

*Note for the Colloquium: I plan to give three "Einstein" Lectures in Switzerland later this month, and this paper is a condensed draft from which I will prepare those lectures. It is not particularly long by our Colloquium standards, but it covers a greater variety of topics and I understand that it may not be possible to discuss every claim. It does meet one of our ambitions for papers: it is suitably rough and unfinished and the footnotes are laughably incomplete. Please don't cite or circulate.*

## Religion Without God

### Lecture 1

#### Introduction

The theme of these three lectures is that the discovery or invention of gods is only one manifestation of a deeper human impulse that I believe it appropriate to call a religious attitude. Albert Einstein, who said he did not believe in any god, expressed this deeper impulse in these striking words:

"To know that what is impenetrable to us really exists, manifesting itself as the highest wisdom and the most radiant beauty, which our dull facilities can comprehend only in the most primitive forms--this knowledge, this feeling, is at the center of true religiousness. In this sense, and in this sense only, I belong to the ranks of the devoutly religious men."

William James, in his catalogue of the varieties of religious experience, also made plain that he did not limit the religious attitude to theism. Clifford Geertz, an eminent anthropologist, was careful to say the same thing, and so was Robert Bellah, in his recent compendious history of religion. It is extremely difficult – as James's efforts show – positively to define the religious attitude. In Lecture 3 I suggest that, in legal and political contexts, the concept of religion is what I have called an interpretive concept. The definition of religion that we should accept in those contexts depends upon what more general theory of liberty we should endorse.

We need a more general characterization now. This will do. A religious attitude comprehensively rejects the metaphysics of naturalism. That philosophical theory holds that reality is exhausted by what the natural sciences, including psychology, can describe. The religious attitude insists that there is more: it insists that reality also includes an entirely co-extensive universe of value. It spreads objective, mind-independent value across nature's entire domain: real value both in life and in the total natural environment in which life is lived. The religious attitude holds, by instinct or after reflection, that human life has intrinsic value or "meaning," and that the universe does not just exist but is a matter of wonder and transcendental beauty. This permeating value is wholly independent of what the various sciences that study life and nature can demonstrate: it is revealed only through an independent, different, cognitive process that science can neither validate nor undermine and whose success or failure it cannot explain. The presence of the religious attitude in so many human beings may or may not be explained by the processes of biological evolution. But the accuracy of the value convictions it yields must be judged in the light of other convictions of value: we can posit no special capacity that otherwise confirms or denies them. Of course, it is possible to believe part of what I describe and not the rest: to think that human life has meaning but that the universe is

otherwise just valueless gas and energy, for instance. But the religious attitude, as I will understand it, is comprehensive. It follows Spinoza. It finds value in everything there is.

I hope it plain why a belief in a god or gods – in a supernatural immortal creative intelligence – is a manifestation of the religious attitude. A god that created the universe and its life might account for that permeating value. But I assume, as Einstein did, that we can manifest the attitude as atheists as well. I am anxious to avoid a merely verbal understanding of this claim. Of course we can rearrange our vocabulary to make what Einstein said a self-contradiction. We can define a religious attitude so that it must include a belief in a god. But then we would need to find some other word to describe the deeper impulse Einstein had in mind. I believe no other word could capture the profundity of what he called “true religiousness.” If you disagree, choose your own word but make sure it does not make what I call the religious attitude seem parochial or trivial.

In the first two lectures I argue that though a god may exist, and though a god’s existence may be the best explanation of why we and the rest of the universe exist, neither of these assumptions can in fact support what the religious impulse claims at its heart: that human life has meaning and that the universe is objectively beautiful. The existence of a god cannot bear, one way or the other, on the truth of these convictions. They therefore belong to godless religions as much as to godly ones. In the third lecture, as I said, I consider the moral and, particularly, the political consequences of recognizing godless religions. This requires complex adjustments in human rights practice. I end the three lectures by examining, in that light, a variety of controversial topics: state-supported religion, religious holidays, drugs in religious ritual, homosexuality, abortion, and the banning of crucifixes, headscarves, burkas or minarets in public places.

### Religious Atheists

Wars between people who cherish different gods are an old story. In North America, Europe and elsewhere a different kind of religious war now holds the field: between believers in a god – I will call them all theists – and atheists who believe in no god. These new wars are fought not on battlefields but in politics at every level, from presidential campaigns to school board curriculum fights. Theists have great political power in America now: the so-called religious right is a bloc that is eagerly courted and makes open and brazen demands. Apparently no one could be elected to any high office in America who openly confessed to atheism.

The new power of theism in politics has, predictably, provoked an opposite though hardly equal reaction. Crude militant anti-religion, though politically inert, is now a commercial success. Richard Dawkins’ book, “The God Delusion” sold two million copies almost overnight, and dozens of other books mocking religion crowd bookstores. Arguments for the existence of a god used to be philosophical curiosities. The inanity of the biblical account of creation seemed too obvious to bear mention. No more. Scholars devote their careers to refuting what once seemed, among those who buy their books, in no need of refutation.

This sharp division between two parties – the religious and the godless – leaves many millions shut out in the cold. It leaves out those who identify themselves – in effect if not in these terms – as

religious atheists. They count themselves religious even though they believe no god or other supernatural intelligence exists. I have already quoted Einstein's example. True, Einstein talked often about God in a joking way. He said that he found the special theory of relativity by looking into God's mind, and that if his general theory proved wrong then God had missed a golden opportunity. But when more serious he offered the more careful opinion I described. He said he believed in a new kind of religion that had no place for a god. In fact godless religion is not, as he sometimes suggested it was, a new idea. Einstein himself cited Spinoza as a predecessor. Countless other scientists held similar views of religion. The biologist Stephen Jay Gould, for instance, said that since science and religion do not intersect: neither could undermine or threaten the other. That is true only if we understand religion to be independent of any creator god: otherwise every claim about the creative career of that god would be in direct competition with some scientific theory.

It is not only scientists and philosophers who embrace godless religions. Millions of ordinary people have the same thought: they say that though they don't believe in a god they do believe in something "bigger than us." That phrase, "something bigger than we are," is a familiar vehicle not just for rejecting moral skepticism but for renouncing naturalism more generally. It embraces religion without a god. Across the world constitutions and international human rights conventions declare a right of religion, and judicial and other interpreters insist that the concept of religion, at least in that context, cannot be limited to godly religions. The American Supreme Court, called upon to interpret the Constitution's guarantee of "free exercise of religion," declared that many religions flourish in the United States that do not recognize a god, including something the Court called "religious humanism."<sup>1</sup> If we insist on a sharp division between religion and atheism -- if we insist that a religion just is a belief in god -- we leave no room for these popular convictions and judicial rulings.

So we can set aside the merely verbal challenge: that the idea of religious atheism is ruled out just by the meaning of words. I must face more substantial challenges to the idea, in a moment, but I shall first try to give the claim of a godless religion more structure. Orthodox religions have two parts: a science and a set of associated values. Their science declares that a god created the universe, judges human lives, guarantees an afterlife, and responds to prayer. Of course I do not mean that orthodox religions offer what we count as scientific arguments for the existence, career and activities of their god. I mean only that this part of each religion makes claims about matters of fact and about historical and contemporary transactions in the causal order. Some believers do defend these claims with what they take to be scientific arguments; others profess to believe them as a matter of faith or through the evidence of sacred texts. I call them all scientific in virtue of their content not their defense.

Second, each traditional religion expresses value judgments that together make up what we might call its regime of value. These values differ somewhat among religions. Some are godly commitments, that is, commitments that are parasitic on and make no sense without the assumption of a god. They declare duties of worship, prayer, and obedience, for instance, to the god the religion endorses. Other religious judgments are ethical, moral and aesthetic convictions that are at least formally independent of any god. Two of the latter I believe define the most basic religious attitude. The first holds that human life has intrinsic meaning or importance and that each person has an innate and inescapable responsibility to try to make his life a successful one. The

second is that what we often call Nature – the universe as a whole and in all its parts – is not just a matter of fact but itself sublime: something of intrinsic wonder.

These two value judgments are shared among the familiar Abrahamic religions: Judaism, Christianity and Islam. Together they declare inherent value in both dimensions of human life: biographical and biological. We are part of nature because we have a physical being and duration: nature is the locus and nutrient of our physical lives. We are apart from nature because we are consciousness of ourselves as making a life and must make decisions that, taken together, determine what life we have made. The two dimensions are interwoven: "He who does not know what the world is does not know where he is, and he who does not know for what purpose the world exists, does not know who he is, nor what the world is."<sup>2</sup> Einstein and others who call themselves religious atheists do not believe in a god and so reject the science of conventional religions and the godly commitments parasitic on that science. But they do embrace, perhaps fervently, independent commitments which they understand to express a religious attitude. I find that true for myself.

I accept both of the convictions I just described. I believe that the life of every human being is objectively important, that it matters objectively how that life goes and that everyone has an innate, inalienable ethical responsibility to direct his life in a way that he judges makes it successful. (I described my convictions at some length in a recent book – *Justice for Hedgehogs* – and I will summarize that discussion later in this lecture.) I find natural wonders like great canyons not just beautiful but breath-taking. I find the latest discoveries of cosmologists and particle physicists not just interesting but fascinating – not just fascinating but awe-inspiring. I was both alarmed and excited by the recent speculative announcement that neutrinos may travel faster than the speed of light. Alarmed because the discovery seemed to threaten the beauty Einstein had found in the universe; excited because the discovery, if confirmed, might conceivably help to remove a stain on that beauty: the inability of physicists yet to reconcile Einstein's equations of gravity with the standard model of quantum mechanics. I find it perfectly natural to describe these convictions and reactions as part of a religious attitude and myself as a religious atheist.

### Is God Necessary for Value?

The first challenge objects that I cannot plausibly defend these convictions, or show those reactions to be appropriate, if I reject the existence of any supernatural creative intelligence who bestowed meaning on human lives through his grace and grandeur to the universe through his creation. If we deny such a god, then though we may claim to understand and embrace those values, we actually leave them empty and pointless. The convictions I said I affirm could only be true and the responses I report could only be only appropriate if there were a god to support and fund them. The objection is misconceived, however, because – to put it briefly at first – it misunderstands the necessary independence of what I called the value part of conventional religion from its scientific part.

Whether any judgments about value are true or any emotional responses to such judgments appropriate is not a question for the scientific part. It is a question for the value part because it is a moral or ethical or aesthetic question rather than a scientific one. Any judgment about meaning in

human life or wonder in nature relies ultimately not only on descriptive truth, no matter how exalted or mysterious, but also on more fundamental value judgments. There is no direct bridge from any story about the creation of the firmament, or the heavens and earth, or the animals of the sea and the land, or the delights of Heaven, or the fires of Hell, or the parting of any sea or the raising of any dead, to the enduring value of a monastic life or the sublimity of a sunset or the appropriateness of awe in the face of the universe or even a call for reverence for a creator god.

I emphasize: I do not argue against the existence of any god or gods. I claim only that a god's existence cannot in itself make a difference to the truth of non-godly religious values. If a god exists, perhaps he can send people to Heaven or Hell. But he cannot of his own will create right answers to moral questions or instill the universe with a glory it would not otherwise have. A god's existence or character can figure in any case for value as a fact that makes some other, background value pertinent; it can figure only as a minor premise. Of course, a belief in a god can shape a person's life dramatically. Whether and how it does this depends, of course, on the character of the supposed god and the depth of commitment to that god. An obvious and crude case: someone who believes he will go to Hell if he displeases a god will lead a different life. But whether what displeases a god is morally wrong is not up to that god.

I am now relying on a philosophical principle that I called, in *Justice for Hedgehogs*, Hume's principle. Judgments of value cannot be drawn from a scientific description or history alone – even an exotic history that includes supernatural, all-powerful, omniscient creatures. Judgments about value can only be defended – to the extent they can be defended at all – by locating those judgments in a larger background network of values each of which draws on and justifies the others. In that book I defend this holistic picture of value philosophically, by trying to show how the kind of truth a value judgment might have restricts any justification to a holistic procedure. Coherence, I said, for that reason, is a necessary condition of responsible belief in this domain and this must be coherence with other values not with any causal hypothesis alone.

So the claim of the first challenge – that only the existence of a god could sustain religious values – depends on whether some further, background value judgment makes a god's existence crucial to the meaning of life or the wonder of the universe. But, in my view, we cannot identify an appealing background value with that consequence. Consider these candidates. We have a moral obligation to obey the commands of any immortal being. Or of any being who created us and the rest of the universe. Or of any being who can cause us to burn for an eternity. No such premise seems remotely attractive or plausible. Consider this further possibility: whether something has value depends on whether its creator decides that it should have value. That is obviously not generally or even occasionally true. A painter can paint a wonderful or a banal painting, but he cannot make it one or the other by his fiat; whether a child's life is successful may depend on what his parents do, but whether it is important that his life be successful is not for his parents to decide. A theist may say: my god is different because my god just *does* have the power to make such decisions. That sounds like a concession rather than an argument, but we will return to it very soon.

We have at least tentatively reached a strong conclusion. The existence of a god, so far from being essential to any argument on behalf of religious values, does not seem even to bear on any such argument. A theist is in no better argumentative position to defend those values than an atheist is. However, there is another, rather different, way to put the first challenge. A belief in god might be

essential to the defense of religious values not because it plays a role in an argument for those values but because it licenses belief without argument. Most theists believe in a god as a matter of faith, or direct perception or intuition, not on the basis of a rational argument. They can include, in their act of faith, the values they associate with religion. But atheists, on this story, must believe what they do as a matter not of faith but of what they take to be the demands of reason. However, no rational argument compels the religious convictions that life has meaning or that the universe has wonder. These convictions can *only* be matters of faith, and therefore atheists can make no claim to them. Only those who believe in a god are entitled to believe anything else as a matter of faith alone.

I hope the non-sequitur is apparent. If religious science cannot establish religious value, then it cannot, just on its own, establish faith as a responsible basis for embracing religious value. We should now pause, however, to consider what it is to believe some proposition as a matter of faith. It cannot mean believing with no reason to believe. Theists who say their faith teaches them their religious science do not mean that they have no reason to believe that their god exists. They mean they have no reason of a certain kind. What kind? We might put the matter this way. Someone believes as a matter of faith when he knows that the reasons that move him carry no promise of even eventual convergence on the truth of what he believes. But then, if Hume's principle is right, no conviction of value can be held in any way *other* than finally as a matter of faith. For unlike propositions about causal transactions, whose truth contributes to people's belief in their truth, the truth of value judgments make no such contributions, and so hold no promise of convergence whatsoever.

### The Second Challenge: Three Gods

The second challenge insists, to put it roughly, that my response to the first challenge is misconceived because gods are exempt from Hume's principle. They are exempt because it is part of the very idea of a god that he is the creator of both universe and value together. We might compare this claim with the famous argument, apparently formulated first by St. Anselm in the 11<sup>th</sup> Century. The ontological argument, as this is called, claims that God must exist because we conceive him as a perfect being and it is part of perfection to exist. The argument is more difficult to refute, or, in any event, its refutation is more complex, than might first appear. But the ontological argument is of interest to us now only as an analogy. We are interested only in a parallel claim: that if a god does exist, that god must be an independent and complete source of value because the very idea of a god is of an independent and complete source of value.

I propose to consider that claim through a fanciful, Just-So story, history of gods. I cannot provide even a crude account that aims at accuracy, but I hope that even a caricature can help make my point. It is only certain kind of god that people might be tempted to assign a role in defending the truth of religious values. I therefore make a rough distinction among three kinds of gods as paradigm types: I call these the Pagan God, the Sistine God and the Bookmark God.

There have been many Pagan Gods, of course, with different features in different religious traditions, but I will speak of them collectively ignoring differences and I will take Homer's Olympian gods as particularly brilliant examples. Pagan Gods are very like human beings but with two important differences: they are immortal and they are mostly very bad. Together, over generations, they created the universe and sired and bore human beings. They continue to take a great interest in human affairs and to exercise a typically malign influence over them. Their interest is dominantly selfish: they demand to be worshiped to the exclusion or at least subordination of other gods, they demand strict obedience and costly sacrifice, they are jealous, capricious, whimsical and often cruel. Over the centuries, the Pagan Gods bestowed many benefits and fulfilled many needs of those who discovered or invented them. They made weak and vulnerable people feel powerful: they were the scourge of their worshippers' foes: they parted seas and sent plagues to reward the faithful and punish their oppressors. But they were not moral teachers. Their existence could do nothing to defend religious values.

They were succeeded by the god that, today, most believers worship. The Sistine God is the middle-aged elegant Renaissance prince who forever creates mankind on the ceiling of Michelangelo's chapel and, in the person of his son, judges Adam's descendants on the back wall. When the Sistine God was discovered or invented – sometime before the beginning of the Christian era – a dramatic change had occurred: this god was *both* omnipotent and the fountainhead of value. The very idea of this god does indeed embody both creation of the universe and the ultimate and sole source of all religious (and, indeed, all other) value. He is the god in whose name the second challenge is made. But he embodies value not because this follows from the idea of a god, but because he, different from other gods, was discovered or invented to mate value with power. The fusion was, however, his downfall.

The Sistine God's marriage of the two departments I distinguished, of science and value, was both personally and politically valuable to many powerful people. A society's shared values are much more effective if they are tied to supernatural power, and a society's political institutions are much more potent if they are bathed in value. If divine authority reflects an infallible moral sense, rather than arbitrary, or perhaps even cruel, whimsy, it is more easily transferred to mortals who govern in that authority's name. Obedience to government is ordained by the Sistine God and then sanctioned by him through eternal reward or the most terrifying punishment. People go to Heaven or Hell only because they *deserve* it. Following rulers to Crusades is a moral duty; fulfilling that duty insures eternal happiness. The fusion of science and value has had another, even more important, consequence. By situating value in the mind of a god, it establishes finally that value is independent of the minds of his creatures. If beauty or goodness or rightness is in the eye of a god it cannot be in the eyes of us as beholders. When a god creates value, value becomes, in the modern philosophical diction, objective.

But the Sistine God gradually became vulnerable on both wings of the fusion. He set out his science in sacred texts and gradually scientists became his enemies (though some of them claimed to be friends) because they challenged the science his texts declared. They were astronomers, geologists, archeologists, biologists, and, worst of all, a single man, Charles Darwin. Some of the Sistine God's defenders reacted to this challenge boldly, by declaring the epistemic superiority of revealed over experimental truth. Others responded more reasonably, by treating sacred text as esoteric or

allegorical. The bible story of creation in a few days is transformed when a day is treated as a set of archeological eras.

The challenges to the Sistine God were however, if anything, more serious on his value wing. One formidable challenge has been called the problem of evil. If the Sistine God is so good and so powerful, why did he permit the wholesale mechanized slaughter of European Jews? Why is there cancer? Why are so many lives of such innocent and good people so horribly ugly? Theologians have created a discipline called theodicy to answer these questions but it has produced no answer remotely satisfying.

A second problem is more germane to our study. I will call it Plato's dilemma because Plato set it out with great clarity in his dialogue, *Euthyphro*. Socrates, approaching his capital trial for impiety, asked whether an action is pious because the Pagan Gods love it, or whether those gods love it because it is pious. The Sistine God faces the same dilemma in this different form. Is justice good because he loves it? If so, justice is not intrinsically good, and the Sistine God cannot claim goodness in himself because he loves justice. Whatever he happens to like becomes, just for that reason, deemed good, so his goodness is only a pointless tautology. Or does the Sistine God love justice because it is good? If so, honesty may perhaps be said to be intrinsically good, but the Sistine God is not then author of its goodness. There must be some independent standard of goodness in virtue of which honesty is good; it is that standard, not the god's will or virtue, that justifies religious convictions. If so, then any direct argument from the existence of the Sistine God to any religious value disappears. That god can play a role in any such argument only, as I said, as a minor premise. He can play even that role, however, only if some more basic value premise, for whose truth he is not responsible, creates it for him, and we could not find any plausible candidate for that more basic role. Any successful argument for life's value or a person's ethical responsibility or the beauty of the universe must work, if at all, without the Sistine God's help. Prudence might demand obedience to that god's demands, but ethical or moral or aesthetic value is not gained by prudence.

The third god in our roster, the Bookmark God, was discovered or invented in the Enlightenment, in response to the scientific and value problems of the Sistine God I described, and he has had a steady if not enormous constituency ever since. This god makes scientific claims, but very different ones from the claims of the Sistine God. He is not vulnerable to any established science because he claims credit only for creating what science has so far not explained. As discoveries march on, the Bookmark God takes his place further back in the story. He is the prime mover, the first cause of everything, the point at which explanation ceases in an appeal to his power. But he yields to experimental and theoretical science the decision of the scope of creation for which he directly responsible. He is now credited, by some, with having created nothing but little strings that live in 10 dimensions. Those little strings, unguided, then created everything else.

So the scientific claims of the Bookmark God are much less vulnerable than those of the Sistine God alone or the Pagan Gods collectively. The Bookmark God has entirely abandoned, moreover, the moral and ethical claims of the Sistine God. Having created the potent little strings, or whatever other artifacts he is next credited with creating, he turned his back on that creation long before the processes began that produced human beings. He did not himself create animals, he takes no

interest in their affairs; he has no ear for their prayers. He is otherwise engaged, though it is wholly unclear on what project. So he can provide no link between any deeper moral or ethical values and the values people call religious.

But what about the different religious value I mentioned? Can we argue, for example, that the universe is properly awe-inspiring because the Bookmark God created its foundations? No, because Plato's dilemma applies with the same force in this dimension. Is the universe sublimely beautiful because that god created it? Or did he create it that way because he wanted it to be beautiful? In the first case, there are no independent standards of beauty in cosmic creation, so the claim that the universe is beautiful because he created it is empty. Whatever he created would, just as tautology, be beautiful. In the second case, there are independent standards of cosmic beauty, and the beauty of the universe depends only on whether its structure meets those standards. No god can contribute to the argument that it does.

We asked: can the existence of a god provide foundation or support for religious values such as those I described? The Pagan Gods can provide only prudential reasons for the obedience and deference they demand. The Bookmark God cannot offer even prudential arguments for any religious value or attitude. The Sistine God has been worshipped for centuries as the fount of both creation and value. But he, too, fails. Even if the scientific claims of Genesis, on which his contribution to awe depends, are correct, his claims to be the foundation of religious or any other form of value are defeated by Plato's dilemma. Perhaps no argument can justify the cardinal religious values: perhaps we can subscribe to these values only out of bare conviction, as a matter of faith. But in any case it makes no difference whether we do or do not throw in divinity.

### The Third Challenge: Conceptual Opacity

I expect it now to be said that I am guilty of unimaginative literalism. When we speak of or think about a god – particularly the Sistine God – we must perforce use the concepts we have, those that allow us to negotiate our lives and our experimental and theoretical science. They are the only concepts we have. But we must not think that these concepts, formed and used in that context, allow us more than the roughest and most compromised insight into the nature of a god. St. Paul said that in this life we can see divinity only “through a glass, darkly.” My arguments so far have wholly ignored that limitation. I have been just assuming, with wholly unwonted confidence, that Hume's principle and Plato's dilemma must apply with the same force for the supernatural as they do in terrestrial arguments. I seem to have assumed, for instance, that the expression “created” has the same causal sense when it is said that God created the universe as it has when we say that a child has created a sand castle. We understand how children make castles of sand: they use muscles to dig in and push around what is already there. These are simple causal events. But God is not embodied – his creation is not a matter of muscle meeting resistance of some kind – and he does not work with something already there but creates out of nothing. God's creation is not a causal transaction: we use the word “create” to gesture – it can be no more than a gesture – toward what some theologians call a “theological creation” in which, in a way we cannot understand, God is present across creation rather than causally involved in it. Do we not understand that distinction? How could we? Perhaps dimly intelligent creatures like us will never have the concepts or capacity

properly to understand it. But we shouldn't pretend that we do by deploying philosophical principles that a moment's reflection would show can have no application to the divine mystery.

I believe, however that this shoe is on the other foot. There must be some limit to the extent that proponents of a thesis – in this case the thesis of divine creation – can deny human capacity to understand that thesis and yet claim to believe it. It does not matter that they claim to believe it as a matter of faith. The question is rather whether there is any proposition to believe – either through faith or in any other way. Perhaps the thesis can be elaborated – as I say, some theologians suggest it can be – in some way so that the creation it reports can be understood in a non-causal way. The pertinent question is whether it can be understood so that it is not a matter of fact whether the God it cites did create the universe. If not, then I cannot see, even through a glass darkly, that any proposition at all has been offered. If so, then Hume's principle, which is a philosophical claim, has not been turned away.

### The Meaning of Life

I take the popular idea that there is meaning to life to come to this: it is important for each person how he lives his mortal life, not only if and because he thinks it important, but because it really *is* important, that he would be in some way defective or not fully responsible if he was indifferent to how his life was going. Because it is important in that way, each person has what we might call an ethical responsibility to identify what would count as a successful life for him, and generally to pursue that life. I agree that many people want to deny all this: ethical skeptics of different kinds, including existentialist philosophers, for instance. I do think, however, that almost everyone, including existentialist philosophers, leads his life in a way that contradicts that skeptical opinion. I defended that judgment in *Justice for Hedgehogs*, and I will not repeat what I said there.

I will ask a different question instead. Many people who want to believe in the meaning of their lives, understood in that way, apparently think they would not be entitled to the belief unless a god exists. But for some of them, at least, the connection we have been exploring seems to run in the opposite direction. They believe in a god because they believe – they cannot but believe – that their lives have meaning. If, as I have been arguing, there is no connection between religious science and religious value, then the argument fails in that direction as well. But why should they even be tempted to think that their responsibility to live well depends on the truth of theism?

The answer, I think, is this. They think that any such belief in the meaning of life needs a ground: some argument of some kind in its favor. Otherwise it might be just an illusion, something that it seems comforting to think but for which there is no actual reason to believe. God, they think, provides that ground. If he has a plan, and the plan includes the human beings he created living well, if he cares very much about that, then it follows that it is important that people live well, not just if they want to but whether they do or not. They think, in other words, that skepticism about ethical responsibility is the responsible default position: unless they have a good, positive reason to think that their lives have meaning, then they must accept, however sadly, that their lives do not, after all, have any meaning; that life really is all just sound and fury signifying nothing.

It is therefore important to emphasize that there is no default in this neighborhood. The existentialist's judgment that our lives have no objective importance – that is important how we live only if and because we decide to want to live well – is just another value judgment. Whatever kind of reason we think we need to believe that our lives are intrinsically or objectively important, we need just the same kind of reason to think that this is not intrinsically or objectively important. If we distrust the affirmative judgment because many people deny it and we have no way of proving that they are wrong, then we must distrust the negative judgment for the same reason: many people – in fact many more people – deny the negative judgment and we have no way of proving that *they* are wrong.

I anticipated this point when I earlier offered an explanation of what it is to believe something on faith. Since there is no default in value judgment, since no reason for accepting or rejecting any such judgment, positive or negative, carries any promise of convergence, we must just do the best we can without any backstop guarantee that we can demonstrate that we are right by converting disbelievers. We must think responsibly by testing our convictions against the great web of our other conviction, and then we must judge and, finally, believe what we believe. When our spade just turns, we must stop. People who have abandoned religion of any kind in favor of skepticism often say that they have converted to reason.<sup>3</sup> They misunderstand their own history: they have converted from one faith to another.

## Lecture 2

### Introduction

I ended the first of these lectures, yesterday, discussing a basic ethical conviction that is an important part of a religious attitude: that human life has intrinsic importance, and that we each have a responsibility to try to redeem that importance by living well. Now I turn to a second prominent feature of that attitude – the conviction that bewitched Einstein that nature is beautiful. In the last lecture our question was whether God can be any help in explaining value. In this lecture we ask whether we can explain the universe without helping ourselves to God.

I concentrate almost entirely not on that part of nature that almost everyone finds beautiful – gorgeous sunsets and flowers – but on the invisible worlds of the tiniest sub-atomic particles and the unimaginably vast universe itself. I will not attempt even the most hesitant view about the truth of the various hypotheses of physics I discuss. I do end with speculations about what physicists might one day settle on as basic cosmic truth, but only to illustrate one way in which the idea of a beautiful universe can be seen as another manifestation of a deep religious impulse.

Yesterday I quoted Einstein's remark that appreciating the "radiant beauty" of the universe is at "the center of true religiousness." He also said this, "The most beautiful thing we can experience is the mysterious. It is the source of all true art and all science. He to whom this emotion is a stranger, who can no longer pause to wonder and stand rapt in awe, is as good as dead: his eyes are closed."

Einstein had in mind the mysteries he had spent his life trying to unravel, and these are the mysteries that will mainly occupy us now. I expect that “beauty” will seem to you too indiscriminate and limited a word to capture the reactions Einstein described, which include emotions of wonder, rapture and awe. These are all different ideas, but the scientists I have read use “beauty” to cover them all, and I believe that word will serve, in all its vagueness, to cover the phenomena I mean to study.

I gather, from my limited reading, that Einstein’s faith in beauty is shared by most – though not all – of the physicists who work at what we might call the edges of their subject: particle physics and cosmology. Their books include, to name only a few, *Fearful Symmetry: The Search for Beauty in Modern Physics*, *The Elegant Universe*, and *Deep Down Things: The Breathtaking Beauty of Particle Physics*.<sup>4</sup> We take up now two questions. First, what sense can we make of these scientists’ faith? Does the inanimate universe in its incredible smallness and unimaginable vastness actually exhibit throughout a kind of beauty? If so, what kind of beauty can this be? Second, what role does that faith play in these physicists’ actual research and speculation? Is beauty somehow evidence of truth at the extremes of physics? Or is the beauty of their discoveries only coincidence? A fortunate serendipity?

We must pursue these two questions together, in tandem and in stages. But my argument will be complex and it might be helpful to set out my conclusions in advance. The beauty that those physicists who are driven by a religious impulse sense is a certain kind of elegance: the elegance of the inevitable. The goal of physics, they think, is steadily to eliminate contingency from the cosmos. That is the assumption under which they work because they otherwise have no satisfactory answer to the ancient question: is there a way the universe just is? For many millennia God answered that question through his own inevitability. That remains the sole assignment of the Bookmark God I described in the last lecture. Scientists who are religious without god also take inevitability as their goal. Their religious impulse shows itself in faith in the breathtaking elegance of a final mathematical proof they may never find, a proof that now remains, as Einstein put it, a beautiful mystery.

#### What Kind of Beauty?

We start with the first of the two questions I distinguished and in bafflement. In what way could the sub-atomic and inter-galactic worlds be thought beautiful? Unimaginable? Yes. Intriguing? Of course. Mysterious? Certainly so far. But *beautiful*? We must reflect on familiar kinds and dimensions of beauty. We can sensibly arrange these on a scale from the purely sensuous to the purely intellectual. Almost everything we find beautiful has a place on that scale. There are pure cases of color sensation, but we perceive most of what we are tempted to call sensuous beauty – of people, paintings and songs – through a filtering lens of knowledge or supposition, and that is even more plainly true of architecture, poetry and serious music. Toward the other end of the scale, perception and the sensuous play little or no role: in much of literature, for instance. The beauty of such things is intellectual – purely intellectual in the case of, for example, a dazzling chess game or legal argument or mathematical proof.

The wonders of nature we see about us – sunsets, flowers and canyons – have sensuous beauty for us, though they also have a large intellectual dimension because their beauty depends upon our assumption that they are wonders of nature not artifice. (We shall have to consider the implications of this qualification later.) It is difficult for us to credit either the sub-atomic world or the entire cosmos with a beauty that is markedly sensuous, not just because we cannot perceive either of these worlds but because our incomplete theories suggest that we would not find them sensuously beautiful if we could. Heisenberg's uncertainty principle declares that we cannot even imagine the behavior of particles in the quantum world because, since we cannot identify their position and momentum at the same time, there is nothing for us to imagine. Physicists speak of quantum jitters but this is not a ballet. And if we could shrink the universe, as we now speculate it is, to the size of say, something visible in the round through our best telescopes, it would be almost entirely homogenous and boring. Most of it would be "dark" matter entirely opaque to our view.

Many physicists suggest a kind of beauty in both the quantum and the cosmic worlds that we also find in the terrestrial world. We find symmetry pleasing to the eye in our world and, as two of the titles I mentioned just now suggest, a great many physicists say that the beauty of the universe lies in its own uncanny symmetry. In our world, an object is symmetrical if it looks the same after rotation to some degree in some dimension. A circle or sphere has total symmetry: it looks the same no matter in what direction or how far it is turned. Most attractive human faces have (close enough) mirror-image symmetry, and, at least until recently, so do the great bulk of beautiful buildings. We marvel at the hexagonal symmetry of a snow flake. But rotational symmetry often means boredom rather than beauty. A desert without dunes and shadows would have complete rotational symmetry in the horizontal: it would look the same wherever we turned. But it would be boring while a desert with dunes and therefore shadows is gorgeous. We sometimes appeal to symmetry in a more abstract way: we say that a painting or a sonnet achieves symmetry when its components are balanced in a satisfying way, even though they have no rotational symmetry at all. (The New American Dictionary describes this as a "special usage," which it defines as "a pleasing proportion of the parts of a thing.") A striking asymmetrical building may be symmetrical in that sense. But not all balance in art is pleasing: it may be mechanical. We should say: whether symmetry makes for beauty is a complex matter sensitive to many factors.

The symmetries physicists celebrate are quite different. These are transformational symmetries: the laws of physics laws are unchanged in even otherwise dramatically changed environments and situations. Transformational symmetry has proved crucially important in theoretical physics. We assume, so far without contradiction, that the same laws of physics operate in the same way everywhere.<sup>5</sup> An experiment confirms the same laws whether it is performed in Iceland or Chile or (so we assume) on an exoplanet in another and unimaginably distant galaxy. Einstein made the claims of transactional symmetry dramatically greater. In his special theory of relativity he showed that the same laws apply for two experimenters each moving at a different but constant velocity. In his general theory, he showed that laws are constant for experiments moving not only at different velocities but at different rates of acceleration. Light travels at the same rate, for instance, for each of these two experimenters. Brian Green spoke for the profession when he said: "So the symmetries of nature are not merely consequences of nature's laws. From our modern perspective, symmetries are the foundation from which laws spring."

Physicists treat other important features of the cosmos as symmetries. The temperature of the background microwave radiation over the whole universe is apparently equal to an extraordinary degree, for instance. And for every kind of particle in the universe there is an anti-particle. (Fortunately this symmetry is not complete. There are slightly more particles of matter than anti-matter; if there were ever an exactly equal number nothing at all would exist.) Symmetries play an important role in burgeoning string theory: for every particle with a spin with an integral value there is another with a spin with half an integral spin. [Insert more about gauge symmetries?]

But these different forms of symmetry, important though they are, have nothing to do with what is pleasing to the eye. The analogy between terrestrial rotational symmetry and cosmic transformational symmetry seems forced. Not all cases of terrestrial symmetry are beautiful and some terrestrial symmetries have no analogue in the world of things too small or too big to see. If the symmetries of the cosmos and the particle world give those worlds beauty, this must be purely intellectual beauty. It must be the beauty of the equations and laws that explain these symmetries – the kind of pure intellectual beauty an elegant mathematical proof has, for example. But it is baffling how our greatest scientists could yet declare the universe beautiful in that way because they do not yet have, and perhaps no intelligent creature ever will have, any sufficiently complete and successful set of equations and explanations to justify that extraordinary claim.

True, physicists who believe that the universe has great beauty also believe that it has some fundamental unity: they presume that there is, waiting to be discovered by observation and mathematics, a comprehensive and unified explanation of how the universe was born and how it works, from the largest galaxy to the tiniest particle. Stephen Weinberg describes the search for such a fundamental explanation as the “dream of a final theory.” It is surprising how widely that dream is shared among physicists. But it is not universal among them, and those who despair of a final theory also reject claims of wonder in the universe as a whole. Marcelo Gleiser sets out reservations in his book, *A Tear at the Edge of the Universe*. He suspects that the universe is finally not unified but untidy. He draws this conclusion: that only human life, not the inanimate universe, can have intrinsic value. There is beauty in our lives and what we make, he thinks, but not in the unconscious galaxies and atoms. We are wonderful, he declares, but if there is no unifying theory there is no wonder in space itself.

One challenge to the dream has obsessed physicists for decades. Einstein’s theory of gravity is a spectacularly successful account of the behavior of relatively large matter: galaxies, stars and us. The standard model of particle physics is a spectacularly successful explanation of the behavior of matter and energy in the almost infinitely small quantum world of particles. But when Einstein’s theory is applied to the quantum world as the standard model understands that world, for example to calculate the probability that an event involving gravity will occur, it yields impossible conclusions: that the event has an infinite probability, for instance.<sup>6</sup> The search for a final theory is often conceived as the search for a reconciliation of the two theories each of which seems so successful as to put it beyond doubt. Some physicists think that what they call “string” theory, according to which the ultimate components of everything are tiny strings that vibrate in ten dimensions, promises a reconciliation. The suggestion has taken many different forms, each incredibly complex, but so far none is unproblematic.

A different challenge to the dream of a final theory is technological and therefore partly economic. Evidence of new particles physicists now posit would require a particle collider capable of exponentially more energy than the most powerful collider that now exists, and it is unclear how the world could pay for that hyper collider even if our scientists knew how to build it. If the beauty that Einstein and his colleagues find in the cosmos is the intellectual beauty of a final, complete explanation of everything, their confidence in that beauty seems at least premature.

So perhaps, for all we now know, the symmetries are only skin deep. Perhaps any further explanation would show, as Gleiser believes, only an untidy and disparate set of cosmic accidents. Or consider this possibility. Some famous physicists now think that our universe is only one of boundlessly many universes, constantly bubbling up and collapsing from a more primitive trans-cosmic soup, each of which bubbles is a universe governed by an entirely different set of physical laws from each of the others. Would that multiverse embody a deeper intellectual beauty? What kind of beauty? Or would it mean that the laws holding in our particular universe are only accidents? Would that destroy all hope of finding beauty in those laws – those accidents?

We reach a tentative conclusion. There is a crucial connection between a physicist's confidence in a final, unifying theory and his commitment to the idea of universal beauty. A religious attitude toward the universe as a whole – finding it not just interesting or challenging but awe-inspiringly beautiful – seems to depend on the assumption that a comprehensive, unifying explanation of everything exists, waiting to be found. But no such theory actually proposed is sufficiently robust either to gather a consensus of physicists or to suggest any empirical design that might test it. Nor is it clear what kind of beauty a final, comprehensive theory would display. Our initial puzzle remains. Why do so many physicists speak so confidently of beauty?

### What Use is Beauty?

We shall have to return to that puzzle. But we should turn first to the second question I distinguished. What role, if any, does the idea of cosmic beauty play in actual science – in research in particle physics and cosmology? The simplest connection we might propose is that the beauty of a theory is *evidence* of its truth: a more beautiful theory is at least to some degree more likely to be true. Keats's urn said that "Beauty is truth, truth beauty. That is all ye know on earth, and all ye need to know." If we have different candidates for a final theory of everything, but no decisive evidence for any of them in observation, then, on this view, the most beautiful among them is most likely to be true.

Skeptics about the objectivity of value would of course deny that suggestion. For them beauty cannot be evidence of truth because truth is a matter of how things are and beauty a matter only of what we choose to call beautiful. We might decide that the most beautiful theory ever invented is that the earth is held up by an elephant who stands on an infinite stack of turtles, but that would be no evidence at all that the universe is turtles all the way down. The urn's advice was once, however, accepted by scientists devoted to the Sistine God. Beauty is evidence of truth in astronomy, they agreed, because that god is an infallible judge of beauty, and would have wanted his universe to be beautiful. Circles are beautiful so the orbits of the planets around the Sun are therefore very likely to be circular. Johannes Kepler was persuaded to circular orbits by this argument, even though his own

observations seemed to contradict his conclusion. In the end he bowed to observation and changed his mind. We might say that, for him, beauty was some evidence of astronomical truth, but the evidence of observation finally overrode the evidence of beauty.

However, a godless religion cannot accept that beauty is evidence of truth because God loves beauty. Some philosophers have suggested that scientists nevertheless follow what the philosophers call “epistemic” values.<sup>7</sup> But any scientist who supposes that the world he investigates is real – that it really is a certain way – cannot mix beauty and truth in that way. He cannot count the beauty of some hypothesis as even some evidence – evidence to be weighted in the balance alongside observational evidence, for instance – for its truth. That would be to violate Hume’s principle: to confuse fact and value respecting the independence of neither.

But some scientist do not accept that the universe they investigate is real – that it really is a certain way. Stephen Hawking recently described his “model-dependent” scientific epistemology.<sup>8</sup> A variety of different models might fit the observational data available at any particular moment in the development of cosmology. None of these can be the “real” truth because there is no real truth. We adopt one model or the other, though always tentatively pending new observational evidence, on grounds that include simplicity and elegance. Hawking calls this the “model relative” theory of cosmic epistemology. It makes beauty evidence of truth but only in a very special way: beauty directs our choice about what to treat as cosmic truth for now. In fact, this view is rather close to the value skeptic’s view I just described, though it is even more skeptical. It denies not only that beauty is an objective property but also that there is any “real” truth to be had at all – ugly or beautiful – about the actual universe.

Hawking’s argument falls into a category of skepticism I called two-worlds skepticism in *Justice for Hedgehogs*. He supposes that in the day-to-day world of practicing physicists it is unobjectionable to speak of real phenomena and cosmic truth. He does it himself, and very well: he presents very complicated accounts of, for instance, the origin and behavior of black holes in the universe and he claims these to be closer to the truth than rival theories. But when he ascends to a philosophical platform, and proposes his “model relative” philosophical theory, he takes it all back. He says he and other physicists are only inventing theories that are not yet contradicted but that should not be understood as attempting to describe a real universe which, in fact, at the philosophical level, does not exist. This leads (as I argued in JH) only to paradox. The thesis supposes that we can distinguish two different senses of “real” – the sense Hawking uses in his everyday role as a physicist, when he says that black holes are real, and the different sense he uses in his philosophical life when he says that they are not real. Unless he uses “real” in different senses in his two roles, he contradicts himself. But if he does mean something different by “real” in those two roles, then he has subverted his claim that beauty is, even in the way he has in mind, evidence of truth.<sup>9</sup>

We might be tempted now to the other extreme: to think that beauty and truth can have nothing to do with one another except by accident. On this austere view physicists should pursue their grand unifying theories according to the best scientific methods, choosing among candidate theories by asking which survive experimental testing and then, if they wish, judging the beauty of what they have discovered on independent aesthetic grounds. So it would be only a bonus if the final theory

was also, according to some such independent standard, beautiful. But this “coincidence” view is too simple. A much tighter connection holds between beauty and method not because beauty is evidence of truth but because the description of the final theory that physicists seek has, as one of its components, that the theory be beautiful as well as true.

The beauty of the universe is not, for religious physicists, a discovery but an article of faith. They concede, as they must, that we know relatively little about what the universe holds or, indeed, whether our universe is unique or only one member of a seething mass of infinitely or nearly infinitely many universes. Most of what exists, we are now told, is dark matter or energy or holes that we may never know anything about except that it or they exist. Physicists sense and declare beauty in a largely unknown totality. But this is not a sense that, should the unified explanation ever be found, the universe it describes would be revealed to be beautiful on some independent, free-standing criterion of beauty. Rather it is *part* of their assumption that a unified explanation exists that this explanation displays a certain deep beauty. We need an account of beauty that makes beauty eligible for that strange role.

The final theory of the physicists’ dream, I said, is a unified, comprehensive explanation of everything. How shall we understand these essential features? We might say that a theory is comprehensive if indeed it does explain everything: if the theory predicts every observation we can make about anything even as our observational technology improves. What makes a theory unified? Here we have a choice. We might say that a theory is unified if it is entirely self-consistent. Or we might adopt some account that makes unity not a logical but an aesthetic property. On the first reading, comprehensiveness and unity both belong to science, assuming that logic is part of science; indeed since a comprehensive explanation must be consistent, the first property includes the second. On the second view of the matter, however, the final theory has both a scientific and an aesthetic component. Beauty is built into the dream.

In the 1960’s, with the development of accelerator technology for detecting sub-atomic particles, a great many new, different and apparently independent particles were duly discovered. [Provide examples.] Physicists complained that they had only discovered a zoo: they said that the next one of them who discovered a new particle should be fined. However nothing in the purely scientific ambition to find a comprehensive and logically consistent explanation of everything rules out such a zoo. Imagine that scientists were able to compose a very long and exhaustive list of the sub-atomic particles they had discovered using available technology, together with a complete description of how each particle behaves vis a vis all other particles in the list in all physical contexts. Suppose that list allowed precise prediction of observations that were repeatedly confirmed, and suppose the list was then embedded in a larger theory – which, perhaps, also had lists of the same kind – that perfectly explained every observation ever made or phenomenon ever noticed. Such a theory would be terminally untidy: indeed ugly. But it would not fail any purely scientific standard of adequate explanation. A scientific theory must stop somewhere; it would not stain the comprehensiveness or predictive value of a theory of everything to stop just at the point where every observation and prediction confirmed that theory.

We know, however, that good scientists are not content with list-theories of that kind. They were dissatisfied with the zoo of particles and their dissatisfaction generated a search for fewer, more basic particles – Murray Gell-Mann, whose work was seminal in their discovery, called them “quarks” – whose properties of “color” and “spin” explain the character and behavior of the larger particles they compose. In fact, it was necessary to recognize a substantial number of different kinds of quarks, but only a few different types so that the zoo is now smaller. The standard model suggests further particles, including the very heavy Higgs Boson, whose existence has not yet been demonstrated. The smaller zoo is certainly regarded as an important advance. But if quark studies do not enable more secure predictions of natural phenomena than the ugly list would, we cannot say that the explanation they provide is more comprehensive than the list would have given us. Physicists who dream of a final theory dream of something more. They dream of a beautiful final theory. So though beauty is not evidence of truth it would be evidence of a final success if a comprehensive theory of the right kind was ever actually found.

That observation helps to define our project. To use an image I have overworked, I fear, we must find a solution to a triplex of simultaneous equations. We need a conception of beauty that is familiar in our experience generally, not just invented for this context. We need a conception that it makes sense to attribute as a goal for the most basic science. We need a conception that it makes sense to describe as an article of faith whose assumption is a manifestation of the deep religious impulse the lectures explore.

The first of these requirements seems easy to satisfy when we think of wonders of nature on a scale we actually encounter. People who are not struck with awe when they first see the Grand Canyon, or Victoria Falls, or even a particularly splendid sunset or gorgeous flower, are in some way defective: they lack a normal sensibility to grandness and beauty. Why? Because, we might say, these *are* grand or beautiful: in just the way that objects created by great artists – Chartres or the Taj Mahal or a Monet – are grand or beautiful. But not, it turns out, in *just* the same way. Imagine that you are spellbound at your first sight of the Grand Canyon. You find it awe-inspiring. Then you learn that, contrary to popular opinion, the Canyon was in fact created over many years by gifted architects and artists of the Disney Corporation so that it might eventually become the site of a gigantic theme park. You might admire the artists and the ambition of the project, but the wonder would be gone. Now consider the gorgeous flower. You learn that it is a brilliant Japanese reproduction properly indistinguishable from a real flower in texture as well as color and form. You admire the skill, but the magic has gone. The lesson seems clear. It is not just that nature contains objects that are in themselves beautiful. Their wonder depends on the fact that it is nature, rather than human intelligence or skill, that has produced them.

There is an initial puzzle in that fact. In other contexts we value a human creation but disdain an otherwise identical object created by accident. Jackson Pollack’s Blue Poles is marvelous, but the same painting, somehow created by an explosion in a paint factory, would be worthless. And yet the Grand Canyon is breath-taking in considerable part just because it *was* created by accident rather than intelligent design. What explains or justifies that difference? Here is one hypothesis: nature can be particularly beautiful in detail because nature is beautiful in the whole. The Grand Canyon is an extraordinary kind of accident: it is part of a what we take to be a great, even noble, story about creation and evolution whose author we personify as Nature. Believers identify that author as a god:

some of them believe that a god deliberately created the Canyon, though not the explosion in the paint factory. If a godless religion is to count our reaction to the Grand Canyon as a religious experience, it must find some other way to explain why the fact that the Canyon is part of an overall evolutionary process endows it with a special drama. We must turn to the larger question. Why do physicists and more ordinary people find beauty and grandeur in the fact and history of the universe as a whole?

### Is There a Way the World Just Is?

I asked that question earlier and we take it up now at some greater length. Is there a way the world just is? Does physics come to an end, at some point, in that resigned statement? Other kinds of explanations, in other domains, do sensibly stop with some such finality. Why do I like pecan nuts? I just do. You might find a deeper explanation of my taste in psychology or biology. But these are irrelevant in this context: the only sensible answer to the question, in the context in which it arises, is that I just do. If that is also true at some point in basic physics, then that point really is the end of inquiry. There would be nothing more to be said no matter where else we turned.

Is there a way the world just is? Some physicists think so. That is why they refuse to struggle on, after so many failures, in the search for a grand comprehensive unifying theory. We just have to accept, they say, a bit of “weirdness” in how the world just is.<sup>10</sup> But neither that view – that the world just is a certain way – nor the apparently opposite view that explanation never ends – is at all satisfactory.

Suppose we accept that the world – the universe or multiverse – just is a certain way; there is a point at which there simply is no further explanation of why it is that way. It just is: the laws of gravity just do not apply in the world of quantum jitters. And that is all there is to it, so that the holy grail of a grand unifying theory is a time-wasting illusion. There seem two problems. First, what possible argument or evidence could we have for that conclusion? We must take care here, as elsewhere when any form of skepticism is on offer, to distinguish uncertainty from finality. We are uncertain how to reconcile gravity with the other basic forces. What justification does that offer for deciding that they cannot be reconciled: that gravity is not after all pervasive but holds only among relatively large objects? That the major symmetry of wholly pervasive law has broken down here, as it does, luckily, in the case of matter and anti-matter? Does the fact that we not yet found a comprehensive and unifying theory justify declaring that there is none? Hardly. Think for how long people believed that the earth was at the center of the universe, or how recently the idea of a lumeniferous ether was abandoned. It is by any reckoning early days. We might have reason to think that we have reached the limit of our observational powers: that we do not have the resources or skill to build adequate technology to investigate much further. But of course that doesn't mean that there is no further to investigate. The idea that the world just is a certain way is a negative claim, after all, and there is no way to prove a negative. In this context, there is no way even to justify believing a negative.

Second, the idea that explanation can come to an end in physics, in the study of everything there is, seems odd in itself. Suppose we find what we decide to treat as a final comprehensive law. We can still ask: how did the universe get into the state described by that law rather than some other?

Consider the layman's perennial question: what happened a few minutes before the big bang. I was told, always, that this question revealed my lack of understanding: it was like asking what is north of the north pole. But now some such question, if not in that form, is recognized as sensible. Proponents of what is called M theory have pressed the idea that there has to be some explanation of what happened in the bang that presupposes some account of how things are in a landscape where that event took place. Hence the multiverse with its landscape of possible universes. How can we turn away the question: how did the landscape get that way?

But suppose we ride the other horn: we say that there is no end to explanation. It goes on forever. No matter how convincing the version of superstring theory, with its 10 dimensions, that our scientists have produced, no matter how thoroughly it explains everything else, we insist on the further explanation I just demanded, and then insist, in advance, that we must have an explanation for any further explanation – that explanation stretches out, as Macbeth put it, until the crack of doom. We have, first, the same epistemic problem. How could we know that the world wasn't just a certain way: that the flat answer wasn't, in fact, the right one, that explanation had not indeed come to an end? But, again, there seems some problem even deeper than that. It seems bizarre, contrary to the very idea of what an explanation is, that explanation could even in principle go on forever. Explanation in physics is causal. But, as everyone since Aristotle has pointed out, a causal explanation has to end somewhere. If there is an infinite regress, then it isn't a causal explanation, which must have a beginning, but an explanation of some different kind. What different kind of explanation could that be?

We should pause, now, to notice that godly religions face the same challenge, and how they answer it. God created the universe. But who or what created God? The answer is familiar, and, for someone who accepts that God created everything, inescapable. God exists not contingently, as if he might not have existed, but out of necessity. The question who created God is no more sensible, for them, than the question what caused five and seven to make twelve. We do not face the epistemic problems of justifying our belief that five and seven just do make twelve because we know that there is no other possibility. There are famous attempts to prove that God is inevitable in the same way. Aristotle did it just by pointing out that an infinite causal regress doesn't explain anything. St. Anselm did it in a different and more positive way: through what is called the ontological argument, which, though few philosophers accept it, has proved surprisingly resilient. In any case, whatever argument we may use, if we accept either the Sistine God or the Bookmark God, inevitability is part of the package. It holds as an article of faith.

I said earlier, in an advance summary, that those physicists who anticipate the beauty of a final theory have intellectual beauty, and in particular mathematical beauty, in mind. Elegance in a mathematical proof has a variety of dimensions: the simplicity of the axioms, the economy of the several steps, and so forth. But of course truth is a necessary condition of a beautiful mathematical proof. No matter how few its axioms, a proof is not elegant unless it works – which of course means, in the mathematical case, unless it is necessarily true. We see a parallel constraint in the world of value: if Figaro is beautiful or torture for fun is wrong, this does not just happen to be so. Given the natural facts of our world and our situation, if it true it has to be true. Mathematics is inevitable in a more fundamental way. Its truths are true no matter what the natural facts are. So mathematics has a kind of inevitability suitable to the most basic laws of nature. If the most basic laws can be shown

to be in some way necessary truths, then the dilemma I described is dissolved. Yes, there is a way the universe just is. The question why is it that way can indeed be answered: it is that way because it must be.

Does that make sense? Remember, we are trying to identify a religious belief not a scientific discovery. We are trying to identify a conviction that would justify the awe with which we contemplate the universe even if we do not believe it was created by some supernatural artist: even if we dismiss even the Bookmark God. The following statement, in a popularization, may well be, as it claims to be, representative of the instincts and impulses of many physicists.

It's sometimes said that the ultimate goal of physicists is to revolutionize the fashion industry. They seek to boil the entire physical world down to equations compact enough to silk-screen onto a t-shirt that all the cool kids would wear. Actually, though, physicists' sartorial ambitions are more modest; they hope to create a theory that won't even need a shirt to write it on because it's so blindingly obvious. Obvious? Given the difficulties they're having in figuring out quantum gravity, it must be one of those things that's obvious only in hindsight. But physicists hope that once they know the trick, all else will follow as a matter of course. They'll find that things are as they are because there's no other way they could be. ... The best evidence, though, may simply be past experience. It's hard to create a consistent theory in any branch of physics because beautiful hypotheses have a nasty habit of collapsing under the weight of their own internal contradictions. In fact, physicists take perverse pleasure from the fact that a quantum theory of gravity is taking so long to figure out. When they do figure it out, they'll have some confidence it must be right because there probably won't be any alternative.<sup>11</sup>

What of the multiverse? If M theory was true, wouldn't that show that the existence of our own universe, possibly the only one in which life is possible, was just an accident, that there was no necessity but only contingency in its existence? No if we accept that everything is an unpredictable accident at the most fundamental quantum world, then we must also accept, given Richard Feynman's equations, that each of the quantum possibilities will in fact be realized. Our universe would then become, as demonstrated by those equations, inevitable. I must leave the argument there, for the present.

What of the distinct requirement that our conception of beauty in the universe must match a more general recognizable conception of beauty? It does: mathematical proofs are the most beautiful of the intellectually beautiful things there are – even more beautiful than legal arguments! But it is not just mathematical proofs that shine with the elegance of inevitability. In a variety of ways I cannot explore in this draft, a sense of inevitability contributes to many other kinds of beauty. Stephen Weinberg compared a successful physical theory with a brilliant painting in which, as he put it, we cannot change a line without destroying beauty. Musicologists have made the same claim for inevitability in music, as in, for example, John Tasker Howard's *Inevitability as a Criterion of Art*.<sup>12</sup> And remember the stupidity of Prince Frederick's objection that *Figaro* has too many notes and Mozart's reply that it has exactly enough?

## Lecture 3

### Introduction: Interpretive Concepts

In the first two of these lectures, I identified and tried to support religious atheism. In the first lecture I discussed a sample religious conviction, about the meaning of human life, that a belief in god could neither ground nor undermine. In the second lecture I took up a different conviction I said we should also treat as religious: the conviction that dominated Einstein's own religion and that of many other scientists that the universe in which we lead our lives has an intrinsic beauty of its own. I suggested that the beauty he and they felt was the beauty of mathematical inevitability, and that this belief could play a role for atheists parallel to the orthodox conviction that a god is the necessarily uncaused cause of everything.

Now, in this third lecture, I turn to the political and social implications of religious atheism. The concept of religion figures in political constitutions and international human rights conventions across the world. Though the Swiss Constitution's preamble declares that it is written "In the name of Almighty God," it also declares that "Freedom of religion and conscience is guaranteed," that "Everyone has the right to choose freely their religion or their philosophical convictions, and to profess them alone or in community with others." Article 18 of the United Nations Universal Declaration of Human Rights declares that "Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance." The European Convention on Human Rights offers the same guarantee, and adds that "Freedom to manifest one's religion or beliefs shall be subject only to such limitations as are prescribed by law and are necessary in a democratic society in the interests of public safety, for the protection of public order, health or morals, or the protection of the rights and freedoms of others." The First Amendment to the United States Constitution prohibits government from either "establishing" a religion or restricting the "free exercise" of religion.

These various provisions are understood to have a variety of consequences. They prohibit government from penalizing membership in any religion – or membership in no religion. They are often understood to forbid government to declare any religion an official state religion, or to support one religion or all religions through subsidies or other special privileges, or to permit legal constraints of any sort that assume that one religion or religion in general is preferred to others or none. It therefore makes a considerable difference what counts as a religion for purposes of these provisions. Is religion limited, for these documents, to some form of theism? Or does religion have the wider meaning I have been defending in these lectures? If free exercise of religion is limited to the practice or denial of theism, then it would not protect abortion rights, for instance. True, much of the opposition to abortion assumes that a god has forbidden that act. But not all opposition is based on theism, and few women who want an abortion believe that a god has ordered them to abort. If, on the contrary, freedom of religion is not restricted to theism, then it might be thought an open question whether the right to abortion is a religious issue.

My argument in the first two lectures showed, I hope, that we need not understand religion necessarily to involve a god. Our question now is different, however: it is a question of interpretation. References to “religion” in constitutional documents would be understood by most people, I believe, as pointing to institutionally organized churches or other groups worshipping some form of god, or something, like a Buddha, close to a god. Certainly the battle for religious freedom was historically fought to secure freedom to choose which such group to join in heart and practice. John Locke, one of the earliest champions of religious freedom, was careful to exclude atheists from its protection: atheists, he said, should not be allowed rights of citizens. Later, however, the right to religious freedom became understood to include not only freedom to choose among theist religions but to choose no such religion: atheists fell under its protection. But the right was still understood as the right to make one’s own choice about the existence and nature of a god. I will soon describe decisions by the Supreme Court and other courts that extended the protection to groups that did regard themselves as religions without god – the Ethical Culture society in the United States, for example. But historically, and for most people still, a religion means a belief in some form of god. Should this fact of common understanding be decisive in determining who is entitled to the protection the various documents declare?

No, because the idea of religion functions in our constitutional, legal and social life as an interpretive concept. I must pause to explain what I mean. We share – or have – different kinds of concepts in different ways. We share some concepts because we agree, at least in most cases, on decisive tests for their application. We share the concept of a bachelor because we agree on tests -- a bachelor is an unmarried man – even though we might disagree about whether, for instance, an unmarried sixteen year old boy is a bachelor. Our disagreement in such cases is only verbal: we just happen to speak in slightly different ways and once we understand this we see that we do not really disagree at all. But we share other concepts in a very different way. We do not agree, even roughly, on some decisive test for applying the concept of justice. Rather we agree that the idea of justice plays a crucial role in licensing personal or political action, even though we disagree about how, precisely, that concept should be understood in order best to justify that role. We agree that if an act or institution is unjust it should be changed, but we certainly do not agree about what makes an act or institution unjust. Some people think that justice requires forcing rich people to pay taxes for redistribution to the poor: others that this political practice is deeply unjust. Our disagreements about justice are certainly not just verbal: we genuinely, radically disagree not only in spite of the fact, but because of the fact, that we have different theories of justice. We contest ideas of justice not by looking in a dictionary to see how justice is defined there, but by offering rival theories hoping to show how justice must be understood in order to suppose that we owe allegiance to just states, for instance.

My argument in the first of these lecture in fact assumed that religion, like justice, is an interpretive concept. I argued that whether religious atheism makes sense is not settled by any dictionary definition, but is rather a matter of how best to account for and justify what people believe, claim and do in the name of religion. On that test, I said, religion cannot be confined to theism. I did not formally introduce the idea of interpretive concepts in that lecture because the importance of such concepts is more vivid in this one, when we are considering the very practical consequences that flow from taking one view rather than another of what a religion is. When the concept of religion appears in legal documents and moral principles it appears as an interpretive concept. We agree

that people have a basic right to religious freedom, but we disagree, sometimes profoundly, about what to count as a religion in fixing the character and scope of that right.

We can only defend one interpretation – our particular conception – of an interpretive concept by setting out some argument, which must normally be a moral or political argument, as to why the concept must be understood in one way rather than another if it is properly to license further judgments or actions. So a conception of the concept of justice – a theory of justice – that holds taxation unjust must be backed by an argument that the key to justice is liberty conceived in such a way that taxation violates liberty. We must apply the same protocol to the concept of religion. How must religion be conceived if people are to have a protected freedom for their religious choices and activities that they do not enjoy in other aspects of their lives?

### Is Religious Freedom Only About God?

Now we may return to the question whether we should understand human rights documents to give special privileges and status only to theistic religions. Can we construct a plausible justification for a conception of religion that has that exclusive force? Can we find a persuasive reason, that is, why that special concern should extend to the choice among godly religions, including a choice to reject them all, but no further? Here is one obvious suggestion: the history of religious war and persecution shows that the choice of which gods to worship is a matter of special, transcendental importance to billions of people. They have shown themselves willing to kill people who worship different gods, and also to be killed rather than abandon the worship of their own gods. That passion was the cause of the terrible religious wars in Europe that made religious toleration imperative there. It continues to cause murder in our time in Northern Ireland and the Middle East, for example. No other issue arouses that intensity of emotion, and the world has had and continues to have that reason for guaranteeing religious freedom in political constitutions and international conventions.

These striking facts certainly help to explain the birth of the idea of religious freedom and its rapid growth in popularity: why people in seventeenth century Europe, for instance, sensed its importance in securing peace. But they do not explain why a special right is needed to protect only godly religions now in the large parts of the world where religious wars are anyway not on the cards. The religions and sects that benefit from the right in those countries are unpopular minority faiths whose members could not produce effective rebellion if their freedom were denied. In any case, moreover, religious freedom is very widely regarded as a human right, not just a useful legal construction, and policy arguments about the need for peace are inadequate to justify a basic right. We need a different kind of argument to defend a particular conception of religious freedom. We need to identify some particularly important interest people have, an interest so important that it deserves special protection against official or other injury. So our immediate question must be: can we identify any special interest that people have in virtue of a belief in god that they do not have because, like Einstein and the others I mentioned, they subscribe to a religion without god?

The science of many theistic religions declares that a god can and will destroy populations or send people to a Hell in anger at their disobedience. But though that divine power was once widely thought good grounds for religious compulsion, it hardly argues for a freedom that permits people

to worship in ways that will make such a god angry. Suppose we say, then, that people who fear damnation live in a kind of terror that atheists do not, and that they require a special freedom on that account? So explained, the right is over-inclusive because many people who belong to orthodox religions do not believe in an after-life of reward or punishment. It is also over-inclusive in a different way: it protects atheists from prosecution and tolerating atheists can lead only to a god's anger. In any case, people have many fears. Some tremble at the possibility that a new particle accelerator will destroy the planet. But government is required to protect people only from fears it believes realistic, and it cannot declare a fear of Hell realistic unless it endorses a particular set of religious beliefs, which the right to religious freedom is generally thought to prohibit.

If it is justifiable to limit the protection of religious belief to theistic belief, we must find the ground of justification not in the science department of orthodox religions but rather in their other department, in the values they sponsor. Religions impose serious duties and responsibilities, including not just duties of worship and diet but also social responsibilities. A government that prohibits people from respecting those duties profoundly insults their dignity and their self-respect. It may of course be necessary for government to prohibit what religion demands: some religions purport to impose duties on the faithful to kill unbelievers. But when the prohibition cannot be justified as protecting the rights of others, but only reflects disapproval of the religion that imposes the duty in question, government has violated the right to free exercise.

However these considerations do not justify a freedom that is limited to the exercise of orthodox, godly religions, for atheists often have convictions of duty that are for them equally imperative. Pacifism is a familiar example: the American Supreme Court properly held that Pete Seegar, a famous folk singer, could not be denied the status and privileges of a conscientious objector to war just because he was an atheist. I earlier described a more abstract conviction that I counted as a matter of religious faith: that each person has an intrinsic and inescapable ethical responsibility to make a success of his life. That responsibility is part of the religious attitude that both believers and atheists can share. It includes a responsibility of each person to decide for himself what kind of life would be most successful in his circumstances. A state violates that right whenever it prohibits or burdens that decision or that life: when it declares homosexual sex illegal, for instance. So this justification of religious freedom – that self-respect needs special protection – provides no ground for limiting that freedom to orthodox religions of believers.

In the United States, the establishment clause of the First Amendment prohibits government from designating one religion or sect as the official faith of the country, as the Church of England is the official faith of Great Britain. But it has been understood to prohibit much more: it has been understood to ban prayer in public schools, crèches at Christmas on public square, replicas of the Ten Commandments on courthouse walls and the teaching of allegedly faith-based science in state schools. These are all regarded as ways in which government takes sides, or at least might be seen as taking sides, among religions or between believers and atheists. But is there any reason why taking sides between orthodox theistic religions should be thought wrong, but not taking sides between alternate views of what counts as living well? Not taking sides, for instance, between alternate views of good sexuality?

It is sometimes said that when government takes sides about god – for example by declaring Calvinism the official faith of the nation – it declares that those who worship a god in some other

way, or who worship no god at all, count as less than full citizens. So providing a period for prayer in state schools, or teaching that the creation of the universe is the work of an intelligent designer, offers less than equal respect to those who have no god to pray to or to credit with creation. It uses state or national funds, collected in taxes in part from them, to affirm a national identity that excludes them. But now consider the position of a homosexual in a state that praises and protects the institution of marriage in a variety of ways, and provides arrangements and officials to marry men and women, but excludes homosexuals from marriage? Or, for that matter, consider a committed monarchist who is surrounded by official declarations of the nation's commitment to democracy. I do not mean to suggest – I will very soon deny – that religious freedom grants monarchists immunity from public endorsement of democracy. I mean only that no justification can be found for an immunity that is limited to endorsement of a theistic religion rather than a political religion.

### Two Problems

We have not discovered a justification for offering religion a right to special protection that is exclusive to theistic religions. We might, tentatively, suggest a simple remedy: the protection of that right should be extended to all religions, including godless religions. But that suggestion encounters two problems each difficult to overcome.

First, once we open the concept of religion to godless religion, it is difficult to see how the concept can be limited at all. I argue that people can sensibly be said to have a religious attitude even though they do not believe in a god. No precise definition of a religious attitude was necessary in the first two lectures, however. I claimed only that the orthodox understanding, which ties religion to some form of theism, gives too narrow and stilted an account of the phenomenon. That is essentially a negative claim, and though I discussed some examples of godless religious beliefs, I did not need or attempt any exclusionary definition. What other beliefs, beyond those I discussed, held in what way and under what circumstances, might also qualify as religious? We feel that monarchism is not a religious attitude. Why not?

Judges in a variety of courts have tried to define a religious conviction. I offer two examples from American constitutional jurisprudence. The folk-singer Pete Seegar claimed, as I said, that though he was an atheist he was entitled to conscientious-objector status in the Vietnam War. He relied on the following language in the statute authorizing the draft.

Nothing contained in this title shall be construed to require any person to be subject to combatant training and service in the armed forces of the United States who, by reason of religious training and belief, is conscientiously opposed to participation in war in any form. Religious training and belief in this connection means an individual's belief in a relation to a Supreme Being involving duties superior to those arising from any human relation, but does not include essentially political, sociological, or philosophical views or a merely personal moral code.

In spite of the statute's reference to "a Supreme Being," the Court upheld Seegar's claim. It assumed that Congress would not have wanted to discriminate among religious convictions, and offered this account of what these are:

The test might be stated in these words: a sincere and meaningful belief which occupies in the life of its possessor a place parallel to that filled by the God of those admittedly qualifying for the exemption comes within the statutory definition.<sup>13</sup>

In a different context, three Supreme Court justices offered a less functional, more substantive definition:

"[M]atters, involving the most intimate and personal choices a person may make in a lifetime, choices central to personal dignity and autonomy, are central to the liberty protected by the Fourteenth Amendment. At the heart of liberty is the right to define one's own concept of existence, of meaning, of the universe, and of the mystery of human life."<sup>14</sup>

Other judges and courts have emphasized that a religious conviction must be part of and drawn from a general, sincere, coherent, integrated and comprehensive account of why it is important for people to live well and what it is to live well.<sup>15</sup> Someone who holds a religious conviction according to that standard need not be able to identify that larger more comprehensive view in any articulate or self-conscious way. It is a matter of interpretation whether the explicit convictions for which he seeks protection fit sufficiently comfortably into some recognizable comprehensive view of that kind, and whether his life and other opinions are reasonably consistent with that more comprehensive view. People who are members of some established church fit the description unless their behavior shows only an insincere commitment to its tenets. They may not be familiar with much of their religion's dogma, but they hold their specific understanding of religious duties under the assumption that these do flow from a more general comprehensive religious view. This account of religion can also comfortably embrace non-theistic convictions – about pacifism or the permissibility of abortion, for instance. In its *Torcano* decision, the Supreme Court listed, among religions meeting the test it had in mind, humanist societies that are explicitly atheistic.

Still, these different accounts of what a religious in and what religious convictions are seem too loose for our purpose. Once we break the connection between religion and god, that is, we seem left with no compelling distinction between a religious and some other general kind of attitude. Everything minimally general, except the rankest and most complete skepticism, seems a candidate. Consider, for instance, a devout materialist, someone who, in a popular phrase, worships Mammon. Does his greed not play the role in his personality that more attractive religious convictions play for believers? Does he not define his own concept of existence and the point of life? We confront the danger that religious conviction, defined in any of these ways, would cover too much: it would protect any conduct that might be deemed to express a sincere and general conviction about what gives meaning to life.

We have, moreover, as I said, a second reason for concern that simply de-coupling religion from god would not produce a satisfying new account of religious freedom. Even when we restrict religion to theism, but particularly when we do not, the two components of the right as traditionally conceived seem in tension with one another. The right requires government, we suppose, to exempt people from general regulations that prevent the exercise of their faith. The right also charges government

not to discriminate in favor of any religion over others. But an exemption for one faith from a constraint that people of other faiths must accept discriminates against those other people. American constitutional lawyers are well aware of this conflict. There are two “religion” clauses in the First Amendment: one prohibits government from infringing the “free exercise” of religion; the other prohibits it from “establishing” a religion, that is giving it special official recognition or protection. The lawyers say that the first of these clauses often conflicts with the second.

The Native American Church uses peyote, an hallucinogenic drug, in its religious rituals. The drug is generally banned because it is dangerously addictive. If an exception is made for a tribe because the drug plays a role in its rituals, then the law discriminates on ground of religion against, for instance, followers of Aldus Huxley who believe that the best life is lived in a trance. If the law therefore recognizes godless religion, and exempts everyone who thinks that hallucinogenic drugs allow special perception into the meaning of life, then the law discriminates, on religious grounds, against those who only want to get high. [Footnote on *Smith* and the Restoration of Religious Freedom Act. Also: denying polygamy to Mormons.]

Here is another, more complex, example of the conflict within the idea of religious freedom. The principle that government may not “establish” any religion has consequences for what may be taught to students in public schools. The religious doctrine of one particular religion may not be taught as truth. But, as I said in the first lecture, each religion has a science department and so the question arises whether and how far that science may be taught or described as truth in science classes. This has become, in America, a particular problem in biology classes. A Pennsylvania school district ordered teachers to mention theories about the origin of life that reject Darwin’s random-mutation theory of evolution and claim to provide evidence that human beings were created by design by some supernatural intelligence. A federal court judge declared the order unconstitutional under the “establishment” clause. He said that the school board’s decision was based on religious conviction not scientific judgment.

Thomas Nagel has provided an illuminating analysis of the issue. He points out that someone’s judgment whether divine authorship or random mutation provides a better explanation of human life is crucially influenced by his prior beliefs about whether a god exists. An atheist will from the start rule out divine creation: it is not a possibility for him, so that even if the chances that random mutation and selection would produce human life are antecedently small, intelligent design is not an alternative. But a theist may well find, given his prior belief that a god exists, that it is much more likely that that god, rather than chance, is responsible for the marvelously complex animals, including us, that populate our planet. The two assumptions – that a god does or does not exist – seem on a par from the perspective of science. Either both count as scientific judgments or neither does. If relying on one judgment to mandate a curriculum is an unconstitutional establishment of a religious belief, then so is relying on the other. In this situation, therefore, appealing to a students’ or parents’ special right that the state not choose among religions seems of no use. A school board, it might seem, cannot avoid selecting one religious opinion and rejecting another whichever decision it makes. In cases like this one the constitutional requirement that government not choose defeats itself.

## Is There a Right to Religious Freedom?

I began this lecture by reporting a very popular assumption: that people have a distinct, basic human right to religious freedom. That is what all the constitutions, documents and conventions I listed proclaim. We now have reason, however, at least to question that assumption. It would be unjustified to recognize such a right but restrict it to freedom of godly religions. But we find difficulty in constructing any other useful definition of the scope of the supposed right, and we find paradox in the two main components of that right: that government may not burden the exercise of religion but also must not discriminate in favor of any religion. It is time to consider a rather different tack. We need some background, however, to describe what I have in mind.

In *Justice for Hedgehogs* I described two facets of liberty. A just state, I said, must recognize both a very general right to what I called ethical independence and special rights to particular liberties. These are different kinds of rights in this important way. Government needs a rational justification for any constraint it places on individual freedom. Ethical independence means that government must not rely on any justification that directly, indirectly or covertly supposes that one opinion about what a good life requires – one ethical conviction defined in that very broad way – is in itself better or worse than another. Government must not rely on any such assumption directly, by justifying some regulation on that assumption, or indirectly by relying on the fact that a majority or some other group within that community holds that view, or covertly by failing to treat citizens who do embrace that opinion with equal concern because it ignores the special importance of some issue to them. It may not forbid drug use because drugs are shameful, for example; it may not forbid logging because people who do not value great forests are despicable; it may not levy highly progressive taxes because materialism is bad.<sup>16</sup> But ethical independence does not prevent government from interfering with people's chosen way of life for other reasons. It may levy taxes to finance roads and aid the poor, forbid drugs to protect the community from the social costs of addiction, and protect forests because forests are in fact wonderful.<sup>17</sup>

Special liberties place a much stronger constraint on government. It must not infringe a special right unless it has, not just a rational justification that respects the general right of ethical independence, but what American lawyers have come to call a "compelling" justification. The right to free speech is a familiar example. Speakers may not be censored because what they wish to say is officially deemed obnoxious or unseemly, or because it is offensive to some group within the community. But neither may speakers be censored because it would be expensive to protect them from an outraged crowd or because they might damage the economy by proposing unsound economic strategies. The right to free speech can be abridged only in emergencies: only to prevent, again in a phrase beloved of American lawyers, a clear and present – and, we might add, grave – danger. Declaring a special right does indeed require a careful delineation of that special right's scope: we must take care to limit that scope to fit the grounds we have for making the right special. Recent Supreme Court decisions denying government the power to limit election expenses, on the ground that such limits invade free speech, is a minatory example of the disasters that follow from ignoring that requirement of rationality.<sup>18</sup>

The two difficulties we encountered in freedom of religion flow from trying to retain that right as a special right while also decoupling religion from a god. We should consider, instead, abandoning the idea of a special right to religious freedom with its high hurdle of protection and therefore its

compelling need for strict limits and careful definition. We should consider instead applying, to the traditional subject matter of that supposed right, only the more general right to ethical independence. These two approaches pursue importantly different strategies. A special right fixes attention on the subject matter in question: a special right of religion declares that government must not constrain religious exercise in any way, absent an extraordinary emergency. The general right to ethical independence, on the contrary, fixes on the relation between government and citizens: it limits the reasons government may offer for any constraints on a citizen's freedom at all. We should ask: are the convictions we want to protect sufficiently protected by the general right to ethical independence, so that we do not need a troublesome special right?

The general right protects the familiar religious convictions of orthodox believers in obvious and basic ways. It condemns any old-fashioned, explicit discrimination or establishment that assumes – as such discrimination invariably does assume – that one variety of religious faith is superior in truth or virtue to others or that a political majority favors one faith over others or that atheism is father to immorality.<sup>19</sup> Ethical independence protects religious conviction in a more subtle way, moreover: by outlawing any constraint neutral on its face but whose design covertly assumes some direct or indirect subordination. Is that protection enough? Do we need a special right requiring not just a neutral but a compelling justification?

Consider, again, peyote and ritual. When the Supreme Court held that the First Amendment does not require an exemption for the Native American Church, Congress, outraged, passed the Restoration of Religion Act, which insisted that the Court's decision was wrong. Was Congress right? Not if we test the Court's decision against the general right of ethical independence. The general right does not protect the religious use of a banned drug provided, of course, that the ban is not intended to disadvantage those who use it or to reflect less than equal concern for them. Since the purpose of the prohibition was to protect everyone from damage, there was no compromise available that would not have subverted its purpose. So Congress's statute reversing the Court's decision was, in effect, a declaration that religion needs more protection than general ethical independence offers. No regulation that interferes with a religious practice is permitted, Congress declared, however innocent and non-discriminating its purpose, unless there is a "compelling" rather than simply an ordinary need for regulation – unless, that is, the regulation is necessary to prevent some emergency or grave danger. The Act was wildly popular.<sup>20</sup>

The Court was right as a matter of political morality and Congress was wrong. If there is no sound justification for limiting religious freedom to theistic religions, and if the Native American Church is entitled to an exemption from drug-control laws, then Huxley followers would also be entitled to an exemption, and skeptical hippies would be entitled to denounce the entire drug-control regime as a religious establishment. Does it shock your conscience that religions must define their practices so as to obey rational, non-discriminatory laws that do not display less than equal concern for them? The last of these requirements – equal concern – requires legislatures to notice whether the activity it prohibits or burdens is regarded by any group as a sacred duty. If so, then it must consider whether an exemption for that group would be reasonable. But such deference is not absolute: if an exemption would mean that members of that group would be put at a risk it is the purpose of the law to avoid, refusing an exemption does not deny equal concern. Once we accept that religion

cannot be restricted to theism, then priority of non-discriminatory collective government over private religious exercise seems inevitable and right.

### The New Religious Wars

We must now, however, test our hypothesis – that the general right to ethical independence gives religion all the protection appropriate – by considering a variety of heated contemporary controversies in its light. These are not battles between different organized religions; they are wars between the religious and the secular. In many nations it is now a particularly divisive issue whether emblems of political faith may be worn in public schools, governmental offices and buildings, and public space. There have been acrimonious and sometimes violent battles, for instance, about whether public schools may set aside time for private silent prayer during a school day, whether the Ten Commandments may be placed on a courthouse wall, whether a city or town may place a crèche on a public square at Christmas, whether headscarves or burkas may be prohibited in schools or on the streets, and whether minarets can be built in Swiss cantons. Some of the practices on this list seem to raise mainly issues of free exercise and others of religious establishment, but we may ask, of them all, how they must be resolved if the only pertinent political right is the general right of ethical independence.

Ethical independence does condemn official displays of the insignia of organized religions on courthouse walls or public streets unless these have genuinely been drained of all but ecumenical cultural significance – like city Santa Clauses visiting orphanages, for instance. Otherwise such displays use state funds or property to celebrate one godly religion, or godly religion in preference to godless religion or no religion. Headscarves and burkas are very different, however: these are private displays. What justification can a state provide for prohibiting anyone from wearing them anywhere?

It is sometimes said that a nation's law may properly aim to instill a sense of a shared secular identity of citizens that would be undermined by divisive badges of religious identification. But that assumes, in violation of the right of ethical independence, that one kind of identification is more admirable than another, or that, contrary to what many citizens think, religious identification is not sufficiently important to trump all patriotic identifications. A state may invent other justifications for such prohibitions that are not on their face violations of ethical independence. It may claim, for instance, that when some students wear badges of a particular religion other students feel compelled to protest, out of a sense of duty to their own faith, and academic discipline and quality suffers. But there is no evidence for this and so it appears to be rationalization. Banning headscarves has long been a very divisive issue in Turkey; the long-standing ban has provoked rather than prevented much violence there. Turkey is also the clearest example of why the ban offends ethical independence: it was a central part of Kemal Ataturk's campaign to change what Turks considered a responsible way to live their lives: to switch their culture from devout observance to reflex secularism.

Public school prayer is a more complex matter. Near one extreme is the British practice of requiring a daily Christian prayer in all except a few schools; near the other is the flat prohibition of any religious moment in public schools in France. In the United States, after an extended debate structured by several Supreme Court decisions, practice has gravitated toward permitting schools to adopt what is called a “moment of silence” in which students are free to pray or, as it is frequently put, “meditate” as they wish. Or simply to rest their eyes. Ethical independence is, I think, satisfied by this practice. It is neutral among godly and godless religious convictions, and neutral between them and students who believe they have nothing to meditate about.

Now consider religion in public education from the perspective of the general rather than a special right. It is widely assumed, and in the United States it is constitutional law, that religious doctrine may not be taught in public, state supported schools. It would presumably be the consequence of a special right that religious doctrine could not be discussed for any reason unless there was a “compelling” need to do so. But ethical independence is more nuanced: it rules out only impermissible justifications for teaching such doctrine. It therefore distinguishes pedagogic presentation of religious opinion as true from its presentation as history, culture or sociology. That requires an interpretive distinction, but in some cases the correct interpretation would be obvious. If a school offered instruction only in the history of Christian theology, in so uncritical a fashion that it either explicitly or implicitly presented dogma as truth, with no apparent connection to any pertinent academic subject such as art history, it would violate the principle that a state may not assume that one way of understanding the meaning and value of life is superior to any other. Of course, a public school that taught the necessity or virtue of sexual abstinence or the unwholesome character of homosexuality would violate ethical independence in the same way.

I mentioned the particular issue of whether a school board can mandate the teaching of intelligent design in biology classes as an alternative to Darwinian evolution. Nagel, recall, pointed out that the assumption that intelligent design is bad science presupposes atheism, which is a religious position, so that banning intelligent design means the state taking sides on a religious matter. His point is pertinent when we understand religious freedom in subject-matter terms, as a special right requires. If we rely not on any special right, however, but on the more general right to ethical independence, we reach a more satisfactory resolution.

Godly religions appeal to members on the two levels I distinguished at the outset of these lectures. They have a science and this includes some form of the view that a god created everything including us. They are also schemes of value, particularly ethical value, and of social identification and separation. The culture of religion built around those values has a powerful political influence and, at least in contemporary American circumstances, that culture may pull the science of the religion along as an engine pulls other cars. A school board’s decision to mandate the teaching of intelligent design as an alternative to Darwinism may well reflect not only the assumption that a god capable of creation exists, just as a strict matter of cosmic history, but the endorsement of a full set of ethical attitudes about the role of religion in a well-lived life. It is, again, an interpretive question whether a particular political decision should be understood in that way. The opinion of the federal judge who declared unconstitutional a requirement to teach intelligent design in public schools relied on that interpretive test. He held that the histories, practices and statements of the majority members of

the school board suggested that they were moved not just by the bare scientific claims of theistic religion but by the values and obligations that make up the ethics of religion.

So a school board or a court need not assume that there is no god, or that god did not design the universe, to rule our teaching intelligent design in state-supported schools. It needs only the judgment that, in our culture, at this time, the assumption that a god does exist is not an isolable scientific claim: people are persuaded to that opinion as part of a package that includes distinct ethical and cultural preferences as well as ontological convictions. Might that change? The interpretive judgment I describe is made much easier, in my view, by the almost total inarticulateness of the hypothesis that a god created the universe. I mentioned this phenomenon in the first of these lectures, in reply to the objection that I was unimaginative in supposing that divine creation was a matter of cause and effect. There is some basic level of articulation that a scientific hypothesis must meet in order to make it sensible that that hypothesis has an independent force of persuasion – in order to make it plausible that people came to that opinion on purely scientific grounds. We can entertain the hypothesis that some ultra-ancient society created Niagara Falls as an artistic achievement, if anyone ever suggested such a thing, because it is a sufficiently well-formed scientific theory. We understand how people or animals with bodies and machines can construct waterfalls from rivers. Soon, I think, we will come to understand how people in laboratories can make life out of inorganic materials. The difficulty with the intelligent design thesis, and similar theories of divine creation, is that we do not understand what is being suggested well enough to judge it, as it were, on its scientific merits. I understand that phrases like “And God created the universe” are mainly not meant literally: theists must use words they understand in ordinary contexts by analogy, to suggest rather than describe what we all lack concepts and perhaps imagination to describe directly.<sup>21</sup> But this deficiency of comprehension makes it likely that people are drawn to believe in the existence of a god not by the power of faith in a purely scientific claim but because they embrace a package of ideas and traditions in which the scientific claims are not, motivationally, the strongest element. When we judge the matter from the perspective of ethical independence, we find not Nagel’s symmetry but an important asymmetry.

We come, finally, to what is undoubtedly the most divisive issue of all: sexual and reproductive morality. When the Supreme Court decided that a state lacks power to criminalize homosexual acts, or early abortions, it located its opinions doctrinally in the equal protection and due process clauses of the American constitution rather than the First Amendment’s guarantees of religious freedom. It had no choice. Opponents of homosexuality and abortion very often cite a god’s will as warrant, but not invariably, and, as I said, few men or women wanting choice in these matters conceive their opinions as religious. But if, quite apart from the state of American constitutional law, we treat religious freedom as part of ethical independence, then the liberal position becomes mandatory. So does gender equality in marriage. I have argued for these claims in other work, and though even this summary statement will provoke dismay I will not repeat or elaborate on my arguments here.<sup>22</sup>

I mention a local controversy now, at the end. In 2009, in a referendum decision that shocked the world, Swiss citizens amended their constitution to prohibit the building of minarets anywhere in their country. The federal government and the Catholic Church, among a great variety of institutions, opposed the ban, but it succeeded, by substantial majorities, nevertheless. One of the main proponents of the ban argued that since the Islamic religion does not require minarets to be

built at mosques, the prohibition could not be regarded as a violation of freedom of religion. The claim is a useful reminder of the point I have been emphasizing in this lecture. If we conceive freedom of religion as a special right confined to religious subjects, then the fact that minarets answer to no religious duty or requirement – if that is a fact – might seem pertinent. But if we conceive of religious freedom as a central case of a more general right to ethical independence that fact becomes wholly irrelevant. No one familiar with the controversy can doubt that the referendum vote expressed an indiscriminate condemnation of the religion and culture of Islam. It declared war on the egalitarian ideal of ethical independence.

I close with a hope; indeed, if you won't object, a prayer. I opened these lectures suggesting that people share a fundamental religious impulse that has manifested itself, for most history, in a belief in an intelligent supernatural force – a god – and also in a set of profound ethical and moral convictions. These beliefs are alike consequences of the more fundamental attitude; indeed we learn about the religious attitude mainly by exploring these consequences. But the theistic question and the ethical and moral questions are independent of one another: a religious science can neither support nor undermine a religious ethics or morality. Theists can accept the requirements of equal concern and ethical independence in politics with no disrespect to their gods. Atheists may accept theists not as objects of ridicule but as full partners in the deepest religious ambitions. They may both come to accept that what they now take to be a wholly unbridgeable gap is only an esoteric scientific dispute with no political implications. Is that much too much to hope?

## Notes

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<sup>1</sup> *Torcaso v. Watkins*: “Among religions in this country which do not teach what would generally be considered a belief in the existence of God are Buddhism, Taoism, Ethical Culture, Secular Humanism and others. See *Washington Ethical Society v. District of Columbia*, 101 U. S. App. D. C. 371, 249 F. 2d 127; *Fellowship of Humanity v. County of Alameda*, 153 Cal. App. 2d 673, 315 P. 2d 394; II *Encyclopaedia of the Social Sciences* 293; 4 *Encyclopaedia Britannica* (1957 ed.) 325-327; 21 *id.*, at 797; *Archer, Faiths Men Live By* (2d ed. revised by Purinton), 120-138, 254-313; 1961 *World Almanac* 695, 712; *Year Book of American Churches for 1961*, at 29, 47.”

<sup>2</sup> Marcus Aurelius: citation,

<sup>3</sup> See Louise Anthony’s book of atheists’ autobiographies

<sup>4</sup> References

<sup>5</sup> Why is this surprising? If we found some change in different environments, we would not give up symmetry but look for some more general law that explained why, as gravity explains why different forces have different effects on the moon. I suppose the point is that we have found surprisingly many wholly laws as distinct from applications.

<sup>6</sup> I am ignoring, in these lectures the claimed discovery, widely reported with great excitement in the press, that neutrinos travel at faster than the speed of light, which would seem to undermine much of Einstein’s theory. The team reporting that observation – it is called the Oscar team – has recorded it twice, but the general opinion among physicists seems to be, as I write, that some mistake has been made and repeated.

<sup>7</sup> See Hilary Putnam.

<sup>8</sup> Reference

<sup>9</sup> Citation to Hedgehogs for further explication.

<sup>10</sup> Cite Gleiser

<sup>11</sup> Musser, George (2008-07-01). *The Complete Idiot’s Guide to String Theory* (p. 188). Alpha. Kindle Edition.

<sup>12</sup> *The Musical Quarterly*, July 1923.

<sup>13</sup> Reference to Seegar.

<sup>14</sup> The three justices said that a woman’s views about the permissibility of an early abortion fall into that category of conviction. They did not say that freedom of choice about abortion is protected by the First Amendment’s free exercise clause – that would not have been possible given precedents circumscribing that clause – but their opinion suggests the possibility that but for those precedents religious freedom could be understood as protecting the kind of convictions they described.

<sup>15</sup> Reference to ECHR decision and Letsas discussion.

<sup>16</sup> This description of ethical independence incorporates what might be regarded as a separate requirement of just government: that it show equal concern for all those over whom it exercises dominion. If laws requiring Sunday closing of businesses, to the disadvantage of those who worship on another day, could achieve justifiable aims almost as efficiently by requiring that large businesses give each employee one day off though not necessarily the same day, the conclusion would be irresistible that the interests of those who worship on another day had not been taken fully into account. An obvious compromise that would have protected them at minimal cost to the aims of the regulation had been ignored. That conclusion would be especially hard to resist if a regulation not only inconvenienced people of one faith but prevented them from observing what they took to be a religious duty: prohibiting, for instance, ostensibly on economic grounds, government canteens or restaurants from offering special meals for vegans. If the expense of special meals was minimal, or if the roughly the same economy could be secured by offering only meals fit for vegans, the decision would, once again, suggest a failure to take the special concerns of vegans as fully into account as a general duty of equal concern would require.

<sup>17</sup> I here distinguish between ethics and what I call impersonal value. Reference to JH.

<sup>18</sup> Reference to NYRB piece on *Citizens United*.

<sup>19</sup> On this test, however, Britain’s “establishment” of the Church of England as official religion does not offend ethical independence if it is only an historical relic with no bite. Consider the ease with which the ancient rule that a sovereign may not marry a Catholic was abandoned. Shows that there was no discriminatory life left in the rule.

<sup>20</sup> The Smith decision outraged the public. Many groups came together. Both liberal (like the American Civil Liberties Union) and conservative groups (like the Traditional Values Coalition) as well as other groups such as the Christian Legal Society, the American Jewish Congress, and the National Association of Evangelicals joined forces to support RFRA, which would reinstate the Sherbert Test, overturning laws if they burden a religion.[11] The act, which was Congress’s reaction to

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the Lyng and Smith cases, passed the House unanimously and the Senate 97 to 3 and was signed into law by U.S. President Bill Clinton.. Later held unconstitutional in part.

<sup>21</sup> See Nagel on Rundle.

<sup>22</sup> See *Life's Dominion* and *Is Democracy Possible Here?* The abortion issue is more complex than I suggest in the text, because my opinion rests on the judgment, which I defend in those books, that a fetus does not enjoy rights of its own before an advanced stage of neural development.