The cultural value of progress (improving society and so forth) is there at the beginning. Then along came Charles Darwin with the mechanism of natural selection. This may not be circular but it is relativistic, because there are no absolute winners. What might be good in one context is not necessarily good in another context. After this, completing the one-two punch, there was Gregor Mendel. The most important thing about Mendelian genetics is that the new variants, the mutations, the raw building blocks of evolution, are never designed for need. They are random. Darwin and Mendel were accepted by evolutionists because they improved the science mightily – one could make predictions and that sort of thing -- but the side consequence was that progress got squashed out. It was nothing personal. It was just that the cultural value went against the objective science. (Those who know the lingo of philosophers will recognize this as a variant of the context of discovery/context of justification division. This is the division that says that all sorts of odd and irrational psychological factors get involved in discovery, like seeing snakes swallowing their tails when you are looking in the fire, but that when scientists come to test their ideas reason and rationality and evidence take over. This variant accepts that the irrationality, including the cultural baggage, of the discovery might last in science for a very long time. It only goes after much discussion and work.)

This was the standard claim and it had actually been made in the context of evolutionary biology. I had another hypothesis. I thought that there might well be something to social constructivism. However, my hunch was not so much that culture had been expelled but that the culture itself had changed! Who today believes in cultural progress? The Bomb, Global Warming, ongoing poverty, conflict in one part of the world after another, and so much more. It is not just mistaken to believe in progress but immoral. I thought therefore that evolutionary biology today does not embrace progress simply because people no longer believe in the cultural value.

The wonderful thing is that my work showed me that I was wrong on both counts! After Darwin, after Mendel, evolutionary biologists went right on believing in biological progress. This is true of the great population geneticist Ronald A. Fisher. It was true of the great empirical evolutionists of the twentieth century. Julian Huxley and Edward O. Wilson have been mentioned – also geneticist Theodosius Dobzhansky, systematist Ernst Mayr, paleontologist George Gaylord Simpson, and botanist G Ledyard Stebbins. And they went on believing in progress in the face of today's calamities and challenges.

Scientists are in respects atypical. They believe in progress because they are scientists. That is what science is all about and someone who does not think that we are getting and can get ever nearer to the truth should not be a scientist.

So what then was the real answer? It was that the culture of science frowns on the intrusion of external (to the science) cultural values. Apart from anything else, you are not going to get the support of society if you are seen pushing an agenda. It is the image of being an objective inquirer that commands the respect, within and without science. So progress was thrown out of biology, not because people quit believing in it, but because they saw its continued incorporation as antithetical to their hopes of scientific respect.

Allow me to explain: What I found was that the history of evolutionary theory falls into three stages. Until Darwin, evolutionary theory was simply an epiphenomenon of hopes of progress. It was regarded as little more than propaganda. It was a *pseudo science*. Darwin upgraded the field, and evolution became something that was generally accepted. However it was still deeply infused with notions of progress and was more a museum science and something for the general public than truly an area of first-class research. It was a *popular science*. Finally, after the coming of Mendelian genetics the new synthesis was formed, neo-Darwinism. This truly was a *professional science*, with full-time researchers, grants, students, a journal, and much more. (A somewhat less-than-friendly critic of my completed book pointed out that my stages seem awfully like those of the nineteenth-century positivist August Comte. He spoke of the religious phase, the metaphysical phase, and the positivist (scientific) phase. Although I did not have this at all in mind when I was working, that seems to me quite an astute comment.)

I took a long time to work all of this out and to write it up. The epiphany – a real road to Damascus experience – came in the late 1980s when I spent a couple of weeks in Philadelphia, at the American Philosophical Society, working in the archives of the paleontologist George Gaylord Simpson. I was looking for discussions of progress, which I found in abundance for Simpson was deeply committed to the idea, both culturally and biologically. But what really hit me – actually about a week after I left to return home – was the extent to which Simpson was obsessed with the status of evolutionary studies as a profession. As soon as I realized this, a huge amount fell into place. Naturally, I rewrote everything that I had written before making the connections, acting as though I had known this all along! It was very exciting to find places where I was pushing and straining suddenly became the strongest evidence for what I wanted to argue. A case in point being that I could often pin down that someone believed in all kinds of progress, but rarely in their professional work. Almost always at conventions where they were giving the after dinner lecture or some such thing – the time when philosophical reflections were not just allowed but expected. I switched from pretending that it did not really matter where I was getting the stuff on progress, to highlighting that it came only in certain places.

These ideas were published in *Monad to Man: The Concept of Progress in Evolutionary Biology*. This book was published by Harvard University Press, with whom I have gone on to have a very happy and productive relationship. I deliberately went with a university press because they demand outside anonymous refereeing. Commercial publishers are far less worried, especially when you are dealing with a successful author whose books sell. (Mine usually sell about ten thousand copies. Not bad when the usual university press run is less than 500, although not good when you think of the literally millions of copies sold by Dawkins and Gould.) I was at the point where I was commissioned to write short pieces and books would be picked up readily. I wanted to be sure that I was producing work that could stand the anonymous referee. I find being refereed tremendously stressful and I am inclined to think that anyone who says

otherwise is a liar. But apart from having the stamp of approval by a disinterested reader, being refereed like this can make a huge difference to quality. Last year, with a young historian David Sepkoski, I published a collection on the recent developments in paleontology – *The Revolution in Paleontology*. I cannot tell you how much that collection was improved by two rounds of refereeing.

Almost as a spin off from *Monad to Man*, in the next few years I went on to publish *Mystery of Mysteries: Is Evolution a Social Construction?* And *Darwin and Design: Does Nature have a Purpose?* The former looks more at the philosophical issue of objectivity (although as always through the medium of history). I emphasized what to me was of growing importance about the nature of science, namely its deep reliance on metaphorical thinking. The latter looks at the concept of design in evolutionary biology. In a way, in this book I was looking at some short-term issues that become long-term issues when you look at progress, as I had in the earlier book *Monad to Man*. I should say that *Darwin and Design* was supported by a very generous grant – actually it was a book competition that I won – from the Templeton Foundation. Given the controversy that surrounds this Foundation, with the New Atheists attacking its desire to find a meeting place between science and religion, I should say that when the Foundation posted a number of topics on which it solicited proposals, these topics struck me as perfectly respectable from an intellectual viewpoint. I entered the competition and won, as best I know fair and square, and I received no pressure from the Foundation when writing the book or publishing it. The Foundation did not even demand that it be acknowledged, although I would have been ashamed of myself had I not done so. I learned later, incidentally, that one of the leading New Atheists also entered the competition, so if I were looking for absolution (which I am not) that would presumably provide it.

Although unplanned as such, I now look upon *Monad to Man*, *Mystery of Mysteries*, and *Darwin and Design* as a trilogy. It deepened my respect for science and for scientists quite immeasurably. But I came away realizing just how deeply science is immersed in the culture of the day. I do not mean at all that science is simply a social construction, nor even more do I mean that science simply reflects cultural values, be they socialism, capitalism, Christianity, anti-Semitism, patriarchy, a metaphysical thesis like progress, or anything else of a comparable nature. It is true that scientists have held, and do still hold, some or all of these views. It is true that these values have seeped into science on occasion – more accurately drenched science on many occasions. But I think the philosophers are right who say that reason and evidence does count. Science is not made up but is about the real world. However in practice the culture of science itself has its effects and, through metaphor, it makes itself known – natural selection, struggle for existence, division of labor, adaptive landscape, selfish gene, genetic code, arms race, and more. I don't think you get a simple transfer of values – a scientist might use the division of labor metaphor while looking at ants and yet deplore its use in human society, thinking it totally deadening. I do think the culture gets in and makes itself known. I don't think for instance that we could have evolutionary theory had we not had Christianity in the first place – making the very inquiry into origins significant – and I don't think we could have had Darwinian evolutionary theory without the Industrial (and accompanying Agricultural) Revolution in the second place. In my *Mystery of Mysteries: Is Evolution a Social Construction?* I touch on these issues.

SCIENCE AND RELIGION

I am sure that this very strong feeling about the nature of science – that it is not something handed down from on high (to use an interesting metaphor) or completely disconnected from humankind – has influenced me as I moved in the last decade seriously to grapple with the relationship between science and religion. I think science is the highest form of knowledge – I am a philosophical naturalist – but I do think

that science is a human enterprise and that that shows. (What about mathematics? I am just not sure about that. I have seen arguments that statistics is very much molded according to human interests. But what about the Euler identity? $e^{\pi i} + 1 = 0$ I don't see much culture there. Perhaps someone might make an argument that only certain cultures would even contemplate thinking about and using the square root of minus one. I don't know.)

I am not quite sure why I moved in the last decade to work seriously on the science and religion relationship. Although I have many good friends in the field, at the risk of making myself unpopular with yet another group who should be natural allies, I think the quality of the work is abysmally poor. Not the people who are working on the history of the relationship between science and religion. There is some really terrific work in this direction, all of whom (including me) owe a huge debt to the leader in the field, Ronald L. Numbers at Wisconsin University. I am thinking more of the people working at the philosophical interface. Stephen Jay Gould wrote a really bad book on the subject, *Rocks of Ages*, which achieved harmony only by gelding religion of all of the things that its followers find meaningful. John Polkinghorne has followed a distinguished career as a physicist by embracing enthusiastically arguments that David Hume and Immanuel Kant long ago showed totally fallacious. Robert J. Russell, for whom I have great admiration as one who has tried hard to make science and religion a functioning paradigm, wants to put God back in the world in a way that would embarrass even Archdeacon Paley. And there are worse. The distinguished Calvinist philosopher Alvin Plantinga would replace modern science with something he called Augustinian science that seems to exist only to make place for miracles. And so the dreadful story goes on.

So, as it was when I started into the philosophy of biology, the situation is ripe for one such as me, who loves to go dashing in and to try to tear down the old and inadequate and to build anew. Interestingly, once a field takes off, I start to get bored as much better technicians than I move in and work the ground. If I were a businessman, I would be forever starting enterprises in my garage. I would hate to work for General Motors. (But then, who wouldn't hate to work for General Motors these days?) I do remember about ten years ago a rather drunken evening with my editor at Cambridge University Press, Terry Moore, and trying to find an area into which I might move. There may well have been a political motivation, feeling that this is an area that needs tackling and now, before the clash between science and religion in America gets even worse than it is. After a decade of relative quiet following the Creationist debacle in Arkansas, the coming of the Intelligent Design movement in the 1990s had started again to bring the pot to the boil. I wanted to get involved one more time, but I sensed that what was needed was less a direct attack on Intelligent Design (others were already at work on this) and more something general, drawing on my expertise. (As I said early, purely and simply to avoid compulsory retirement which was starting to loom over me, in 2000 my family and I left Canada and moved down to Florida. I don't think I knew I was going to make this move when I was talking to Terry. But by then I had been involved in America's political fight against Creationism for over twenty years, so in or out of the country that was not a factor.)

Expectedly from one who writes as much as I, there tends to be overlap between books, and I do not pretend that I have never tackled the science-religion relationship in other books. However I chose now to write directly on the topic and this led to the first of what has turned out to be another unplanned (and admittedly somewhat loosely sequenced) trilogy, this time on the science-religion relationship. In *Can a Darwinian be a Christian? The Relationship between Science and Religion*, I try in a straightforward way to answer the question posed in my title. I lay out in a fairly standard way what it is to be a Darwinian and then I go through the main claims of Christianity as they might be impacted by the science. I confine my discussion as much as possible to what one might call traditional Christianity; that is I say little about

American Creationism and so forth. Obviously Darwinism and Creationism clash, we know that and it is not very interesting. The question is whether Darwinism and traditional Christianity clash, and it turns out that most of us do not know the answer to that and this is interesting.

Let me say a couple of things about this book and then turn to reactions. First, one of the big complaints I have about the science-religion literature is that there is an unwillingness to engage with the theology of the great religions, Christianity in particular. In part this is because many of the science-religion participants come from science and basically are not well schooled in theology, or philosophy for that matter, and tend as scientists do to think that you can mug these things up in a couple of hours if that. In part, I think it is because participants are a bit embarrassed about pushing their own faith and want to appear ecumenical and not tied down to specific items of belief. The trouble is, and I think we have seen this in recent years in the conferences run by IRAS, you end up with a kind of wishy-washy Unitarianism, and not much more. Fuzzy, warm feelings about the environment and that sort of thing. So one thing I tried to do in my book, since it was explicitly about Christianity, was to take the theology seriously. To that end, I read a number of textbooks and then other works that folk pointed me towards. I cannot say that I was particularly theological literate (I was better informed on the philosophy, obviously) but I do think my efforts paid off. One thing that has been remarked on is that the book does not trivialize Christian thought.

The second point is more of a personal revelation. I thought the big issue for the Christian in the light of Darwinism – actually the big issue for the Christian, period – would be the problem of evil. How do you speak of a loving, all-powerful God in the face of the struggle for existence? This was a problem that Darwin himself had and it is one that others, including Richard Dawkins, have written on more recently. I cannot say that I felt that I got on top of the problem of evil, indeed I am not sure that one can get on top of the problem of evil, but in the context I did not find it as worrisome as I thought I would. Put it this way. If you think one can speak successfully to the problem, then I don't think Darwinism adds to the problem. Indeed, if you argue that there were reasons why God should create through law rather than miraculously at every step, and I think this can be defended theologically, then it may be that the only way to get organisms is through natural selection and this implies a struggle.

However, what I did find worrisome was the matter of evolution and direction – I guess with all of my work on progress I should have anticipated this. It seems to me that an absolutely bottom-line demand of the Christian is that humans are not contingent. They had to exist. Perhaps they could be green or have twelve fingers. Perhaps even sex was not necessary. But intelligent, moral beings are not a matter of chance. Beings made in the image of God had to have evolved. And that is a problem if you are not convinced that evolution is progressive, leading eventually up to humankind. Here, it really does seem that Darwinism undercuts Christianity. I am not sure that I solved the problem in *Can a Darwinian be a Christian?* One kind of solution is to argue that there is indeed progress. Richard Dawkins believes that there is progress through arms races – lines of organisms compete and eventually this leads to intelligence. But, much as I enjoy using the arguments of the New Atheists to make the case for the other side, I am not convinced that really this guarantees the appearance of humans. Another kind of solution, a theological solution in the tradition of Augustine, is to argue that God knew what would happen when He created and that is enough. In one sense, I am much happier with a theological solution to a theological problem, although this particular solution did worry me because it does seem to have a kind of determinism built-in that I find antithetical to Darwinism. It may not be directed, theistic evolution, but it seems very close.

I think now, several years later, I am more on top of the problem. The answer lies in the fact that, since humans did evolve through natural selection, they could evolve. It was just a question of enough

tries. Interestingly Stephen Jay Gould, who strongly opposed the idea of biological progress, believed that given the size of the universe and the likelihood of other planets with life, on balance intelligent life was likely to emerge more than once. Even this seems to me to leave too much to chance for the Christian. But I see no reason why God should not go on creating universes until humans do appear. It is not as if God is waiting around for this to happen. He is outside time and space. And if you say that it seems like an awful waste, that is to put your value on creation and also to ignore that much of our universe seems uninhabited and by your argument is a waste already. Note incidentally that I am not arguing scientifically for multiverses, but offering this as a theological solution.

The reaction to the book was interesting. The science-religion community ignored it. Frankly, I think they find me pretty irritating. I am a hard-line Darwinian, I am a non-believer, and I show contempt for much that they do. I would find me pretty irritating, if I were them. However, I have had a lot of folk write to me and say how helpful they have found the book. A typical reader would be someone who teaches science at a small college, grew up in a Christian home and now is either a more liberal Christian than their parents or not even a believer but who, like me, values their religious childhood, and who worries about these issues. The book has been reprinted several times and translated into other languages, including I believe Korean, and still sells steadily. So I feel it has been a real success. It taught me a lot as I wrote it and it has obviously helped others.

However, other reactions were a wakeup call. As noted earlier, Jerry Coyne is an evolutionary biologist at the University of Chicago. He is a student of Richard Lewontin and the co-author of a great book on speciation. I had had a little correspondence with him (initiated by me) at the end of the 1990s, because I had been much impressed with an article he had co-authored criticizing the shifting balance theory of evolution by the American population geneticist Sewall Wright. This criticism, based on the science and the theory, meshed with doubts I had myself formulated based on the historical origins of the theory. (In essence, I think Sewall Wright is more a follower of Herbert Spencer than of Charles Darwin.) I don't think I had met Coyne personally and in fact I am still not sure that I have met him. He wrote a scathing review in the *London Review of Books*, mocking me as a fool and scorning me as a dupe.

Of course, it is fairly easy to do this when you are not too bothered about the content of the book you are reviewing. My efforts to distinguish what I call traditional Christianity from American Creationism come to naught. "Ruse's attempt at a reconciliation ultimately fails – not surprisingly, given that it requires us to accept a version of Darwinism so extreme that it has practically no adherents, and a form of Christianity that would appall most theologians and churchgoers." And then Coyne is off on a line saying that the fossil record is inconsistent with Genesis and so on and so forth. "The fossil record shows that the Genesis version of creation is manifestly wrong if read literally, and one is left either questioning the authority of the Bible or recognizing that it is a prolonged exercise in metaphor – and as such open to endless interpretation." Condescendingly, he picks up on the very issues I wrestle with, like the problem of human existence, and then happily dismisses all solutions. It is the first, and I trust the last time, that I have been accused of being a theistic evolutionist. Mainly the tone of the review is astonishment that anyone should be as naively bold as I to try to reconcile science and religion. It just cannot be done and science has won.

My second foray into the science and religion field was more historical. The *Evolution-Creation Struggle* started as a kind of overview of the three books that I had written on science and values. But it soon took on a life of its own. I argue that there are significant parallels between evangelical Christianity and Darwinism taken as a world philosophy in the way that many have taken it. At a more technical level, I

cast the debate in terms of eschatology. The evangelicals I argue are like premillennialists. In theological terms this means that Christ must come before the millennium and that our duty here on earth is to prepare for this coming. We are sinners and nothing we can do ourselves can change things. It is only through faith that we can be saved. The Darwinians I argue are like postmillennialists. They believe that we must make the world better ourselves and only then will Christ come again. Hence we have the obligation to work to improve things. But I argue that this means also that there is a kind of shared theological context to their differences and it is because of this shared context that the clash between evolutionists and creationists can be so bitter. They are arguing over the same things. More than this, I argue that the chief divide is not really about science – no one lies awake in the middle of the night worrying about gaps in the fossil record – but the different moral systems to which the two sides point. On the one side, abortion on demand, anti capital punishment, pro gay marriage, and the like. On the other side, anti abortion, pro capital punishment, anti gay marriage, and the like.

Obviously my position needs spelling out. For a start, I certainly don't believe that all Darwinians are Christians. At most, I am speaking metaphorically here. Second, I don't think that all Darwinians want to make a world view out of their science. I think you can do evolutionary biology without interest in these issues at all. Third, I don't think every Darwinian who makes a world philosophy from the science fits into my picture. I don't myself. The key issue is that of progress. It is the Darwinians who are committed to progress who try to make something more of their science, something akin to a secular religion. It is they who are committed to the eighteenth-century Enlightenment project of the possibility of improvement, of progress. And the evangelicals to the contrary are committed to the eighteenth-century reaction to progress, to the religion of the Pietists and Methodists and others, to Providence.

I pitch the story strongly, with lots of fun quotes, and thanks to a terrific copy editor at Harvard University Press *The Evolution-Creation Struggle* is beyond compare my best written book. It got quite a bit of favorable attention, including a review (written just before he died) by the doyen of the Creationist movement, Henry Morris. (He didn't agree with my thesis, but I was tickled that he praised my knowledge of the Bible. As a former Quaker, that is, as someone coming from a religion that does not put a heavy emphasis on Bible reading, that was quite a compliment. All of those nights, thanks to time changes, unable to sleep in my hotel room, reading the Gideon Bible, had certainly paid off.) On the other side, this time it was the philosopher Daniel Dennett who took off after me. Among other things, he told me that he wrote a letter (co-authored with the Harvard linguist Steven Pinker) to the *New York Times Book Review* criticizing the book. In the event it was not published and the *Review* was taken up with a highly critical review of his book, *Breaking the Spell*. To this day, I am not convinced that Dennett actually read the book, but he gets very tense at the suggestion that he or anyone else might be endorsing a religious position, however defined.

As it happens, I did not say anything in the book about Dennett's religious beliefs, secular or otherwise. I did say that I thought Edward O. Wilson's position could be described as religious, and I think Wilson would agree with this. I do confess that I also gave the impression that he was not alone in this. Although these things are all a matter of degree, I do think that the New Atheists show the fanaticism one associates with religious sects and that this comes through particularly in the venom directed to those who almost believe the same things, but not quite. How often have these sects split over some issue – say about the exact meaning of the host – that to the outsider seem totally trivial? Perhaps my differences with the New Atheists are not really trivial, but when I think about our mutual distances from the Creationists, it is hard to think otherwise.

I suppose you could say that there are tactical issues here. The New Atheists clearly think that someone such as me, an “Accommodationist” as I am called, is not doing the right thing faced with the problem of religion in America today. I conversely worry that they are doing a very wrong thing, and that the ways in which they mix their science and their anti-religious diatribes are socially useless and politically dangerous. If Creationism crosses the divide between science and religion, then why on earth is it not the case that the New Atheists likewise cross the divide? They mix up their atheism and their ardent evolutionism at all and every occasion, like this one:

Evolution has implications about how the world works. If you deny them, if you pretend evolution is cheerily compatible with the god-is-a-loving-creator nonsense religions peddle, you aren't teaching evolution. You are pouring more mush into the brains of young people. If you are a conservative Christian, it's entirely understandable that you would fight evolution, because the truth does not favor your position. If you are a moderate Christian, you are not helping science education by enabling fear of atheism by continuing to lie to people, assuring them that science isn't going to challenge their religious beliefs. It will, or the teachers are doing it wrong. (Myers, December 8, 2009)

You tell me why that does not violate the First Amendment.

I now come to my new book, the third volume of the trilogy on science and religion, *Science and Spirituality: Making Room for Faith in the Age of Science*. The argument in this book is simple — indeed so simple I worry that others must have already made it. If they have not made it was it because it is obviously wrong? I shall soon find out. In the first part of the book, I give a historical account of science, showing how up to the time of the Scientific Revolution (16th and 17th centuries) the root metaphor that people used to think about reality was that of the world as an organism. Plato and Aristotle were definitive on this. Physical reality was in some sense living and that, for instance, is why talk of final causes was appropriate. You could ask about the function of a river, because it had to have one. Then came a new metaphor, namely that of the world as a machine. Physical reality was simply dead matter, or not really that, because it had never been living in the first place. I show how this metaphor first conquered physics, then biology (thanks in no small part to Darwin), and finally psychology, in the form of the brain as computer sub-metaphor.

With the history done, I turn more philosophical, arguing that metaphors have strengths — they help you to organize things and they have terrific heuristic power — but also limits — there are questions that are not asked. Not just questions not answered, but not even asked. (You can see the influence of Thomas Kuhn here and what he says about paradigms, entities that in later writings he tied intimately to metaphorical thinking.) If I say my love is a red, red rose, I am saying nothing at all about her mathematical abilities — not unable to say, but not even asking about them.

Likewise I argue that the machine metaphor does not ask certain questions that I insist are nevertheless genuine questions. Included here are why is there something rather than nothing, what is the ultimate basis of morality, what is consciousness (what is sentience), and does it all mean something, in particular to us humans. I don't think science starts to answer these questions (and there may be more). I think you can be a skeptic on these matters — I just don't know — but I argue that it is open for the believer. The Christian is what I talk about because that is the religion I know best, to offer solutions. Others don't have to accept them, but that is their business.

What the Christian cannot do is encroach on the domain of science. That is why I offer no hope to the Creationist, because that position does clash with science. (Expectedly, I don't have any time for those who would alter science to fit with Creationism.)

I should say that part and parcel of all of this is a strong feeling of discomfort about natural theology, understood in the sense of proving the existence of God through evidence and reason. I don't think the arguments work but I don't even want the arguments to work. It is all mixing science and religion in a way I dislike.

Additionally, because ultimately I think that the Christian position has to come down to faith – you believe these things through a kind of self-validating intuition or you don't – I am with people like Kierkegaard and Barth who don't like natural theology for theological reasons. They feel that for faith to be faith it must involve an unjustified leap into the unknown. Natural theology tries, illicitly, to put boards across the gap.

The physicist Ian Barbour has proposed a four-way division of the possible ways in which the science-religion relationship might be construed. The first possibility is that of *warfare*. Science and religion are at war and that is all there is to the matter. This is the position of the New Atheists, as well as many religious people at the evangelical end of the spectrum. My feeling is that in respects science and religion are at war. You cannot be a Darwinian and a Creationist at the same time. You cannot accept the claims of modern anthropology that the native people of North American came more than ten thousand years ago across the Bering Straits and at the same time accept the Mormon claim that the native people are descended from the lost tribes of Israel. A major point of my position, however, is that science does not have to be at war with all religion and that it is not necessarily at war with traditional Christianity.

Barbour's second possibility is that of *independence*. Science and religion talk about different things and cannot clash. This is often known as the neo-orthodox position because it owes much to the theology of Karl Barth. The most recent major exponent was the late Langdon Gilkey. Obviously at an important level, this is my position. Where I differ from someone like Gould, who also embraced it in his *Rocks of Ages*, is that I want to give the religious person a great deal more than mere ethical sentiment. I think the Christian can hold to everything that he or she holds dear.

Barbour's third and fourth positions expect a certain amount of interaction between science and religion. The third allows for *dialogue* between the two and a certain reaching across. The kinds of knowledge that the two claim may be different but not of such different type (as the independence positions claims) that they cannot overlap. I take it that the person who likes natural theology (the Thomist, for example) embraces this position. The fourth position is full-blooded *integration* of science and religion. I think someone like Teilhard de Chardin would fall into this category and also the process theologians influenced by the philosophy of Alfred North Whitehead.

Obviously I am not a supporter of either of these positions, the fourth particularly. However, I do see the need to negotiate boundaries and for religion to respect science and if need be go with it. I don't see how you could have a theological position today without in some wise taking evolution into account, for example. So perhaps in a way I do think that the third position is relevant also. The important thing is not to be dominated by Barbour's categories but to use them for insight. And not to think that it must be one position only and all of the others are wrong.

ACCOMMODATIONIST?

Let me pull things together and conclude. Am I an Accommodationist? It all depends. If it means thinking that the Christian religion is true, then I am not. If it means thinking that religion, and Christianity in particular, is a valid way of knowing, and that as such I should not criticize it – just as I should not criticize your wife’s looks even though I am not in love with her – then I am not. I think religion is a delusion and that faith is chimerical. I really do. However, my form of Accommodationism says that science can only go so far and that after this if religion wants to take over, science as science cannot stop it. You can use other arguments, theological and philosophical, and this I myself would do. But these are not scientific arguments. Note the caveat that my Accommodationism allows only those aspects of religion that do not encroach illicitly on science. So Creationism is ruled out. Science may have boundaries but they are pretty far flung.

Does my Accommodationism mean not criticizing religion as a social phenomenon, either because you should respect the beliefs of others or because it would be politically or socially dangerous to do so? I am not an Accommodationist in this sense either. I wouldn’t argue that Christians are all bad. Christians, in fact, have done some good. For example, the Quakers and the evangelicals that fought slavery at the end of the eighteenth century and beginning of the nineteenth evidence this. It is also silly to argue, as does Dawkins in the *God Delusion*, that the really major evils all come back to Christianity (or some other religion). It is just not true that Hitler was motivated by the Christian faith, or many of the other leaders of the Third Reich either. The same holds for Stalin and Mao.

However, religious believers have been responsible for many evils and I would say that it still works that way. The oppression of women and homosexuals is in large part the fault of religion. And this is without getting into specific things, like the ways in which Catholic priests have used their positions of authority to abuse children sexually. Not to mention the Church hierarchy fighting tooth and nail to avoid responsibility. That is wicked and “Christians” had a role in all of this.

Now, here is a difficult question. If I believe that religion is false, does my form of Accommodationism require or allow me to respect Christians as Christians? I am not much of a warrior, and although I am no longer a pacifist (as I was as a Quaker), I am still a lot closer to pacifism than most people are. Yet I can respect, let us say, Dwight Eisenhower in his role as supreme commander in the West during the Second World War. I think he was a good man doing a very tough job. I would be the first to stand between him and a critic who wanted to spit on him.

What about Christianity? I think I really do respect Christians. Not just love, for although that is there it is not quite the same thing. I tell my children that I give them my love, but they have to earn my respect. The same is true of Christians and some do earn my respect — not despite, but because of, their Christianity. I think they are honest people trying to make real sense of a bewildering universe. They are often moved to action in good ways because of this. I am with Immanuel Kant on this. It is the good will that counts above all else.

Having said this, understand that I do not extend my respect to every Christian, however sincere. If I sense that people are not taking seriously arguments that they should take seriously – especially those about science – then my respect diminishes. This does worry me a bit. The people I respect are those that are socially respectable – the Episcopalians, the Lutherans, the Calvinists, and so forth.

What about the others? Am I letting my prejudices show? I really find it very difficult to respect the Mormons. The whole thing seems to me to absolutely ludicrous, from wearing silly underwear to not drinking tea and coffee, to all of that stuff about golden plates, not to mention the already-mentioned lost tribes of Israel, now supposedly alive and well and living on reservations out West. Why do I not feel the

same way about Christianity? Is turning water into wine any more stupid than thinking Joseph Smith got special insights in upstate New York? Is it simply that one is older and I grew up with it? Is wearing a fancy pair of knickers anything different from wearing your collar backwards?

I am not sure that the answer lies simply in the reliability of the Bible stories. I am a little bit with David Hume on this. If you want to believe in miracles, do so on faith. Don't get into the justification business. (This is why I think Pannenberg is barking up the wrong tree.)

I think the reason I can legitimately separate your basic Anglican or Roman Catholic from a Mormon rests on the fact that traditional Christianity (this may also be true of Judaism and other religions) has worked hard at what I will call philosophical theology. I came to appreciate this while working on *Science and Spirituality*, a book that goes much more deeply into theological questions than my earlier writings. Such Christianity has labored to give philosophical meaning to the claims, say, about the nature of a necessary God and so forth. I think this also holds in areas like ethics, where (to name one branch of Christianity) Catholics have tried to give some meaning to natural law and so forth. (Protestants have done similar things, as I know full well from my own background.) So as a philosopher I can appreciate the efforts to try to answer the basic metaphysical questions.

If you can show me that the Mormons actually do the same and show the same level of conceptual sophistication, then I guess I will need to do some rethinking about my prejudices. I would also say that I can and do enjoy Bible stories as literature and feel they are often deeply insightful into human nature. The story of Ruth is, for me, one of the most moving and profound works that I know. I personally think the Noah story is pretty good also, not as an exercise in shipbuilding and navigation, but because of the bit at the end, where Noah is found drunk in the tent and his kid makes fun of him. To me, the whole story shows that simplistic solutions – let's wipe out humankind and start again – just don't work. I wish George W. Bush had thought about this before he went into Iraq. I am not sure that the stories of the Mormons qualify in this respect, and I am quite certain that the stories of the Scientologists do not. Perhaps, however, in the other great faiths one does find work of comparable worth.

I come to an end. As always, whenever I write anything I write first to make things clear to myself. This is certainly true of this piece. I am sure that the New Atheists will read it with scorn. Whether others will find anything of value as they make their journey through life is for them to find out. My story has been personal, but then these things are personal.