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The Future of Atheism: A Dialogue

Daniel Dennett and Alister McGrath

Opening Remarks

Daniel Dennett

First of all, I'm delighted to be here, and honored that you all came out here for this event, and I'm grateful for Mr. Heard and the New Orleans Baptist Theological Seminary for creating this occasion. I'm particularly happy to hear the opening remarks by President Kelley. I think, as you'll see, at the end of my brief presentation, I'm going to be seconding those in a very strong way.[1]

So I'm *the* atheist. (*The audience laughs.*)

I'm going to start with a very brief film by somebody that in a way you know. How many of you know Homer Simpson? Well, Homer Simpson's creator is Matt Groening. Matt Groening's father is Homer Groening, now deceased. His father made films among other things, and at the [2006] TED Conference a year ago[2] Matt showed a two-minute film that his father made in 1967. And I was thrilled with this film because it so perfectly expressed what to me was a very important idea. I actually have Matt's permission to show it here. I'm going to share that film with you now, so if we could just run the video.

Here's Matt Groening, introducing the film . . .

The short film shown by Dennett is introduced by Matt Groening, creator of The Simpsons. *The experimental film begins with the title card reading, "The following is a public service announcement from Homer Groening." The camera cuts*

to a close-up of a dingy old soccer ball being kicked around in the dirt. The camera pans out to reveal three or four young men, presumably in an African setting, playing with the ball. Told entirely through title slides, Homer Groening's text is a sort of naturalist hymn:

There are millions of years in the past
There are millions of years yet to come
And here we are
right in the middle

There's also space
there are miles and miles of universe in all directions
And here we are
right in the middle

Sort of makes your eyes water
We'd never find this moment again in a million years
This is a big deal
Being in the middle of time and space
Man, this is our world
Let's not blow it

(*The audience applauds.*)

I find that that message is, in its own way, both deep and beautiful, and it responds to a question that I'm sure many of you have. And that is, Can you possibly have a morality, can you have a sense of life's meaning without religion? The answer is, yes, yes. You just saw a very succinct and, in its own way, beautiful version of that. Here we are, with time and space going off unimaginably in all directions, and here we are in the middle. This is our world; let's not blow it. It's not the St. Matthew Passion, but it's a beautiful piece of art in any case. And I wanted to share that with you.

So now, let me get down to my talk. My title, "Taming the Wild Memes of Religion," will be clear enough as we go along. Leaving off where Homer Groening stopped, I want to give you another perspective. Let's go back ten thousand years. This was after the dawn of agriculture, but thousands of years before the beginning of Christianity, thousands of years before the beginning of Judaism. At that point, the human population of the globe, plus their livestock and pets, amounted to a very small fraction of the terrestrial vertebrate biomass. The terrestrial vertebrate biomass does not include the invertebrates, the bugs, and what is in the ocean. But we were a minor primate, maybe a major primate, but that was a tenth of one percent. Would anybody hazard a guess at what percentage of the

terrestrial vertebrae biomass—human beings plus their livestock and pets today—that it is today? Would anybody make a guess? Fifty? Do I hear any raise on fifty? Seventy? Do I hear any raise on seventy? Ninety-eight percent. What a huge change in a biological instant—in ten thousand years! This is calculated by the visionary engineer Paul MacCready, and he came up with a really rather remarkable thing to say about it:

> Over billions of years, on a unique sphere, chance has painted a thin covering of life, complex, improbable, wonderful, and fragile. Suddenly, we humans—a recently arrived species no longer subject to the checks and balances inherent in natures—have grown in population, technology, and intelligence to a position of terrible power. We now wield the paintbrush.[3]

To appreciate how amazing this is, that we have inherited this earth in this way, it sometimes helps to take an alien perspective. So let's pretend we're Martians and we're coming to the planet, and we're wondering what we're going to find on this planet. What would happen if Martian scientists came to earth? Well, here's a picture of something that might amaze them. This is approximately one million human beings gathered for Maha Kumbh Mela in 2001 on the banks of the Ganges River, one of the largest convocations of bipedal mammals ever. That would impress Martian biologists. They would say, "Goodness, me! What an amazing event! This is a very remarkable gathering of animals."

Here's another. That's Mecca, of course. Another: St. Peter's Square. *The Martians would want to know what on earth explains these patterns.* This is a pie graph that shows as of a few years ago what the breakdown of the populations of the world are. You see that Christianity has about 33 percent. Hinduism has about 16 percent, the same as nonreligious. Islam has about 18 percent. The fastest growing of these is probably Islam, mainly because of birth rate. The second fastest growing, or maybe fastest growing, is *nonreligious.* According to the *World Christian Encyclopedia,* the only major religion that is growing worldwide is Islam. Secularism and nonreligion are growing even faster. Southern Baptists are now baptizing about 300,000 a year according to the figures that I was able to get. That's about the same as you were doing in the 1950s. You're not growing any faster than you were then, but the population has doubled.

I mention these facts because one often sees in the press the claim that there's a tremendous upsurge in religion in the United States and around the world, and it's not really true. Religions are making a lot of noise, and they're getting a lot of attention, but if you go and look for the facts, if you do a careful study of the demographics, you'll find out that some of those claims are very misleading. Right now, there are roughly 749

million atheists in the world, and that's a very conservative estimate. That is, there are twice as many atheists as Buddhists, forty times more atheists than Jews, more than fifty times as many atheists as Mormons. (That's from Zuckerman, 2006.)[4]

In an October piece that many of you may have read in *The New York Times*, Laurie Goodstein wrote about the notorious "4 percent problem" that many people are worried about. Quoting her, "If current trends continue, only 4 percent of teenagers will be Bible-believing Christians as adults."[5] It was this calculation that led the National Association of Evangelicals to pass a resolution deploring the epidemic of young people leaving the evangelical church.

So it is simply not the case that religion is booming and that atheism is on the wane. Those are just facts. What to make of them, whether to deplore them or to be thrilled by them is another matter. First, we have to understand what the facts are. Gregory Paul, in a recent article in the *Journal of Religion and Society*, draws our attention to some interesting facts, because many people are very concerned that if a nation becomes more secular, family values will go down the drain. Well, let's compare the homicide rate in the United States, which is not a very secular state, with European secular states. The homicide rate is much higher in the United States than in any secular democracy. But sexually transmitted disease rates, teen pregnancy, and abortion rates are also much higher in the United States than in "godless Europe."[6]

Now, our Martian scientists see this and say: "Well, these are interesting facts, what explains them? What accounts for all these patterns in the world?" Now this is the question that interests me. I'm a philosopher by training, but I work in and on the edges of science and evolutionary biology, evolutionary theory, cognitive science, and psychology. I'm interested in knowing what happens when you put on your Martian glasses, which are the same as scientific glasses, and you look at these phenomena. They are fascinating phenomena; they are unmistakably important phenomena. They are deeply important, amazing phenomena, and they are going to become more important as the century progresses. What do we make of them?

To help us think about this, I want to draw a comparison. Here's a cow, a nice cow (not, I think, a sacred cow, but maybe for some). Here's a question: "Who designed this cow?" You're going to say: nobody designed this cow. Well, actually, a lot of people have spent a lot of time in the last few hundred years redesigning cows. This is a domesticated species, and they have tried to make the cow just right for us. Let's consider its ancestor, the aurochs. About ten thousand years ago, people started keeping aurochs and they began to domesticate them, but who designed the aurochs? The answer is evolution. Evolution by natural selection designed

the aurochs over millions of years. No intelligent designer was responsible for the aurochs. What were aurochs for? They were for making more aurochs. They were a wild species, and that's all they were for. But now, we have domesticated the aurochs, and we've reverse-engineered it. We figured out how the parts work, and we've figured out how to optimize the parts and revise the parts. We've basically redesigned the auroch to serve our purposes. Who designed the cow? Well, natural selection designed the cow for millions and millions of years, and now, for about ten thousand years, we've been sometimes inadvertently and sometimes very deliberately redesigning the cow. The same thing is true of religion.

Religions are brilliantly designed systems. They are tremendously robust, efficient, powerful, long-lived institutions. We can reverse-engineer them. They have an evolutionary history. They started off wild and then were domesticated. And many of the features of organized religions today are very different from the features of their wild ancestors, only some thousands of years ago. And this we can study with the tools of science. We can reverse-engineer religion the same way we can reverse-engineer cows and television sets and just about any complex thing you see. Reverse-engineering is the intellectual exercise, the scientific exercise, that intelligent design (if it were a real science) would use to come up with proofs to show that you just couldn't have this design without an intelligent designer. They haven't yet come up with any good evidence that that's true, but they are at least trying to do that. If you want to disprove evolutionary theory, that's what you want to look for. You want to look for something that couldn't have evolved. The process of studying these questions is really a variety of reverse-engineering.

So, the Martians want to know how all this originated and when. What is it for? How does it perpetuate itself? Well, we know that there have been hundreds of thousands of religions since the first religions. Hundreds of thousands of religions and almost all are extinct. But religions are being born now so fast that the web site on new sects can't keep up with them. Most of them have a life of only a few weeks or months, sometimes a generation or two. Most religions that are started go extinct in short order. That's also true, of course, of biological species. Much more than 99 percent of all the species that have ever existed on this planet have gone extinct. Those that go extinct, however, often pass on a few themes to competitors that survive. So if we study the evolution of religions—seeing what's around today and where it came from—we can learn a lot about the sources of themes that we find in organized religions today.

Well, what is it about the survivors that helps them survive? That is the question that you always want to ask. And one possibility is that one of them is simply the truth. And that presumably is what most of you believe—and it may be true. But you don't know it's true. Scientifically, we can explore

the question. We can look at the history of religion and see if there might be in fact some other, better explanation of why this particular religion or these religions have survived. Notice, there are a lot of survivors out there still, and they can't all be true. So if your religion has survived because it is true, the other religions that are robust and healthy today have survived for other reasons. What might those reasons be? These are the questions—factual questions—that we can explore. And that's the point of my book *Breaking the Spell.* The "spell" I want to break is the taboo or prohibition against studying that very question. It's the idea that we shouldn't look so closely and intensely at religion, that we should avert our eyes from these phenomena. According to the taboo, it's not nice and it's not appropriate; there is something blasphemous or just immoral about studying religions. I say no. Religions can be studied as natural phenomena just fine. Let's look at them. Let's see what we can make of them. Now, some people are afraid of what they might learn. Maybe they're right to be afraid, or maybe they're not.

My book is not a "virulent attack" on religion—as some critics have said. I do not hate religion. I am not an enemy of religion. I'm a student of religion. I'm an atheist, but that does not mean that I hate religion. If I were a Jew it would not mean that I hate Buddhism. I hope you agree.

Here's something else that might really amaze a scientist from Mars, or it might amaze you. You go out in the field and you find an ant climbing a blade of grass. And it climbs and it climbs and it climbs to the top of the blade of grass, and if it falls, it climbs again. And you think, What is this ant doing? Why is it wasting all this energy climbing to the top of the blade of grass? What's in it for the ant? What good is it for the ant to climb to the top of the blade of grass? Is it lost? Is it showing off? Is it looking for food? What is it doing? What good accrues to the ant? And the answer is: no good accrues to the ant at all. Is it just a fluke? Yes, it's just a fluke. It's a lancet fluke. A lancet fluke is a little parasitic worm. Now lancet flukes (*Dicrocoelium dendriticum*), in order to complete their life cycle, have to get into the belly of a ruminant—a cow or a sheep. And they improve their chances of getting into the belly of a cow or sheep by commandeering a passing ant, climbing into its brain, and driving it up a blade of grass like an all-terrain vehicle, there the more likely to be eaten by a cow or a sheep. Incredibly smart. Of course the lancet fluke is stupid, but the strategy is brilliant. The lancet fluke doesn't even have a brain, really. It has the IQ of a carrot, roughly, I'd say. But the strategy that it engages in is very devious and very clever, and it's sort of spooky. Here we have a hijacker. We have a parasite that infects the brain and induces suicidal behavior on behalf of a cause other than one's own genetic fitness. Spooky. Gee, I wonder if anything like that happens to us!

Well, let me remind you that the Arabic word *islam* means submission, surrender of one's self to the will of Allah. Built right into the name of Islam is this idea that the individual should surrender his or her interests to the interests of Allah. And it's not just Islam; it's Christianity, too. This is a page from a music manuscript that I found in a Paris bookstall about fifty years ago. It says, *Semen est verbum Dei; sator autem Christus.* "The Word of God is a seed, and the Sower of the seed is Christ." And it goes on to say that all who hear this shall have eternal life; that is the *quid pro quo.* The idea of spreading the word, even at the risk of one's own life, of surrendering one's own life to the will of God, is just as much in Christianity as it is in Islam.

"The heart of worship is surrender."[7]

"Surrendered people obey God's word, even if doesn't make sense."[8]

Now where did I get those quotes? I got those quotes from Pastor Rick Warren, from his book *The Purpose Driven Life,* which many of you, I hope, know. It's an interesting book. It's sold over twenty-three million copies. It's an immensely influential book, and it is extremely well designed. And it can be reverse-engineered. And if you're interested in the reverse-engineering of that book, there's a talk I did at the conference where Matt Groening spoke where I reverse-engineered Rick Warren's book.[9] Warren was not amused. But as I say, it's brilliantly designed, and we can figure out what makes it work. In a way, I'm taking it very seriously.

Well, here are some ideas to die for: Islam, Christianity. But many people have died for communism, and many people have died for democracy. Many people have killed for communism. Many people have killed for democracy, for justice, for freedom. This is the New Hampshire license plate: "Live free or die!" Great sentiment. I'd like to point out something. The moose pictured on that license plate cannot share this sentiment. It is beyond the capacity of the moose's brain to appreciate this idea. We are the only species on the planet that has ever existed which can decide that an idea is more important than having more grandchildren than your neighbor. That sets us apart from all other species, but is itself a biological fact and one that has a biological explanation.

Question: Is maximizing your progeny your highest goal, your *summum bonum*? Now, I'm a father and a grandfather. I love having grandchildren. My second grandchild is going to be born any day now, and I'm thrilled. Many of you are parents or grandparents, or you want to be parents. Hands up those of you who think that the most important thing in life is having more offspring than your neighbor. I do not see a single hand up. That makes us entirely different from the other species on this planet. For every other species, that's their highest imperative. Making more aurochs or making more ants. That's all. Every act they take is aimed at that purpose.

But not us, because we have minds that can have ideas and we can decide to die for an idea.

It's ideas, not worms, that hijack our brains—replicating ideas. Ideas that we rehearse and think about, and decide that we like, pass them on to somebody else, who passes them on to somebody else. They make copies; they spread like a virus. These themes are what Richard Dawkins calls *memes*. Dawkins, who wrote *The Selfish Gene* in 1976, introduced the idea that cultural items had an evolutionary history too. They could replicate. They could differentially replicate, and the fittest were the ones that would get us to make the most copies. He pointed out that they are analogous to genes or to viruses. What's a virus? It's not alive. It's just a big crystal, a macromolecule. It's a string of DNA with attitude. That is to say, it's got a shape that permits it, when it gets in the right place, to provoke its own reproduction by the replicating machinery of a cell.

And Dawkins's brilliant idea was that ideas can do that too. They can go inside a mind and get that mind to make a copy of them and another copy and another copy and then send that copy out into the world where it makes more copies still. That's the idea behind "the Word of God is a seed and the sower of the seed is Christ." It's not an ugly idea; it's a beautiful idea. The idea that ideas themselves have their own fitness and that we are their hosts.

The theologian Hugh Pyper said in 1998: "If 'survival of the fittest' has any validity as a slogan, then the Bible seems a candidate for the accolade of the fittest of texts."[10] There are more copies of it in more languages all over the world than any other book, by a wide margin, but the Qur'an is picking up. These are fit cultural items. Independent of whether they are good for us, whether they are true, whether they are false, they are fit in the biological sense because they have lots of offspring that have lots of offspring that have lots of offspring. Human culture is itself one of the fruits on the Tree of Life.

Culture is composed of symbionts that are either good for us, neutral, or fitness-reducing. But remember, none of you cares about your biological fitness. There wasn't a person in this room who thought their biological fitness was the most important thing in life. So the fact that a particular idea in your brain might be fitness-reducing is neither here no there. Some of them, no doubt, are fitness-enhancing. The idea for making a better mousetrap, a better fishhook, a better plow, these give you more powers. But lots of ideas may be along for the ride, and some of them may even be detrimental.

When I started working on my book on the evolution of religion, people said very often, "Oh, you're working on the evolution of religion. That's an interesting question. What do you think religions are for? Because after all, every human group that's ever been studied has some form of religion, so it must be good for something."

And I said, "Well, yeah, that's a possibility, but that's a false inference."

"Well, why?"

And I said, "Well, every human group that's ever been studied also has the common cold. What's that good for?" It's good for itself. It replicates because it can. I'm not saying religion is like the common cold; I'm saying it *might* be. I'm saying that some religious ideas could be like the common cold; they spread because they can spread. They are fit, and we can't get rid of them any more than we can get rid of the common cold. It is one of the possibilities you have to bear in mind if you are going to be objective in studying this scientifically. You must not assume at the outset that "Gosh, it's got to be wonderful" or that some particular aspect has to be wonderful. The fact that it's still here only shows that it is benefiting the fitness of something, but it might be only itself.

How did human culture get started? If I had more time, I would go into that. It's in my book, but I'm not going to because I want to move ahead to one more idea.

Here's a riddle: How are spoken words and folk songs like squirrels, rats, pigeons, and barn swallows? The answer is: these species are not domesticated species, but they have evolved to fit the human environment. They've evolved to coexist with us. They are beautifully adapted to live with human beings. Some of our ideas are like that too. They're not domesticated—they're wild—but they live with human beings. Now sheep, for instance, were very clever to acquire shepherds. They got to outsource all their problems. But it wasn't the sheep's cleverness, it was evolution's. Sheep are stupid. They're a little smarter than *Dicrocelium dendriticum*, but not much. The fitness move is evolution's move, not the sheep's. Sheep are fortunate to get themselves domesticated, and similarly the wild memes of religion were fortunate to get themselves domesticated because they acquired stewards—people who were prepared to devote their lives to the health and spreading of those very ideas.

Now, there I might end, but I want to go to my final point. Religions are powerful forces in people's lives. Religions are brilliantly designed. When we understand their design, we can see better what we might do or should do to revise their design or improve them. Many of the attempts to reform religion have been misguided; they've been under-informed, and they have done more harm to their religions than good. If you want to save your religion, if you want to improve your religion, you better understand how it works. You better reverse-engineer it.

In the meantime, I have one policy proposal. It surprises a lot of people, but I don't think it's going to surprise you. I think education on the world's religions for all of our children—homeschooled, private school, public school—should be required. We have the three Rs; we should have the fourth R. What am I talking about? I'm talking about the history, the

creeds, the rituals, the music, the symbols, the ethical commands and prohibitions of all the major religions and, for that matter, of atheism. Just facts, no values, no spin. Just lots of geography, basically.

I'm completely *laissez-faire* about the rest of what you teach your children. If you teach them this, you can teach them whatever else you want. Whatever else you want, with one little proviso: as long as it doesn't disable them from informing themselves further through, for instance, hatred or fear. That's child abuse if you do that. But if you teach them these facts, then you can teach them anything else you want. Why? Because when religions do go toxic—and we all know every religion has its toxic, fanatical forms that go off the rails and become lamentable human phenomena—this depends always on the enforced ignorance of the young. So if you simply prevent that ignorance, you more or less guarantee as sort of a public health measure that only the benign, good religions can survive. A religion that can flourish in a world of mutual knowledge of the facts about world religions is a benign religion. So I think you can see why I'm not really an enemy of religion. I think we should study religions carefully, scientifically, objectively, so that we learn what makes them tick. Once we've reverse-engineered them, first of all, we'll understand better why they're good at what they're good at and how to make them better.

Thank you very much for your attention.

Opening Remarks

Alister McGrath

Let me begin by saying what a great pleasure it is to be with you here in New Orleans tonight. And it is a special privilege to be able to have this dialogue with Professor Daniel Dennett. Although recovering from an operation, Professor Dennett is able to be with us tonight, and I am delighted to be able to engage in this provocative and important topic. There is so much that could be said on this topic, and so little time in which to say it. So where shall we start?

I'm going to begin with the failure of prophecy—the great secular prophecies of the 1960s that religion was on its way out globally, as humanity entered a new, secular phase of its existence. Religion was meant to have disappeared years ago. For more than a century, leading sociologists, anthropologists, and psychologists have declared that their children would see the dawn of a new era in which the "God delusion" would be left behind for good. Back in the 1960s, we were told that religion was fading away, to be replaced by a secular world.

For some of us, that sounded like a great thing. I was an atheist back in the late 1960s, and remember looking forward to the demise of religion with a certain grim pleasure. I had grown up in Northern Ireland, and had

known religious tensions and violence at firsthand. The solution was obvious to my freethinking mind. Get rid of religion, and such tensions and violence would be eradicated. The future was bright—and godless.

Two things have changed since then. In the first place, religion has made a comeback. It is now such a significant element of today's world that it seems strange to think that it was only a generation ago that its death was foretold with such confidence. The humanist writer Michael Shermer, perhaps best known as the director of the Skeptics Society and publisher of *Skeptic* magazine, made this point forcefully back in 1999,[11] when he pointed out that never in history have so many, and such a high percentage of the American population, believed in God. Not only is God not "dead," as the German philosopher Nietzsche prematurely proclaimed; God never seems to have been more alive.

Second, and rather less importantly, my own attitudes have changed. Although I was passionately and totally persuaded of the truth and relevance of atheism as a young man, I subsequently found myself persuaded that Christianity was a much more interesting and intellectually exciting worldview than atheism. I have always valued freethinking and being able to rebel against the orthodoxies of an age. Yet I never suspected where my freethinking would take me.

I arrived at Oxford from school a Marxist, believing that religion was the cause of all the world's evils. As an intellectual Darwinian, it seemed perfectly clear to me that the idea of God was on its way out, and would be replaced by fitter and more adapted ideas—like Marxism. I was a "bright," to use Dennett's language.

But it didn't work out like that. At Oxford—to my surprise—I discovered Christianity. It was the intellectually most exhilarating and spiritually stimulating thing I could ever hope to describe—better even than chemistry, a wonderful subject that I had thought to be the love of my life and my future career. I went on to gain a doctorate for research in molecular biophysics from Oxford, and found that immensely exciting and satisfying. But I knew I had found something better—like the pearl of great price that Jesus talks about in the Gospel, which is so beautiful and precious that it overshadows everything. It was intellectually satisfying, imaginatively engaging, and aesthetically exciting. So I guess I became dim.

But this discovery raised questions for me. I had been taught that science disproved God. That all good scientists were atheists. That science was good, religion evil. It was a hopelessly simplified binary opposition, not unlike George Orwell, in *Animal Farm*: Four legs good, two legs bad. But it suited me just fine then.

Yet my newfound Christian faith brought a new sense of fulfillment and appreciation to my studies and later my research in the natural sciences. I saw nature as charged with the grandeur and majesty of God.

To engage with nature was to gain a deeper appreciation of the divine wisdom. I gave up the sciences to read theology, but I still love the sciences, and follow the literature, especially in evolutionary biology. And above all, I have a passion for relating Christian theology to the natural sciences. Hence, my presence tonight.

The first point that got me nodding my head in agreement comes very early in the book. People sometimes feel very defensive about religion. Religious people often get extremely defensive when challenged about the basis of their beliefs, which hinders any serious debate about the nature of their faith. I know what he means. The issue, I suspect, is that a challenge to faith often threatens to pull the rug from under the values and beliefs that have sustained someone's life. But this is a general problem with any significant worldview, not just a religion.

Since the publication of my book *Dawkins' God* in 2004, I am regularly asked to speak on its themes throughout the world. In these lectures, I set out Richard Dawkins's views on religion, and then give an evidence-based rebuttal, point by point.

After one such lecture, I was confronted by a very angry young man. The lecture had not been particularly remarkable. I had simply demonstrated, by rigorous use of scientific, historical, and philosophical arguments, that Dawkins's intellectual case against God didn't stand up to critical examination. But this man was angry—in fact, I would say he was furious. Why? Because, he told me, wagging his finger agitatedly at me, I had "destroyed his faith." His atheism rested on the authority of Richard Dawkins, and I had totally undermined his faith. He would have to go away and rethink everything. How *dare* I do such a thing!

As I reflected on this event while driving home afterwards, I found myself in two minds about this. Part of me regretted the enormous inconvenience that I had clearly caused this person. I had thrown the settled assumptions of his life into turmoil. Yet I consoled myself with the thought that, if he was unwise enough to base his life on the clearly inadequate worldview set out by Dawkins, then he would have to realize someday that it rested on decidedly shaky foundations. The dispelling of the delusion had to happen sometime. I just happened to be the historical accident that made it happen at that time and place.

Now I do not intend to imply that the very weak arguments I find in Dawkins's works recur in Dennett's. Let me put on record my belief that *Breaking the Spell* is a well-argued, thoughtful, and interesting work, which shows no signs of the rambling and ranting I fear I find, for example, in Dawkins's *The God Delusion*. Dennett is right—beliefs are critical. We base our lives upon them; they shape our decisions about the most fundamental things. I can still remember the turbulence that I found myself experiencing on making the intellectually painful (yet rewarding) transition from

atheism to Christianity. Every part of my mental furniture had to be rearranged. Dennett is correct—unquestionably correct—when he demands that we examine our beliefs—especially if we are naïve enough to think that we don't have any in the first place.

So how, I wondered, would Dennett clarify the distinction between a worldview and a religion? The dividing line is notoriously imprecise, and, many would say, is constructed by those with vested interests to defend. Here I must confess some puzzlement. In *Breaking the Spell*, Dennett tells us that "a religion without God or gods is like a vertebrate without a backbone."[12] Now if I were leading a sixth form discussion[13] about how to define religion, this would be the first definition to be considered—and the first to be rejected, precisely because it is so inadequate. What about nontheistic religions? Vertebrates *by definition* have backbones. The concept of religion simply does not entail God.

So why this unworkable definition? I initially thought that it was because Dennett seems to have American Protestant fundamentalism in his gunsights. (This is, if I might say so, a very American book.) After I had finished the book, I could see why he took this line. Dennett wants to explain religion in terms of evolutionary theory. The existence of God is, he asserts, a fantasy that once carried some kind of survival advantages. So religions that don't believe in God don't really fit the bill.

I have to say that I was simply not persuaded by his account of what religion is, which most religious people will regard as unrecognizable. Perhaps it tells us a lot about what leading figures in America's political and intellectual left think about religion, which is a rather different matter.

So let me turn now to what I think is the most interesting aspect of this book—its appeal to science. This is an area that excites me, and Dennett's earlier book *Darwin's Dangerous Idea* shows that he has mastered some of the intellectual issues that he needs to address in this book. Dennett suggests that that there is some kind of taboo against the scientific study of religion. The historian of ideas within me was puzzled by this, in that this has been going on—at least in Europe—since about 1780, with the emergence of comparative mythology. But it's good to welcome a newcomer to the conversation.

I would place Dennett in the broad tradition of naturalist explanation of religion, which includes Ludwig Feuerbach, Karl Marx, and Sigmund Freud. Whatever the benefits of religions, Dennett and these writers believe that they arise entirely inside human minds. No spiritual realities exist outside us. Natural explanations may be given of the origins of belief in God. Now I hesitate to mention this, but this is clearly a rather circular argument, which presupposes its conclusions.

So what models does Dennett propose for the origins of faith in God? I was delighted to find a rich range of explanatory approaches in this

book. I read the first—the "sweet tooth" theory. On this approach, just as we have evolved a receptor system for sweet things, so in a similar way we might have a "god center" in our brains. Such a center might depend on a "mystical gene" that was favored by natural selection because people with it tend to survive better.

Just a moment, I thought. Where's the science? What's the evidence for this? Instead, I found mights and maybes, speculation and supposition, instead of the rigorous evidence-driven and evidence-based arguments that I love and respect. These theories are evidence-free and wildly speculative. We are told, for example, that—I quote from the jacket blurb—religious "ideas could have spread from individual superstitions via shamanism and the early 'wild' strains of religion." There's no credible evidence for this. There's no serious attempt to engage with the history of religions. It reminds me of those TV ads, "This could help you lose weight as part of a calorie-controlled diet." *Could.* The TV ad writers would love to be able to say their product was "clinically proven" to do these things. But they can't. There's no evidence.

Now I wish I had time to engage with each of the major models that I noted in working through this book. Sadly, I do not have time. I therefore propose to deal with what I consider to be the strongest of these models in detail. This is the "meme"—a hypothetical cultural or intellectual replicator. On this model, religions might be memes that infect our brains. They are not necessarily parasitic, but could be symbiotic, conferring advantages on those who are infected. It's an idea that Dennett put forward back in *Darwin's Dangerous Idea*, and needs exploration. So let's do that.

Is belief in God a meme? It's an idea that Dawkins floated back in 1976, and it lingers to this day. When I first came across the idea of the meme back in 1977, I was excited by it. I was beginning my career as an intellectual historian, fascinated by cultural development and the history of ideas. I thought that Dawkins's idea of the meme might explain some things far better than other models. And I know that others felt the same. Yet as I—and those others—began to check this idea out, we began to realize it just didn't work.[14] I abandoned the concept as unworkable about ten years later, after detailed work on intellectual developments in the Renaissance.

But the real problems lie deeper than this. First, the meme is just an hypothesis—one that we don't need, as there are better models available, for example, in economics, but also in anthropology. If genes could not be seen, we would have to invent them—the evidence demands a biologically transmitted genetic replicator. *Memes can't be observed, and the evidence can be explained perfectly well without them.* As Maurice Bloch, professor of anthropology at the London School of Economics, commented recently, the "exasperated reaction of many anthropologists to the general idea of

memes" reflects the apparent ignorance of the proponents of the meme-hypothesis regarding the discipline of anthropology, and its major successes in the explanation of cultural development—without feeling the need to develop anything like the idea of a "meme" at all.[15]

And what about the cognitive model that underlies the meme? I would welcome some clarification here, as it seems to me that Dennett seems to buy into Dawkins's curious idea, set out in 1976, of memes "leaping from brain to brain." This seems to posit cognition as an essentially passive reception of these memes. But cognition is an active process.

Anyway, has anyone actually seen these things, whether leaping from brain to brain, or just hanging out? The issue, it must be noted, has nothing to do with religion. It is whether the meme can be considered to be a viable scientific hypothesis, when there is no clear operational definition of a meme, no testable model for how memes influence culture and why standard selection models are not adequate, a general tendency to ignore the sophisticated social science models of information transfer already in place, and a high degree of circularity in the explanation of the power of memes.

At this stage, the issue is simply whether memes exist, irrespective of their implications for religion. I say, and most active scientists say with me, that there is no evidence for these things. As Simon Conway Morris, professor of evolutionary paleobiology at Cambridge, points out, memes seem to have no place in serious scientific reflection. "Memes are trivial, to be banished by simple mental exercises. In any wider context, they are hopelessly, if not hilariously, simplistic."[16] Now maybe Simon is playfully overstating things here, just like Dawkins does in *The God Delusion.* (Sure, it's naughty, but it makes for much more interesting reading.) But I cannot help but note that Conway Morris represents the majority report within the scientists I hang out with at Oxford.

I was slightly puzzled that the arguments of such leading critics of memetics were not identified and confronted, point by point. This book, in my view, makes a critique of religion dependent on a hypothetical, unobserved entity, which can be dispensed with in order to make sense of what we observe. Isn't that actually a core atheist critique of God—an unobserved hypothesis that can be dispensed with easily? The evidence for belief in God is far better, in my view, than the evidence for belief in memes.

If I were an atheist, wanting to commend atheism to others on account of its intellectual excellence, I would drop this memetic approach, which merely weakens the case for atheism, and head back to the safer territory of Marxist dialectical reading of history, which is, in my view, much more intellectually rigorous and evidence-driven. But far be it from me, as a lapsed atheist, to tell those of you who still believe how to do your job.

Anyway, what do memes *do*? Dennett tells us that they spread beliefs—like beliefs in God. So are *all* beliefs spread by memes? Or just the ones that anti-religious critics don't like? Is there a meme for atheism? Dennett's "Simple Taxonomy"[17] certainly suggests so. And since there is no compelling scientific evidence for these things, are we to conclude that there is a meme for believing in memes?[18]

This is certainly a problem for the originator of this notion, Richard Dawkins. As many of you will know, Dawkins makes an unsuccessful attempt to evade the trap of self-referentiality by saying that his own ideas are different. God is caused by memes; atheism is not. Anyone familiar with intellectual history will spot the pattern immediately. My ideas are exempt from the general patterns I identify for other ideas, which allows me to explain them away. My fear is that Dennett has fallen victim to this same weakness. So let me ask this question once more: Is it just belief in God that is a meme? *Surely atheism is as well.* And if it is, we seem to end up in the epistemological quagmire in which all theories, worldviews, and beliefs are determined by these mysterious biological drivers.

But the real question is this: How could Dennett and I be able to settle this point *scientifically*? If we are not able to do so, then we have a nonscientific debate about imaginary entities, hypothesized by analogy with the gene. And we all know how unreliable arguments based on analogy can be—witness the fruitless search for the luminiferous ether in the late nineteenth century, based on the supposed analogy between light and sound. That's why the Michelson-Morley experiment was so important—it showed that there was no evidence for this so-called "ether." It was analogically plausible—but nonexistent. Michelson and Morley exposed that analogy as invalid, however attractive or plausible it may have seemed to many at the time. Dawkins tells us that memes are merely awaiting their Crick and Watson, meaning that the clarification of their structure and mechanism is just around the corner.[19] I think they are merely waiting for their Michelson and Morley to deliver the final deathblow to an unsatisfactory and unnecessary theory, of questionable relevance to our debate about God.

Moving on, I was glad to see that Dennett and I share so much in common. We both love democracy, freedom, science, and lots of other good things. We both also abhor violence and oppression. Professor Dennett argued that religion has on occasion encouraged both of those. I agree. That's a fact of history. Yet I have to say that I searched in vain in *Breaking the Spell* for a mention of either Lenin or Stalin, each of whom launched violent programs of repression based on their atheist worldviews against Christianity and Islam. That's a fact of history as well.

Now, Dennett might respond by saying that these are not *typical* of atheism. In fairness, I believe he would be right to do so. But neither, in equal fairness, are the excesses of violence and intolerance that he does

mention *typical* of religion. I appreciate the need for a bit of rhetoric and exaggeration to spice up an argument, and have to confess that I do it myself every now and then. But one cannot represent the *pathological* elements of any movement—religious or anti-religious—as if they were *normal* or *typical*. Few of us in this audience tonight are in favor of fanaticism; but it is clearly perfectly possible to be a fanatical atheist, as much as a fanatical religionist. It's fanaticism that's the problem here, not religion or anti-religion. In Oxford at this moment, we are facing a threat from one of the most fanatical groups in British society today: animal rights protestors. They are not religious. They are driven by an ideology—by a worldview. Surely our common enemy is the fanatic, first and foremost. We need to reflect on how to control this phenomenon. But it is a clear factual error to assume that this is limited to, or necessarily characteristic of, religion.

Our topic tonight is the future of atheism, and I fear that I have only begun to scratch the surface of this matter. So I will end by raising a question that I believe to be important. Is science going to sort out the God question for us? I'm sure that at least some of you here tonight remember early episodes of *Star Trek*. Classic *Trek* episodes from the period 1966–1969 were strongly influenced by the humanist philosophy of their creator, Gene Roddenberry. As Roddenberry made clear in a 1991 interview with *Humanist* magazine, religion was simply "nonsense—largely magical, superstitious things." Early *Trek* episodes were saturated with an ethos of the excellence of science, the triumph of logic, and the inevitability of progress. Religion was one of the evils of the past—along with poverty, prejudice, and war—that progress would leave behind. Religious beliefs were to be expected among the primitive alien societies favored by a visit from the crew of the starship *Enterprise*. But there could be no question of these enlightened and thoroughly modern progressives themselves holding such beliefs. Religion was best left to the savages of the more backward parts of the galaxy.

The beginnings of an answer are to be found in a wise book written back in 1984 by Sir Peter Medawar, who won the Nobel Prize for Medicine for his work on immunobiology. In *The Limits of Science*, Medawar reflected on how science, despite being "the most successful enterprise human beings have ever engaged upon," had limits to its scope. Science is superb when it comes to showing that the chemical formula for water is H_2O. Or, more significantly, that DNA has a double helix.

But what of that greater question: What's life all about? This and others like it, Medawar insisted, were "questions that science cannot answer, and that no conceivable advance of science would empower it to answer."[20] They could not be dismissed as "nonquestions or pseudoquestions such as only simpletons ask and only charlatans profess to be able to answer."[21] This is not to criticize science, but simply to calibrate its capacities. Medawar's

point is that science is excellent when it comes to exploring the relationships between various aspects of the material universe. But when it comes to questions of meaning or value, it doesn't really get us very far. It's not a controversial point. For example, Dawkins made a very similar point recently, in emphasizing that "science has no methods for deciding what is ethical."[22]

This deft analysis by a self-confessed rationalist, who had little time for religion in his own life, casts light on why scientists hold such a variety of religious beliefs. It makes it clear that scientists are intellectually and morally free to believe (or disbelieve) in God, while at the same time challenging religions to take the findings of science seriously. It also shows that it makes little sense to talk about "proof" of a worldview, whether Christian or atheist. In the end, as Gilbert Harman pointed out decades ago, the real question is which offers the "best explanation" of things. And as there is no general agreement on how to decide which of these explanations is the "best," the argument seems certain to run on and on.[23]

Christians will argue that their worldview represents a superb way of making sense of things, while accepting that this, like its atheist counterparts, is open to challenge by skeptics. "I believe in Christianity as I believe that the Sun has risen—not only because I see it, but because by it, I see everything else," as C. S. Lewis famously said.[24] Christians know that they can't prove that God is there, any more than an atheist can prove that there is no God. The simple fact is that all of us, whether Christians or atheists, base our lives on at least some fundamental beliefs that we know we cannot prove, but nevertheless believe to be reliable and significant—in short, to be the best explanation of this highly complex undertaking and mystery that we call "life."

But that just opens up another question—how on earth can we verify a worldview? But I have run out of time! I'm sure we'll come back to this one!

A Dialogue

Daniel Dennett and Alister McGrath

Dennett: Thanks, Alister, for very eloquent and interesting comments, and as you pointed out, there's a great deal that we agree about. I'm going to respond to some of the challenges—the ones that struck me as the most important. Maybe I'll leave something out, and then if there is something you want me to respond to particularly, I will.

One of the first things that Alister mentioned was my definition—my working definition—of religion as involving belief in a supernatural agent. He quoted my line, "A religion without a supernatural agent is like a vertebrate without a backbone." Now, when I introduced that, I said, "This is

just a working definition." I have to start somewhere, and this strikes me as the most central feature of religions through the ages, that they have believed in gods. Now, there are religions that apparently do not believe in gods or, if they believe in gods, the gods that they believe in are so different that a lot of people wouldn't call them gods. And what are those? Well, they're former religions. Or maybe they're honorary vertebrates. Now what's an honorary vertebrate? Well, in Great Britain, a vertebrate is where they draw the line on the law. You can throw an invertebrate on a hot grill. You can stomp on an invertebrate. You can do whatever you want to an invertebrate. They have no rights at all. You can eat a live oyster. But vertebrates are protected under the law; you can't do whatever you want with a live vertebrate. This gets a bit into the question about animal rights. The British make one exception, and I think it's a very wise one. They have one category of honorary vertebrates: the octopus! Just one species, *Octopus vulgaris*, a mollusk with a large head and prehensile tentacles—basically a smart clam, and it is protected by law even though it's not a vertebrate because it's so much like the vertebrates in so many ways. So it doesn't matter too much where we draw the line. We can have things that are so much like religions that we'll call them religions because they, in some sense, deserve to be called religions. I particularly want to resist Alister's request, but I can't resist quoting him, though: "What is the essence of religion?" What Darwin showed us is that essentialism is a mistake. Don't ever ask for the essence of something because essence is something that's just pre-Darwinian thinking. So if we look at the history of the evolution of religion we see a gradual transition of phenomena. That's not religion; that's just superstition. That's not religion; that's just witch doctoring. And then, well, that's a religion. And then, that's obviously a religion. And then you have things which, well, they're not quite religions anymore, or maybe they're religions because they have the legal status of religion—a good reason to hang onto the term. Scientology is a religion because it says it's a religion, and it gets a tremendous tax break thereby. It's an honorary vertebrate. So the issue has some real practical consequences, but not theoretical ones. In my book, I say that it doesn't make a difference where I draw the line, because I'm going to be looking at both sides of the line in any case, because I don't just have to explain the religions, I have to explain the sort-of-religions and the used-to-be-religions and the quasi-proto-religions, too. If you're going to do the scientific study, you have to study all of them.

Alister suggested that I was begging the question with my naturalism by ignoring the prospect or starting with the assumption that I was going to give a natural explanation of all religious phenomena. That's the subtitle of my book: *Religion as a Natural Phenomenon.* The emphasis is upon *natural* as opposed to *supernatural* phenomena. Now, I want to point out to

you that there's nothing illogical or circular in this. This is in fact not just the standard scientific method, it's the standard method of, for instance, the Catholic Church. When somebody is up for sainthood, what do they do? They appoint a devil's advocate. This is the person who is supposed to take the other side and say, "No, no, no miracles here. No miracles here!" That's just the method of finding truth. You start with the assumption of no miracles, of nothing supernatural, and then you try to explain certain phenomena naturally. If you can't explain something, if you're left with a silly grin on your face and the frank admission that you can't explain it, only then do you have any evidence for the supernatural. Now, if you believe in the supernatural but you recognize that it hasn't been proven, you should go with my method, because that's the only way it will ever be proved. The only way anybody will ever prove religions are not a natural phenomenon is by trying to prove that they are natural phenomena and failing. If there are some aspects of religious phenomena that this naturalistic approach is utterly baffled by, then that will be a skyhook, a miracle; that will be something that is real evidence for the supernatural. So there's nothing biased or out of place or illogical in my starting with the assumption that all religious phenomena can be explained naturalistically. I haven't done it yet, but that's the quest.

I'm really pleased that Alister focuses on memes as what he thinks of as the weak point of my book, because I think it's, in fact, the strong point and that Alister's skepticism about memes is seriously misguided. First of all, he doubts the very existence of memes. I want just to check and see how obvious this is to some people. I'm going to ask you, how many of you believe in unicorns? Nobody. How many of you believe in atoms? How many of you believe in words? How many of you don't believe in words, you don't think words exist? *Words are memes.* Words are memes that can be pronounced. They're passed by copying; they spread; they have histories; and they've evolved. The (English) world *table* and the French word *table* both evolved from the Latin word *tabula.* We know the history of the evolution of these words. We know that it wasn't deliberate. We know it wasn't planned, and we know that it happened by differential replication of words. Words are memes. If you're baffled about whether memes exist, just ask yourself if words exist. If you think words exist, then the case for memes is pretty clear.

Now, what about the scientific case, though? Well, we have some sciences of words. We have linguistics—both historical and theoretical. And so, it's quite possible to do science with those memes at least, but maybe not memetic science. It's still an open question just how much memetic science is going to prove useful. But he mentions two, he thinks, eminent critics: Maurice Bloch, the anthropologist, and Simon Conway Morris, the evolutionary paleontologist. He's right. I don't mention them in my

book, because I don't think they're serious critics. They're opposed, but that is not enough. Maurice Bloch is certainly haughty in his dismissal of memes but he doesn't actually offer any arguments against them. Now, I do include in my book responses to all the good criticisms that I know of from such anthropologists as Dan Sperber and Scott Atran and some biologists, too. And if you're really pretty sure that the concept of memes is scientifically disreputable, which is the suggestion that Alister gives you, I'd just like to point out to you that the *Encyclopedia of Evolution*—the two-volume encyclopedia published by Oxford University Press—has a chapter called "The New Replicators" about memes, which I wrote—peer-reviewed by evolutionary biologists. This is *the* encyclopedia of evolutionary biology, and I include the chapter as an appendix in my book. So I really do take memes seriously scientifically. There's a lot of good evidence, and in fact, there's more good work just since I've written my book. There are new articles by evolutionary biologist David Haig, and by philosopher of biology Kim Sterelny, who has authored a wonderful new piece called "Memes Reconsidered." There's new work by cultural anthropologists Peter Richerson and Robert Boyd.[25] There's a lot of work on memes, finally. It's taken a few years. It's been thirty-one years since Dawkins published *The Selfish Gene*, but the idea of memes is being taken more and more seriously by the relevant sciences all the time. That doesn't mean it's yet established, but it means that it's in pretty good shape.

One more point, and then I'm going to turn it over to Alister. Is atheism a meme? Of course it's a meme. And so is science. I mean, it's not as if memes are just the irrational, bad ideas. I don't know where Alister gets this. He's pushing on an open door here. Memes are information packets that replicate whether they are true or false, sane or ridiculous, benign or toxic. The memes of calculus, you will notice, do not travel very well. They are domesticated. I don't know about you, but I've never found myself walking down the street thinking, "I just can't get those second differentials out of my head!" Unlike, say, a popular tune, or an advertising jingle, some memes only reproduce with effort. They really depend on their stewards; others we can't get out of our heads. Peter Medawar says that science can't answer deep, important, ultimate questions about meaning, and he's right; I agree. That's why there's philosophy. We pick up where science leaves off. My definition of philosophy is, "That's what you're doing when you don't even know what the right questions are." Once you know what the right questions are, then you can turn them into scientific questions. And in fact, that's why it was a philosopher who wrote *Breaking the Spell*. I'm trying to sort out the questions to help turn it into science. Alister's right. There's a lot of speculation. There are claims and hypotheses put forward without much evidence. And I say these are just a sketch, composed because I want people to see what a scientific theory

of religion would look like. I want to give people something to fix. This is the best we can do now. Notice how the pieces work. Notice what we don't know yet. I'm trying to help people see which questions we need to answer next so that we can do a proper scientific study of religion. And I think we can do it. And I think, actually, that Alister agrees. And I agree with him that I don't do it in the book. It is not a book triumphantly announcing the results of a scientific theory of religion. It is a book saying, "Let's try to create a good scientific explanation of religion. Here are some of the problems. Here are some of the questions we can answer; here are some of the questions we can't."

He's particularly concerned with my suggestions about whether there might be a gene involved in making our response to say, shamanic ritual, more prevalent. This is actually a very nice scientific idea because it's parallel to ideas we have now confirmed. How many of you are lactose intolerant, you get sick to your stomach if you drink raw milk? Most of you are lactose tolerant. That makes you remarkably unlike other mammals. We're the only mammal that is lactose tolerant in adulthood after weaning. In general, mammals can only digest milk when they're babies. We know the genetics involved. We know how human beings who are lactose tolerant—like most of us who can eat ice cream, whipped cream, milk, and so forth—can eat this without getting ill. We know which genes have adjusted to create the proteins that permit lactase, which is the enzyme involved, to be expressed in adulthood. We also know that this was a genetic response to a culturally transmitted practice of dairy herding, and that people who are not lactose tolerant are descendants of people that did not have dairy herding in their cultures. That's a slight oversimplification, but it's good hard science and it's well done. Could we do something similar with regard to the apparently wide variability and susceptibility to ritual? For some people, ritual really makes their hair stand on end; it gives them the heebie-jeebies; and it fills them with joy and love. Other people have a sort of tin ear for ritual; you may have noticed this. Could there be a genetic basis for this? There could. Do we know yet? No. Can we find out? Yes. And if we find it, we will probably find the areas of the brain involved. (Dean Hamer thinks he's found them; I don't think he has, but he's written about this in *The God Gene.*) If we find the areas in the brain, and the neuromodulators, that are responsible for this difference, then we will have a question that needs answering, and that is, Why are there these differences? Why are there some people deeply moved by ritual and other people not? We can get to the bottom of these questions. I do not purport to prove what the answers are, but I think I've articulated the questions quite clearly.

McGrath: Well, thank you very much, Dan. Let me begin by saying how much I appreciate not only the questions Dan has raised but also the very

gracious way in which he has put them. So I had some questions that I was going to ask him, but they all seem to have been raised by Dan himself. I'll respond directly to him, which will make it more interesting for you, but also it means we will have a genuine dialogue.

The first point is, "What is religion?" I think Dan's point is good. He wants a "working definition" that can be more finely tuned as he goes along. The point that I was trying to make, though, is that this is extremely difficult to do. And the real difficulty is that there is a barrier, a dividing line, between what I'm going to loosely call a "religion" and a "worldview." Actually, it's difficult to make that distinction rigorously. And the difficulty is that sometimes people import preconceptions about what distinguishes a "religion" from the larger category of "worldview." Now, Dan has made some very kind comments about the United Kingdom; let me make one that may not enhance his esteem which he holds in my Kingdom. During the 1970s, some sectors of British religious education stipulated that atheism should be studied as a religion. Now, many protested about that, arguing that it was clearly not a religion. But those responsible for the decision said, "Look, it seems to have a creed; it seems to have a set of ethical values that derive from that; there seems to be some practices. Therefore, operationally, in terms of how it functions, it seems to be a religion." Now, I think they were wrong, and I think maybe you think they were wrong as well. But it's interesting how for some people, atheism paradoxically could almost be treated in that way. Now, I think that was a wrong adjudication on their part, but it does emphasize this important point of definition. So what is religion? Well, I earlier used the word *essence*. Dan rightly raised some objections to that. But it's still fair to ask, What is it that makes a religion a religion? My point is that this is a very difficult and somewhat subjective judgment. And it does raise some questions for Dan's use of the meme elsewhere. If I could just give one very obvious example, is the essence of religion "belief in God" or "religiosity"? Is it something cognitive or is it something behavioral? Those of you who know different kinds of religious people will be aware that this is actually quite a significant issue. For example, I am an evangelical Protestant, which means that for me, the ritualistic side of things has relatively little importance. But to others, as Dan was saying, it matters quite a lot. Therefore, if one is going to try and develop a memetic approach, there is a perfectly fair question here as to whether the religion meme has to do with belief in God, or certain patterns of behavior. And that seems to me to be an important point which really does need to be followed through. I think there is a very good case to be made for the evolution of human culture, of which religion is a part, and above all—and I think this is where I value Dan's work—the cultural shaping of religion. Yet again, this rests on some very difficult discriminations. When does something stop being "cultural" and start being "religious"? There is

a really interesting issue here for me as a theologian—the extent to which various forms of Christianity are shaped by their cultural context. I think this may be an area in which Dan's approach is helpful. There's a serious issue here if you're a theologian, because one of the big problems is that sometimes Christianity morphs into its culture and has to be (I don't know what the opposite is) "unmorphed" to try to recover its identity, which is what you see, for example, in the Protestant Reformation of the sixteenth century. So I think there's a very interesting issue there indeed.

And so we come back to memes again. Dan is right, there are many who still support the idea of memes in some way or another, and therefore you could argue clearly that this is an idea which has survival potential. And certainly, Dan has given us some very interesting, illuminating examples: words, ideas, and others. I also believe in the power of words and ideas, but I don't feel the need to generate a portmanteau concept called a meme to embrace them. I think one can manage perfectly well without it. There is clearly a difference of opinion between us here, as indeed there is in the broader scientific community. In the end, one of the key scientific criteria is whether taking this away renders things unintelligible. Is this hypothesis necessary? My feeling is, it is not. And, therefore, I'm just nervous that as I read Dan, he seems to place a lot of weight on this. I think the research program he suggests we explore is actually a very, very good one, and I certainly would want to encourage that. One of the things that really interests me is why different people respond in different ways. And in a point that is maybe more psychological than cultural, why it is, for example, that in different forms of worship, different people find different modes of worship elicit a different response. That's a very interesting question and I think it may well be a question about human nature that needs to be explored. So I think there is potentially a very interesting line of arguments here.

Our conference is called "The Future of Atheism," and so I find myself asking how Dan's approach helps evaluate the future of atheism. So I'm going to reflect back, if I may, some ideas just to take us on a little further before our time of questions. And certainly, Dan said (and I think that's entirely consistent with what I've read in his book *Breaking the Spell*), that atheism is a form of a meme, if indeed you believe in memes. And so, if there are memes (now obviously, I'm stepping over to his position for a moment) then, yes, atheism is one of them, and I'm sure you're right about that. I find that interesting because if Richard Dawkins was standing here and if I've understood him correctly, I think his view would be that belief in God is a meme whereas the belief that there is not a god is so self-evidently true that it doesn't actually require memetic explanation. So if atheism, religion, and belief in God and so on are all memes, where does this take us in terms of considering what the future of atheism may be? Dan made a point that I think is very true. Maybe science isn't going

to give us the answers there. Maybe we do come back to philosophy—and in saying that I'm not in any way degrading or devaluing the sciences. I'm simply saying that there are questions that science generally has difficulty with. It may clarify many points by helping us understand how the human condition works, but in the end it doesn't tell us what's right and what's wrong. And therefore, I find myself in agreement with him that we need something over and above the sciences which might help us make these adjudications, some of which are philosophical, some of which are ethical, and some of which are also religious. Science may help us clarify things, but in the end, we have to go somewhere else to find those "big answers." And while Dan and I think we'll probably disagree about what that source might be, I think nevertheless that the general point is fair. Recognizing that there are general limits to science does not leave us defenseless or without any guidance, it simply means that we realistically and rightly begin to look somewhere else, but hoping that the science will help us as we try and wrestle with that. So I find Dan a very interesting dialogue partner who has many interesting things to say to us in this context.

Dennett: I agree with Alister that the question of what's a religion and what is religiosity and what's spirituality and so forth, these are very interesting questions, and I talk about them in the book. Of course, on some accounts of religiosity or religion, one of the most powerful religions in America is the NFL. Well, for other reasons we might want to rule it out. It certainly inspires a sort of passion and devotion and large expenditures of energy. We could have a Super Bowl crowd right up there with that crowd in St. Peter's Square as something that the Martians would take note of and say, "Whoa, this is interesting. I wonder what the explanation of that is." And there might be some important similarities between the explanation of the NFL religion and other religions. The important thing about memes is not whether there is a religion meme or an atheism meme. The interesting memes are smaller, more specific ideas. They are, in this regard, like words, but more specific words. Let me tell you in response to Alister's skepticism, the simple argument that convinces me. I'm going to restrict it here to religion, but I could apply the argument to some other topics, too. Manifestly, religions are brilliantly designed. They repay attention from reverse engineers on many, many levels: the music, the rituals, the creeds, the prohibitions, the size of congregations, the hierarchies. The ones that are successful are not successful by accident; they have been beautifully designed to do what they do. Now, that's premise one. Premise two: you never get design for free. Some process has to do the designing. If your only two candidates are genetic evolution—you know, the "religion gene"—and let's say, clever priests, intelligent designers, you are missing a major trick. Many of the features of religion are much older than any deliberate redesigner. Yes, we

have the Council of Trent, the Council of Nicaea, Vatican II. We have occasions when people sit down and ask very deliberately how best to design their religions. And I would guess that something like 5 percent of the evolution we've seen in religion in the last two thousand years is due to those conscious, deliberate, foresighted, "intelligently designed" decisions. Most of the revision—and notice how very different Christianity today is from what it was five hundred years ago or one hundred years ago or certainly two thousand years ago—most of the change is so gradual and unheralded that you cannot find an author of that change. Christianity has changed in the Darwinian way, by differential replication of ideas. For that, you need the memetic perspective. You also need the memetic perspective because you want to be neutral as a scientist among all the possibilities for who is the beneficiary of this replicative process. Is it good for the host or is it good for the symbiont? If you don't have that role for the symbiont, you're left having to concoct bogus benefits for the hosts. And believe me, there are theories of cultural evolution, theories of religious evolution, that make the mistake of not adopting the memetic approach, and then they're left with many inexplicable features of religions. They think of cultural evolution as simply an adjunct to genetic evolution, where it's basically a matter of parents teaching their children things. Instead of passing on the wisdom through the genes, they pass it on through early upbringing. Such theories can be very good at explaining adaptations that are good for you, but they can't explain all the things that probably aren't good for you. And they have to treat a great deal of cultural difference as just noise. Scientifically, it's called noise because they can't explain it on their theory. If you have a theory which can treat that noise as signal and say there's pattern in here, that's a scientific advance. And in order to find that advance, you have to take the memetic approach. It's still in its infancy, but it's going somewhere.

One last point: Alister says he's glad that I agree with him that science doesn't give all the answers. Indeed not. He says we have to look somewhere else and that we may not agree. I think we can even agree on that if he'll agree to one more thing. I would say that where we look when we want to answer those deep questions that science doesn't answer, the answer to that was found in that film I showed at the beginning: where we look is to each other. We look to the community, to use the old-fashioned word *man*, to the community of human beings. And it's ultimately not just a philosophical issue, but in a deep sense, in a nonpejorative sense, it's a political issue. What can *we*, by informing each other and persuading one another, agree is right? Morality has changed a lot in the last two thousand years, and in every case, it's because people became better informed and looked around and just decided either this act wasn't as bad as we used to think or it's worse than we used to think. And they've adjusted their ethical views. Nobody here would be comfortable living under the ethical prohibitions and requirements of

the Old Testament. Nobody. Now, we the people have worked out in open conversation what we think makes the most sense morally. That's not science. And if you agree, then there's only one more thing we have to agree on that matters here, and that is, when we do that, religious beliefs come very much into the fray. And I agree and I welcome them and think there's a tremendous amount of wisdom to be found in the texts and traditions of religions. If we're going to have a genuinely open forum, we have to agree on the rules. And there's one rule I would insist on, and that's, there's one card you cannot play, the faith card. The faith card is when you say, well, no, we don't talk about that, that's a matter of faith. I'm a Hindu and Hindus don't believe that, and that's all there is to it. If you say that—and I talk about this in the book—if you play the faith card, if you say, "I am sorry, my religion does not permit me to discuss this," you are actually declaring your disability for this political discussion. You are saying, "I am sorry, my mind is closed on that. I am not able or I am not willing to give you reasons." Because it's always about giving reasons. If you will agree not to play the faith card, then you can use all the wisdom in your religious tradition and support it and spread it to others and get them to see why that's right. And if you say, "No, no, I have no obligation to defend or explain it. It's in the book, and that's it," you're basically letting your religion down. You're saying, "I can't defend this. I can't explain this. I'm just going to take my marbles and leave the game; I'm not going to play." Don't play the faith card, but join the conversation.

McGrath: To respond very briefly because we need time for questions. The last point is a good point, but if you think Alasdair MacIntyre is right in his analysis of faith and of tradition-mediated rationalities, then we all reflect these, whether we are secular or religious. The important thing is to identify these and try to make sure that we don't have unacknowledged taboos that we bring into the discussion. Some are religious, some are cultural.

Then you made some interesting point at the beginning about religions being designed, which I found intriguing. If you look at the way certain forms of Christianity have emerged, there is no doubt that they are now recognized to have certain benefits that I do not believe were recognized at that time at all. I think, therefore, one has to say that if one does use the language of design, it has to be used in a very cautious, very restrained way. That's a bigger discussion, and I'm afraid that time has rather run out. But thank you anyway.

Questions and Answers

Robert Stewart: You may make your way to the microphones now. I'm very confident that due to time restrictions some of you will be left standing at

the microphone. Let's run over the procedure again very quickly: thirty seconds to frame your question, make sure your question *is* a question, and after you've asked your question, sit down and let our speakers reply. We don't have time for follow-up questions. This will ensure that we allow as many questions as possible in the time we have left.

Keith Parsons: I'd like to address a question to Professor Dennett. I notice that you've said that atheism and unbelief is one of the most rapidly growing of the various worldview positions that you had in your powerpoint slide. But how could that be, if indeed religion is a natural phenomenon and explicable in scientific/naturalistic terms as you say? It seems to me that the number of unbelievers vis-à-vis believers would always be low and quite constant. For instance, I would imagine that the number of adult human beings who are uninterested in sex is quite small and remains quite small by comparison. So how then could it be that the number of unbelievers as in fact your evidence indicates is growing? Thank you.

Dennett: Well, things that are natural are natural because they are maintained by differential replication in the conditions that exist. And when conditions change, they either go extinct or they evolve. And if the world has evolved—think of the difference between the world ten thousand years ago and the world now—there's a tremendous difference—and if the conditions in the world today are no longer hospitable for certain religious ideas, then it's not surprising that they don't replicate very well. Either they go extinct entirely or they get replaced by others. I think that *natural* doesn't mean in everybody. As you say, the love of sex is normal—and there is no mystery as to why that should be because its role in reproduction is quite clear—but aside from things that are that directly related to fitness—genetic fitness—we see variation arising in all sorts of ways. And so it should not surprise us that there are differences and similarities between people when it comes to the religious phenomena that they participate in. I don't know if that answers your question.

Question: I've enjoyed hearing both of you. I have a question. I've always been under the understanding that if you have an opinion you need to understand the opposing opinion also. It's obvious that both of you do this. I have one question, and that is, "Is there a future of atheism?" That was what we were here for. I haven't heard that. And what I'd like to do is have you (*addressing McGrath*) say "No" and answer it *emotionally* without science, memes, or anything. And I'd like you (*addressing Dennett*) to say "Yes" and answer it *emotionally*. I have not heard emotion from either one of you. (*The audience laughs.*)

DENNETT: Emotionally?

QUESTION: Emotionally. Not scientifically, not statistics, but from emotion in your heart. No, there's no future, and yes, there is a future.

DENNETT: Oh, that's easy. No, there's no future for atheism because we're going to destroy the planet before the future arrives.

MCGRATH: I would wickedly say yes, because people don't know a good thing when they see it.

QUESTION: I've been reading your book, Professor Dennett, and I haven't quite finished it, but I get the sense that Professor McGrath's question about the definition of religion might be there in your book. You seem to have a number of phases or stages of religion that you've traced through the natural process. Can you speak to the development of religion, is that possible as a definition for religion?

DENNETT: Well, there's a straight-man question. He's invited me to give another lecture, but I'm not going to do that. Well, very briefly, before there were domesticated religions—when they were just wild religions—they were just responsive to the design (and perhaps I should use the word *design* very cautiously) of natural selection itself. And indeed, as Alister says, features could persist although people had no idea why they were good because they weren't even thinking about it. Sometimes people were the beneficiaries of them, but they hadn't worked out why. We find these things all the time. Then when religions became domesticated, people began to meddle. And when they meddled, they had their reasons. And although their reasons were often very good reasons, sometimes their reasons were very selfish reasons. And so, just as when the cow was domesticated, some of the things that were adjusted were really not good for the cow at all but made life easier for the cowboy or the dairyman or the farmer. And similarly, when religions started getting adjusted, very often, for instance, it was the good of the priests, for instance, that was really being served. And we can trace that. Or it was good for the political rulers of the day. Once people started using religion for ulterior motives, all sorts of pressures were introduced that simply hadn't been there when religions were wild.

WILLIAM LANE CRAIG: Professor Dennett, as I listened to your opening address, it struck me as an attack upon human rationality itself. On the view as I understood it, we don't adopt our ideas as a result of free, rational

reflection and adjudication, but acquiring ideas is rather like catching a disease. You use the example of the common cold. In which case these are ultimately the product of nonrational factors. So my question is, Are you a determinist? And second, isn't this then self-defeating since your own ideas would then be the result of these arational processes? You've caught this disease from Richard Dawkins (*audience erupts in laughter*), and as a result, you hold to these views.

Dennett: Well, first, let me answer your question, Am I determinist? Oh yes, I'm a determinist. And I've written two books on free will and determinism and I've tried to show how free will and determinism are completely compatible. Free will in the sense that you mean, in the sense that it shows that *we* have the power to judge ideas, to evaluate ideas, to choose ideas, to make decisions, all of this is compatible with determinism. There is no magical exemption from causality in our brains. There is no little part of our brains which is somehow undetermined, but that doesn't mean that we don't have free will. I know that's a hard idea for many people to understand. That's why I've taken two whole books—*Freedom Evolves*—surprise, surprise, and *Elbow Room*, which I wrote back in 1984. Now, if you read *Origin of Species*, (and I hope if you haven't, you will—we atheists read the Bible as literature; you should read the *Origin of Species* as literature. It's simply a great read. It's wonderful. He's a brilliant writer.) In the early going, he distinguishes three processes. First, he talks a lot about artificial selection. He calls it *methodical* selection. And he points out that all the animal breeders—the pigeon fanciers, the dog fanciers, the cattle breeders—are making deliberate, conscious, thoughtful decisions about which of their animals they are going to breed. Then he points out as a segue that there was an earlier period (and it's still going on in some regards) when we had *unconscious* selection, by which he means people are favoring some of the dogs in the litter and not others. They are not trying to do anything, it just happens. It's not a rational choice but it leads to selection. He has some wonderful examples of this—the King Charles spaniel, which had grown much larger at the time of his day from what it had been in the days of King Charles. And this was not a deliberate process. And then there's natural selection. Notice what we have here is the gradual diminution of free, rational interference with the process. Eventually, he's showing how natural selection can do without the intelligent decision altogether, but in fact, all three processes are instances of natural selection. The dachshund is just as much an instance of natural selection as the weasel is. It's just that the selection has been focused through the mind of a particular evolved biped, namely human beings. And I want to say that the same thing is true of memes. There are memes that can only replicate by making it through ferocious filters that have been established in the

brains of, let's say, biologists. And if they can't get through those rational filters they are not going to be copied or passed on. That's called science. Scientific memes have to pass some very big tests of rationality before they get passed on. It doesn't mean that they're not memes, but it just means that they are memes that have been through the mill of rational evaluation. Then we have memes that are unconsciously selected and we have memes that were completely wild—we didn't even know we were doing it. So there's no contradiction. And indeed, it's not self-contradictory to say that scientific ideas are memes. Did I catch the meme meme from Dawkins? Yes I did. But did I put it through the rational mill before I caught it? I'd like to think I did. At least I show some evidence of that in that I have now written something like a dozen papers in the last twenty years on problems with memetics and whether or not they are soluble. It's rational evaluation that's the filter.

Question: Professor McGrath, in the discussion of Peter Medawar's obvious statement that there are things that science cannot answer for us-purpose and meaning—you know, Professor Dennett mentions philosophy and you mentioned philosophy, ethics, and religion. And I'm wondering if there's kind of like a god of the gaps—science can't do it. Why is religion in this argument besides the fact that it might be the eight-hundred-pound gorilla in the room? Thank you.

McGrath: Well, I think the first point is just to say that there is widespread agreement that science does have limits. I say that not in any way because I'm a critic of science, but because I think it's simply important to calibrate it. In other words, if you are using any instrument, the first point is to establish the conditions under which it works well. And if it doesn't work well under certain conditions, you don't use it there. And I think that Medawar is just articulating a generally held consensus, that when science works it is very, very good. When it doesn't work it can't be relied upon. So the question that you were asking me is, Why should I then move on and try to bring religion or belief in God into this? Now, you have some American tax benefits here that we don't have in the U.K. but obviously it's an important point to make. One of the classic debates which lies unresolved but it is still extremely interesting is this—namely, whether there is something from which we can infer from looking at the world. I'm going to refer to this as God. In other words, we say we observe this, we observe this, we observe this, and we draw a conclusion and ultimately in order to make sense of what we do observe we posit a god. Now, of course, some would rightly want to challenge that. And I'm very open to that. One of the key points here is that Christians—and I certainly speak here for myself—don't just simply rush and say, "There's a gap in the argument here, let's

stick God in there." That is not what Christians are saying at all. I think one of the key points here is if we look at what science does do, we find that it has a remarkable capacity to explain what may be observed. But the key point here is that explicability itself requires explanation. John Polkinghorne, in a very interesting recent article in *Science and Religion* published in 2005, just makes the point that there are many basic understandings of the epistemic virtues. You could make a very good case for saying that God is a very good explanation of what we observe in the world and culture and human experience. But of course, it could be a challenge. And that's why Christians would then begin to want to talk about the whole importance of divine revelation, not as a way of weaseling out of intellectual difficulties, but rather as a statement about the kind of God that we believe we are involved with. In other words, not a God who leaves us on our own, wandering around, but rather tries to make himself known in ways that can really transform and transfigure the human experience. So the question's point really was that I seemed to be saying that science explains this and that it leads to gaps and let's just fill the gaps with God. That certainly isn't what I want to do. Maybe some others do. If they do, then I would want to critique that. But for me I think a very good rational case could be made for arguing that the invocation of God is actually an extremely important explanatory agent. Again, if I could just briefly end my response with a quote I love from C. S. Lewis. He writes, "I believe in Christianity as I believe that the sun has risen. Not just because I see it but because by it I see everything else." So he's offering this vision of an intellectual sun that illumines the landscape and enables us to make sense of things.

Stewart: This will be the final question. I'm very sorry that we do not have time for more but we do have a book signing, so Dan and Alister will be around for you to question.

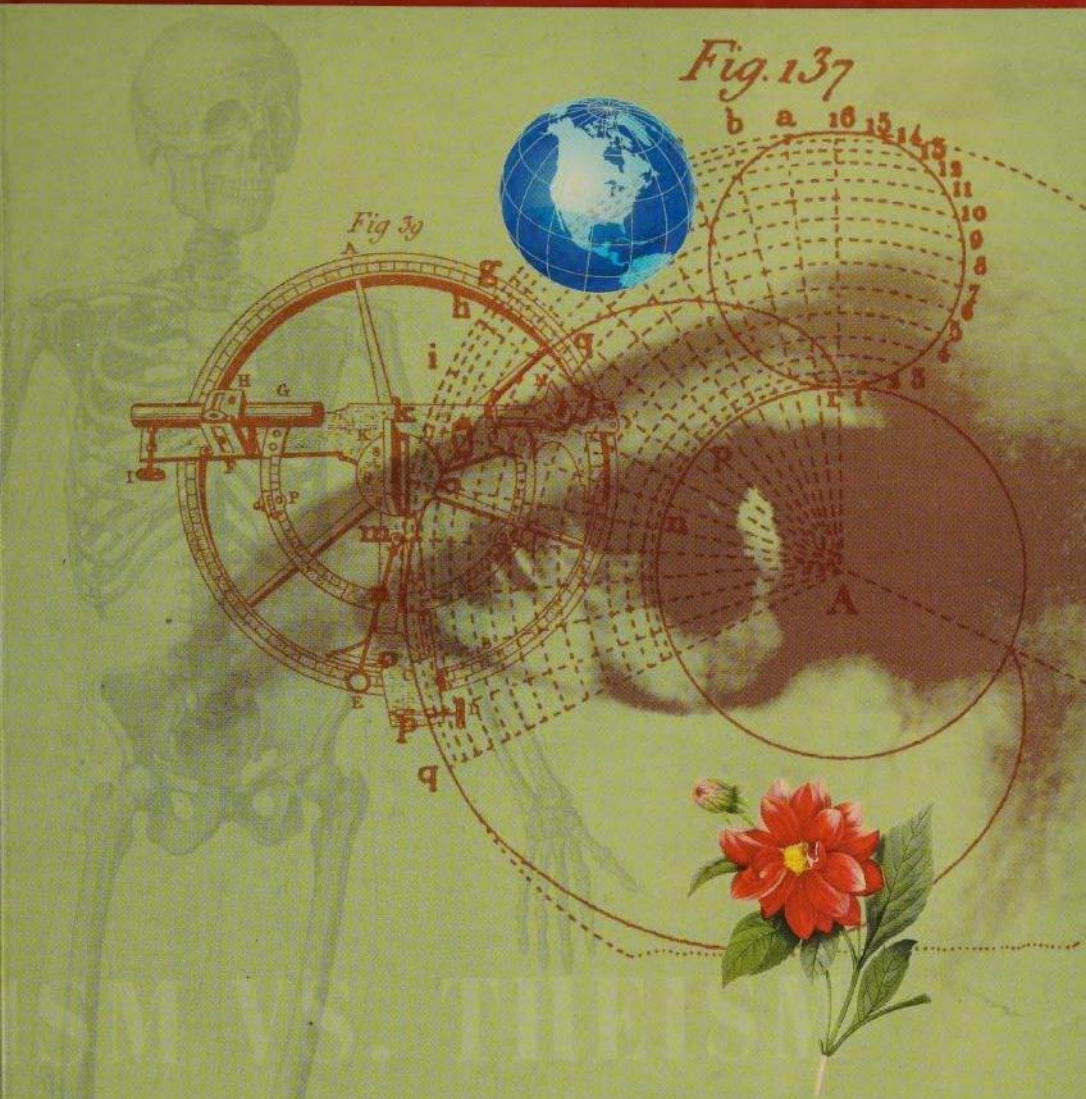
Question: Professor Dennett, I just wanted to start by saying that I am eagerly anticipating your book on reverse-engineering of atheism. And on that line, I would like you to put yourself in the position of a thousand years in the future and atheism has grown and it is 90 percent of the population. Their goal is to reverse-engineer atheism and explain it. Could you take that position?

Dennett: I'm sorry, I don't know . . .

Question: To reverse-engineer atheism? In the same way you reverse-engineer religion, could you do the same for atheism?

Dennett: Absolutely. Certainly. We reverse-engineer atheism and we see what is it about the tenets of the atheism that you are imagining a thousand years in the future—when atheism goes without saying. And we see what is it that convinces people in that day that atheism makes sense. And also, what is it about those who are still not atheistic? Have they got some special insight, or special experiences, or do they have different genes? That is one remote possibility. Certainly. We can reverse-engineer anything complex. Now, Alister ended with a quote from C. S. Lewis. I'm going to end with a paraphrase—I can't quote it exactly—from my friend and his *bête noire* Richard Dawkins, who points out, we're all atheists about Baal, about Thor, about Zoroaster, so some of us just go one god more.

Robert B. Stewart



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