The Science Studio Interview
With A.C. Grayling

ROGER BINGHAM: My guest today on The Science Studio is A C Grayling, Professor of Philosophy at Birkbeck College, University of London. Anthony Grayling is in town for Beyond Belief, the third annual Beyond Belief meeting, and we're at the Salk Institute. Anthony, welcome.

You are the author of so many books I don't even know where to start, but the last one, I notice, was called *Against All Gods: Six Polemics on Religion and an Essay on Kindness*, which you put in at the end there. Many pieces about you start with things like "Lion-maned philosopher A C Grayling isn't afraid to leave his ivory tower to dispense his own brand of bracing moral advice." You are seen as something of a public intellectual, you're known to be an atheist, and you often say things that would be considered unkind about religion. Is that unfair or is that a fairly…?

A C GRAYLING: Nope, perfectly fine, yep.

BINGHAM: Now how did you get to be this scourge of religion at this point?

GRAYLING: Well, in our contemporary world, and especially, I think, since 9/11, there's been a sort of jacking up of the temperature in the debate between people who have a religious orientation and people who don't. In my own country, in the United Kingdom, ten, twenty years ago, people didn't really talk about these things very much. If they had a religious commitment of some kind they kept it quiet; if they didn't, they kept it quiet. And if you came across somebody who was a regular churchgoer and had views that were deeply informed by their religious commitment, you sort of bypassed that little bit. Religion was a bit like sex; it was something for your private life. And good taste, on the whole, prevailed.

But the catalyst, I think, was the eruption into international affairs and national affairs of religiously motivated violence. And it annoyed a lot of people on both sides. It annoyed people who didn't want to see religion getting back into the discussion in the wrong kind of way. And it annoyed people of religion who didn't want to be branded by their adversaries, at any rate, as being all terrorists and all aggressive. So the quarrel has turned out to be a rather bad-tempered one.

It seemed to me very important that one should distinguish three things. One was the metaphysical question about whether or not there are supernatural entities or agencies in this universe of ours. The other is the question of secularism, which religiously motivated people might sign up for, the idea of just keeping politics and religious questions separate, at least in the sense that people of religious commitment see themselves as one among a number of civil society voices with a point of view and an entitlement to put it, but not a dominating voice in any public domain. And then the third question, and this is the one that really does interest me, is the question of the ethical basis of society.

Now it seems to me that, in the small "h" sense of humanism, there is a very powerful, rich humanist tradition in western civilization, a very ancient one--in fact older than Christianity and Islam, which is now a western religion too--and that it was very important to stake a claim for that, to make people aware of the fact that they were missing a large part of the debate if they didn't talk about that too. So, I sometimes attack people on the secularist side of things if their religious views make them want to push too far forward into the public domain. But really, the most interesting thing for me is the humanist aspect.

BINGHAM: Now the other of your books I have here is, the title is actually, *What is Good?: The Search for the Best Way to Live*. I know that was taught as a philosophy text at UC San Diego recently, as well, so that's probably something that you're quite proud of, as a text. And that perhaps represents more fully the views that you want to espouse, right?

GRAYLING: It was an attempt to explain these two main traditions of thought in the western tradition. On the one hand, the view that the basis for our thinking about the human good has to be premised on our best understanding of human nature and the human condition. And this was

something that was explored in the past of antiquity, and has been a theme all the way through. And the other is the, I suppose you might, if you were being especially unkind, call it an oriental view, which has burst into the western tradition early on in the form of the Judeo-Christian tradition, which says that the source of good is something transcendent, it comes from outside this world and it's imposed on us, a demand is made on us to struggle with our own human condition in ways that somebody who doesn't share that view would regard as somewhat unnatural.

But these two views, the idea that morality exists because there's a command from outside the world on us to think, act and be in a certain way, and the other, which says that we must seek and make our own good on our best understanding of ourselves. So the book is an attempt to try and describe those two traditions, and the conflict between them, the debate between them, and sometimes the hostility between them.

BINGHAM: Let's go back a little bit and see how you came to be a philosopher, I mean how does one get to be a philosopher. Where did you grow up?

GRAYLING: Well I grew up in central Africa, my father, my parents were British but they were working and living abroad. Right bang in the middle of Africa, in what is now Zambia on the border of the Belgian Congo.

BINGHAM: So what used to be Rhodesia?

GRAYLING: Used to be Northern Rhodesia, Rhodesia, which is now Zimbabwe. And then we lived in Nyasaland, which is a very beautiful part of Africa. And I've had occasion to say before now that the two main entertainments that people had, adults anyway, were adultery and golf. And for somebody like me without television and not much else to do, reading. So quite early on I got interested in what was in the encyclopedia, and read about Socrates and all these great people and thought, that'd actually be wonderful.

And then, when I was about twelve, I went into our little local library, which is a very eccentric little library. It consisted of all the books that were left behind by British expats who had died of tropical diseases and had taken with them the books they had read at university not many years before. So there was a complete set of Plato's dialogues, and I picked up the first one – this is at age twelve, remember – I picked up the very first one, which happened to have the very early and very accessible dialogues of Plato. The first one I read was *The Charmides*, which is about temperance, and I was bowled over by it, though, this is absolutely wonderful. Here's this great man, Socrates, growing up, giving us permission to contemplate temperance. And then the other ones were about justice and goodness and beauty, and it seemed to me that that was something worth devoting one's life to.

BINGHAM: Your parents had no scientific or philosophical background, they were, your father was a businessman?

GRAYLING: My father was a banker. And my mother a complainer; she didn't like Africa at all, and she used to look at the airmail edition of *The Times* and say, "look at what we're missing on the West End stage." But the thing is that she didn't really want to go back to the U.K. because in Africa we had this very, very comfortable life with lots of servants and good weather, and so her complaining was really an exercise, an entertainment, I suppose.

BINGHAM: Right. So, but at some point you obviously came to, went to England for an education, right?

GRAYLING: Yes, I went back there as a teenager to be educated there at university. And by that time, already, it was set already that the thing to do was to study philosophy. Not only because of the intrinsic interest in philosophical debates and really wanting to understand more about what

was involved, but also because it was quite clear to me, even at that early age, that philosophy gives you a license to stick you nose into everything, so it was kind of carte blanche really for being interested in everything that human beings do.

Because it also seemed to me, early on, that all the things that we try to do, all our endeavors, whether they're in the sciences, in the humanities, in social sciences, in the arts, they're all part of the same great enterprise, which is to try to understand this world of ours and ourselves in it. And they are all; all the special pursuits really are attempts to push the horizon of our ignorance a little bit further away. And that philosophy has a duty, to some extent, to control that horizon as a whole, and to interfere or comment or make suggestions, participate in the conversation that people are having about their special pursuits. And so as a really exciting, exhilarating invitation to be involved in that conversation, philosophy seemed to be the right way.

BINGHAM: But you keep up with science, don't you, because you write a column for *New Scientist*, for example, obviously. How would you describe the relationship between philosophy and science now, especially neurosciences, within neurosciences?

GRAYLING: Well firstly, I should say that I am a very enthusiastic amateur of science in both senses of the term amateur. That is, a lover of what happens in the sciences, which I think constitutes a magnificent adventure, thrilling; I mean all we have to do is just to think about all the anticipation and excitement which has built up about the Large Hadron Collider in CERN. I think we all expected that there would be teething problems. But what that's going to deliver is immense, if all the promises are borne out. You think what's happening in the biological sciences in the last decade, two decades, and the promise that they hold out, again, that's absolutely extraordinary. And there's something so powerful and beautiful about what science reveals about the universe. It's really staggering when you meet people who are unaware of it or uninterested in it in some way. So an amateur of science in the sense of a lover of it, but also, of course, not a trained scientist. I'm an enthusiastic reader of everything I can get my hands on about it, because I think it's telling us something rather very important about the world it investigates, but also about our capacities for investigating it.

And if you have a philosophical interest, too, it's very fascinating to reflect on the methodologies, the assumptions that lie behind that process, and to bring to bear on it the great question about how far our own cognitive structures are implicated in how we view the world. You know, we are theory constructors, and we are pattern seekers, and we are the makers of the instruments through which we see the universe. And so there's always this, it's a very old question in philosophy, but there's always this question about the degree to which we're reading something in to what we're finding. And it's an important question because what one wants is to be able to find something that is rock solid and objective and true about the nature of things, independently of our inquiring into it.

BINGHAM: What do you think the current public perception of science is? I mean, let me just preface that by saying that the reason you're here, the third annual Beyond Belief meeting, we're discussing these issues. And what seems, to some of us, to be an estrangement of science from the society of which it is a part and which it supports. Is that too much of a chicken in the sky, the sky is falling kind of perspective, are we getting too gloomy here or is there an issue?

GRAYLING: I think we're at a crucial moment, I mean there are lots of crucial moments and this is one of them. Because public perceptions of science tend to take a form of caricature, and there's very little understanding, very little in-depth understanding of what happens. For one thing, people talk about science in the singular where they should be talking about the sciences. They're insufficiently well informed, I think, about the stage at which there is the betterment in the different sciences. So for example, when you think about the position that fundamental physics is at, if you think about the situation cosmology is in at the moment, I mean we're on the brink of perhaps great

discoveries, but certainly on the brink of all the past work that's been done that's led us to a number of great puzzles. For example, about dark energy and dark matter, about whether we're going to be able to crack the secret of the structure, the microstructure of physical reality as an extension of the standard model that we have now, and so on. So I mean there are a number of very crucial, knife-edge questions which are out there, about which the public seems to know very little and care less.

And the great problem is this. That to explain to somebody, for example a religious orientation, let us say the Christian story or the Islamic story, takes relatively little time; you can do it in half an hour. But to explain what's happening in science takes much more than that. The great communicators about science, people like Gribbin and Paul Davies and others, who are masters, really, at writing accessible popular books, which, for a certain constituency anyway, are very informative and very popular. Even they don't seem to reach quite everybody. I mean it's important really that the level of scientific literacy in society, in general, ought to be much, much greater, and more fine-grained, that people really should understand much more about what's happening in the different sciences.

That is because we've got this bad-tempered quarrel going on in society at the moment. We've got governments like one in this country, recently, which has been holding back on research funding and support for some areas of science because there are ethical and religious problems about them. So you know, this is an important moment, and so an argument has to be won; we've got to be able to make a much, much better case for this tremendous enterprise, this great project, which is, understanding the world scientifically.

BINGHAM: But why do you think it's under attack? What is it about it that you think causes unease?

GRAYLING: There's not so much under attack that it's exposed to the corrosive power of ignorance and some disaffection. I think if one rewinds a little bit and goes back to the '50s and '60s, when a politician in the UK could talk about the white heat of the technological revolution, I don't know if you remember that phrase, which somehow encapsulated the idea that science was going to provide lots and lots of answers, and that a world of leisure aplenty and greater security in all sorts of ways would ensue on the advance of science. And you get some people saying that what happened was disappointment; that people felt, that, in fact, science wasn't delivering. On the contrary, biotechnology was creating problems, it was creating pollution, the extension of possession of nuclear weapons by different nations, there was an increased threat in the world, and so on and so on. So there were all sorts of reasons why people might be a bit disaffected about it.

But even more important, as I say, is the corrosive power of ignorance, that people don't really know what quite is going on in science, why it matters, how it connects so broadly to all different aspects of society. They meet with one main face of science, which is communications technology, so cell phones, the Internet and the rest. And they're beginning to be aware of the fact that there are plenty of dangers with those--the massive loss of privacy which has resulted, for example. The great instrument in the hands of governments monitoring people, tracking them in the name of security and bureaucratic efficiency, invading people's lives much more. And when that debate takes off, as it should, I suppose, it's just going to be another reason for disaffection of the science.

So before that happens, what one wants to do is reverse this prevailing tenor of ignorance about the science and its importance.

BINGHAM: In a recent issue of *New Scientist*, there was a whole section, a cover story on "Seven reasons why people hate reason". Now I would have thought that reason was something that would be an important part of any scientifically advanced society, and you introduced this session, these questions. The Archbishop of Canterbury said that reason stands against values and morals. How does that work?

GRAYLING: Well, I'm as flabbergasted as you are by that statement. I have to say that I debated Rowan Williams just last Monday of this week on a quite different issue, the question of the basis of ethics in society, and the whole reason thing didn't come up very much in that. The point of the exercise here was to really pick up on the fact that there is a sense, not just amongst religious people, but among the agnostics, about science and how we think about society. About reason as something reductive, as something which tries to drive out value questions and questions about how we feel about things, about emotion. And there's this longstanding tradition, in fact it goes all the way back to Aristotle I suppose, that reason and emotion are somehow opposed to one another.

What people haven't picked up on is this much more recent debate. There's a great deal of empirical work in psychology, for example, that tells us that you're a bad reasoner if your emotions are not engaged. And if you were a Mr. Spock figure, you would be a lousy reasoner, because all he's got is logic, he hasn't got anything else. And massive data that we have to deal with means that if our sensibilities are educated, they help to filter some of the things that we need to consider when we reflect on them.

But the point that I wanted to make in the article that prefaced all this was that thinking about how we feel about things, that is, making that explicit connection between our emotional responses to things, and our capacity to learn from experience and to draw inferences about what might be best to do next time we're in that kind of situation. To get the right sort of marriage between how we feel about things and how we think about them carefully and maturely is obviously the right way to go, and I don't think anybody would think that was anything other than a very obvious thing to say. And yet it's something which gets missed, I suppose, in the debate. And people want to say that love and joy and happiness and laughter have very little to do with reason; they're wrong about that, because most of those things have intentional content. I mean, beliefs are involved in them; beliefs about which you can reflect.

So that the opposition which is sometimes raised, by people like Rowan Williams, talking there about how we need a base of our valuing of things, some emotional response, that ultimately what really matters, what really drives us and motivates us is emotional response. But that, I think, has to be put into the right kind of context. And clearly, how you respond to your crying baby and how you respond when you've got some technical problem with the collider in CERN, they're two quite different things. You're not going to solve the problem in CERN just by emoting.

BINGHAM: Yes, Chris Frith, in fact, the neuroscientist Chris Frith makes the point that no one really uses reason as the headline it's given, which I think is the same point, as a great deal of unconscious reasoning goes on, is your point. And the Archbishop uses this phrase "instrumental reason," which I suppose is this notion of where people reduce the Enlightenment to be something that produced dry, mechanical, harsh treatments of things, rather than more humane things, right?

GRAYLING: Yes, exactly, you know they interpret reason, and then reason as the distinctive tool of science, as being reductive and utilitarian and value-negating in some way, or, if value-freighted, than carrying the wrong kinds of value.

BINGHAM: Yes, so I don't want to set you up as just this sort of beating up religion sort of thing. Do you see some way of, and compare and contrast the UK and the US, if you wouldn't mind, some way of actually producing some sort of a rapprochement, or is it just hopeless?

GRAYLING: Well, first on the question of beating up on religion, I think, you know, the old saying is, if you don't fight you lose by default, right. So the thing to do is realize that religion is so present and pervasive in society, that something which is almost an absurd remark in the United States context, given the power of the Evangelical lobby and the rest, but it's pervasive even in the United Kingdom. I mean, the Church of England, for example, is established. And it runs a very large percentage of the primary schools, and a significant percentage of the secondary schools. Very

many of the schools in England now are faith-based; they have some kind of faith connection. A prayer is said in the Houses of Parliament every morning when the session starts. I mean in all sorts of ways, religion is part of the very fabric of the society.

BINGHAM: And there's been a huge injection, an influx of Muslims as well lately.

GRAYLING: That's true, so, and in fact it's mainly the Islamic community which has been very vocal, wanting the same sorts of privileges and attention that the Church of England and the Catholic community have got from the government. So wanting our tax money for their faith schools, wanting a say, perhaps representation in the House of Lords, where 26 bishops of the Church of England sit by right, and number of others who've been made life peers.

So, you know, there is a very pervasive and, up until recently anyways, silent presence, unobvious presence, let me say, in the public square of the religious voice. Out of all proportion to their actual representation in society. I mean I very often find myself on a panel with a Jewish person, a Muslim person, a Catholic person, an Anglican person, and then me, and I'm the token atheist-secularist-humanist, then because I've got long hair, sort of if they didn't find a lady to come along, so you know, I'm that representative of all those positions. And between the four of them, they represent an active constituency in the society of about 8%, of people who go every week to mosque or church or temple, and I represent a majority of people in this society who are fundamentally secularist, whether or not they are religious, they still think that public square ought to be mainly a secular domain. And the reason why there are four of them and one of me is because they can't agree with one another, and that's just you know, a part of the premise.

So I always say in these situations that there's a big distortion in the debate, and the distortion comes from the side of the religious voice in the debate. That's why I think that Richard Dawkins, Sam Harris, Christopher Hitchens, and other people who stand up and flourish their boxing gloves at the religious lobby are right to do so, because there has to be an argument in order to bring that up, and somewhat to play the Canute thing of trying to keep the tide of religious influence a little bit back.

BINGHAM: If you hadn't been a philosopher, just a little thought here, if you hadn't been a philosopher, what would you have liked to have been instead?

GRAYLING: It's a tough question there, because there are so many things, a musician would be one thing that I would like to be.

BINGHAM: Do you play?

GRAYLING: Yeah, I do, yeah. A multi-millionaire would have been another thing that would have been very nice, right, because that would have opened options I suppose. But I suppose a musician, mainly. Having the hairstyle already, you know.

BINGHAM: Right, right, sort of the Beethoven thing, yeah. Do you, what got you first interested in science as opposed to philosophy? Is there something that came up in your schooling or…?

GRAYLING: Well I went to a school, a boarding school where, too early really in the sort of English tradition, you had to choose between the art side and the science side. And just, I suppose the accident at having a facility with the classical languages and English literature and that kind of thing, meant that my teachers at school pushed me in the direction of the art side. I'm not sorry about it at all, because I think if you're reasonably alert and you like to read, you know, you're not going to lose out too much, although at some point, had we an ideal educational system, one would have been given more opportunity to learn something really more in depth and firsthand young in the sciences. But that's broadly speaking what happened there.

BINGHAM: When I was back in England recently, there was a piece in one of the newspapers, I think it was *The Times*, and it was that time of year when they were about to elect a poet laureate. And there was a comment that perhaps it was old-fashioned and redundant, and what we needed now was a sort of philosopher-in-chief or a thinker-in-chief, somebody who actually could do something useful. And your name was mentioned, so was Jonathan Glover, who's also in the room, I notice. Is there a greater tradition of public intellectuals in the UK in your experience? Because you work both sides of the Atlantic. And why?

GRAYLING: Well I think in the, it's difficult, in this one, it's difficult to generalize about the Anglophone sphere, in a way, because there are some notable and very admirable public intellectuals in the United States. Now, the tradition of the public intellectual in continental Europe, especially among the French, the Germans, and the Italians, is very strong. And in France, for example, public intellectuals are sort of stars. I mean if you think, there are some who wear their shirts wide open, throw out their chests and appear on television and wave their hands around, and I've picked it up to some extent now, too. And they have a really wonderfully accepted role in society; theirs is a voice which adds, I think considerably, to the public debate. They're welcomed, therefore, by their societies.

In the UK, there's always been a great deal of suspicion about intellectuals in general, public or private. You know, there's the old saying, mention the word "intellectual" and I reach for my gun; you know, all that very much applies there. So we don't think in those terms very much, despite the fact that the public debate in the UK is, I think, very rich in intellectual voices, except they don't present themselves as such.

If you look at the broadsheet newspapers, for example, there's a lot of very interesting comment, a lot of very smart people who write for them. And a very lively debate goes on, without it being pretentious, and without it setting itself up as sort of a Café Philo society. So that's exactly as it should be, and everyone's very grateful for it, because no matter what their point of view, at least the points of views are being expressed, and it's not a babel of voices, I think it's an exciting kind of disco of voices, if you like, out there, which means that if you track back over the last twelve months or five years of public debate in the UK, you'll see that most of the things that we've just been mentioning now, at one point or another would have come up, and done so in the broadsheets and in the public broadcast.

BINGHAM: Yes, but so, if you have universities actually closing departments, say chemistry and so on, how do you justify keeping open philosophy departments? I mean, what is the function that's being performed by learning and teaching philosophy?

GRAYLING: I think the first thing that needs to be said there is that the university sphere and the intellectual sphere, if you like, have never been coterminous in thinking. Nor have they overlapped all that much, which I think is a pity. If you go back to the 19th century, the universities that existed then, to a greater extent the old universities, to a lesser extent the civic universities were places, strictly speaking, of education, not so much of research and not so much of public challenge and public debate. The research institutions were the Royal Societies--the Royal Society itself, Royal Geographical Society, Royal Geological Society. You know, when Darwin came back from his travels, he didn't go and lecture in Cambridge, he went to and lectured in the Geological Society.

What we've seen in the 20th century with the professionalization of the humanities, and the fact that now people are paid salaries all their working lives long to be philosophy professors and so on, is a sort of nicheing or pigeon-holing of people who really, in another age, might have been much more general in their output and in whom they addressed in their work. Making them specialists and technicians. I mean, if you want to get anywhere in the academic profession, you have to do technical work before, pass muster with your professional colleagues, and get into peer-reviewed journals and so on, otherwise you just don't get anywhere. But that kind of work is far too

specialized for the general debate. And so we've had this separation of the intellectual sphere from the academic sphere, and that means that when funding problems come up and when universities run out of money, one of the reasons why they start cutting departments is because nobody out there in the general square cares about it so much.

But your question was, why keep philosophy departments open when chemistry departments are closing. And you know, I think there's a serious point behind that. I would much rather see a chemistry department kept open than a philosophy department because I think, whereas the bangs and smells aspect of things in chemistry needs some equipment and more special training, people like Hume and Descartes and Berkeley and all that didn't need philosophy departments to do philosophy.

BINGHAM: You mentioned Darwin. We're coming up on the bicentennial of Darwin's birth and the 150th anniversary of the publication of *The Origin* and so on. Do you have any thoughts about Darwin, as a philosopher?

GRAYLING: Well, Darwin as a philosopher.

BINGHAM: No, no, no, as a philosopher, do you have any thoughts about Darwin?

GRAYLING: Oh, sorry.

BINGHAM: You can do the other one as well if you like.

GRAYLING: Well of course, I'm a great admirer of Darwin. And I think his life and work is not just important from the point of view of the contribution that he made to the biological sciences, you know, a transforming, revolutionary contribution really, but also his life and work is in itself iconic in a certain way. Because if you think about his own personal progression from a kind of unreflective, nominal faith, the possibility of going into the church, and then his own realization as he traveled and studied and looked at evidence. Contrast, for example, Darwin's journey, intellectual journey, from a reflex unquestioning Anglican to an agnostic or an atheist, to somebody like Edmund Gosse who, presented with the same sort of evidence, struggled like mad to hang onto his religious faith and to reinterpret everything in the light of it. Between the two of them they are, as it were, the opposite poles of something that happens when science really does come into conflict with the ancient stories, the ancient creation myths and the rest.

And so there is something very courageous and poignant about Darwin's life, because for a very, very long time he kept quiet, realizing the implications of what he was going to say. Very early on, early in the 1840s, he wrote, "I feel as if I have killed God." In a sense, of course, he had. And heaven knows what might have happened if, you know, Russel Wallace hadn't come along and chivvied him up a little bit and got him to publish eventually. Perhaps it would have all been posthumous.

BINGHAM: I remember, in both the cases of Charles Darwin and TH Huxley, his "bulldog", they both, as happened in Victorian families, lost children. But they were particularly; in Darwin's case the loss of Annie was a very severe blow for him. And then in Huxley's case his son was very vibrant, little nine year old, was caught with some fever or something, I don't remember exactly. And there was a wonderful exchange in letters, you probably know, between Huxley and Kingsley, in which Kingsley tried to sort of make him feel more comfortable and suggested that he seek some sort of solace in religion. There was this sort of wonderful letter from Huxley in which he sort of says, basically, no, and uses the word agnostic, says he can't get into all that sort of thing. And uses the fact that his sense of standing before fact like a child, "sit down before fact" like a child, right; extraordinary, these personal losses creating almost the texts that we now use for understanding sort of this conflict between the two.

GRAYLING: Well, one can generalize this to the question of attitude. Antoine de Saint-Exupery said, the meaning of things lies in our attitude to them, not the things themselves. And if you dwell on that, if you meditate a bit on what that means about our responsibilities to formulate our attitudes, to take the time to think, you know, in the way that philosophical reflection, in the very broadest sense, philosophical reflection is a kind of constant preparation for life, thinking a bit about how you would meet loss, how you deal with grief, how you deal with success, triumph, and the rest. What kind of mindset you work to make and by which to live your life. Those sorts of examples, Huxley's example, Darwin's own, and others, are exemplary for this reason: that in general, as it were, epistemological terms, the idea of being able to live with open questions, without resolution, without solutions to problems, is a very courageous and adventurous mindset.

You know I sometimes think that one of the impulses, and there are many, to accepting a religious view of the world is that it provides a narrative and closure and it's very neat, it's got a beginning and an end, and it's got some solace attached to the story about the end. Whereas science gives us something very open-ended and inconclusive, that you have to live with, not knowing what the answers are yet, but being prepared to seek them, to carry on looking for them, and to struggling with the new and sometimes more difficult questions that arise when you do come up with some solutions.

And so it is with personal life, thinking about how you're going to accept the inevitability of loss or grief. So for example, the minute that you enter into a relationship with another person, especially if you love that other person, one or other of you thereby contracts for loss. You know, if you marry somebody, one of you is going to die before the other one does. Loving somebody is buying into a certainty that there's going to be hurt involved in it at some point. But to recognize that that is, in fact, part of the value of what you've done, and to accept that it's in this life now, in the span of that relationship, that all the best that you can make out of it must be made. Now that seems to me to be deep and courageous, that view of life. Whereas, sticking with a sort of reflex view of, oh it doesn't matter because you'll meet up again later, or you know, everything's going to come right in the end, is, it's a kind of shallow, inexpensive view of life, if you like.

BINGHAM: So you have a fondness for Stoics?

GRAYLING: Well I think the Stoics are a very, very interesting bunch of people. In fact, of course, a great deal of Stoicism was imported into Christianity late on, when the sort of early ethics of the New Testament were seen to be just pretend, you know, the end of the world was coming; when it didn't come they needed some decent ethics, and so they went and plundered it from the Stoics, so.

BINGHAM: Who is your favorite philosopher?

GRAYLING: I have to tell you that I'm really against beauty contests, you know, who's your favorite this and the biggest that, and who trumps the other and so on. There are so many I admire.

BINGHAM: All right, so who influenced you the most in your thinking?

GRAYLING: Well it's hard to say that. I think, in my sort of more technical work, I suppose Kant and Aristotle and people like that have been big influences. But somebody I regard as having been quite an exemplary philosopher, both in the technical sense and in the more public sense, would be somebody like Bertrand Russell. Now there was a man who, whatever else you think about him, at least spoke his mind, and I think made quite serious and important contributions to social changes. That book of his, for which he won the Nobel Prize, published in the early '30s, *Marriage and Morals*, was a book which, if you were to trace its influence on thinking in the post-war period, probably a very significant one. So you know, the social and moral revolution of the '50s and '60s may have something to do with what Russell had to say. If true, that shows you that philosophy does bake bread.

BINGHAM: What about, if you had a chance – this is not quite the same as a beauty contest – but if you had a chance to sit down with somebody in historical, or wherever, who would you have liked to have spoken to?

GRAYLING: That's a very difficult one because almost everybody is the answer. But, I wouldn't mind, I was very excited actually, as an undergraduate when Russell himself died, and I thought, damn, I should have tried to get in touch with him before he died and try and speak to him. And maybe there are people here who did meet him in lecture, but that would have been fun.

I think for the sort of purely philosophical reasons, there are some questions I'd like to ask Frege and Kant. I suppose I'd just have to give one hell of a big dinner party, because there are so many people I'd probably want to talk to.

BINGHAM: Right, and see who would come to it. Are there any discoveries that you'd like to have made? Anything you're…?

GRAYLING: Well I wouldn't have minded coming up with the general theory of relativity, for example, that would have been fun. But I think, what I would like now is, above all else, to discover a way of persuading everybody to leave kids alone, I mean small children alone, from the point of view of proselytising them with religious beliefs. If you'd only just leave children to get on with a standard course of education, perhaps learn about all the, you know, the mythologies and religions of the past, without being persuaded by parents or schools or society into one or another religious commitment, before they're in a position to evaluate it properly, then I'm sure the influence of religion in society would be considerably less.

BINGHAM: Was there any religious influence when you were growing up?

GRAYLING: No, none, I was in a completely non-religious family. But then what happened was, I was at school one day; we used to have to go to chapel every morning at this boarding school, and therefore we didn't listen to what was happening, we spent our time flicking pellets at one another and so on. Until we had a new chaplain one day, who read the Collect for the day, and this was a Church of England associated school, so the Collect for the day happened to be one which went, "Oh Lord, open thou our hearts by the inspiration of thy Holy Spirit, that we may worthily love thee and truly magnify thy Holy name," something like that. And this chaplain said it in a different way, he said "Ooooooh Lord." Firstly, that was new to us because we hadn't had any revivalist noises made in our chapel until that point, so that all woke us up, just first off. Then he said, "Open thou our hearts by the iiiiiinspiiiiiiration of thy Holy Spirit." Now by the sheerest coincidence, just the preceding week, I'd been reading about the Greek view of inspiration, of how the muses would breathe into you the poetry, I mean that chap, how could he have written that poem, to see him weeding his garden every day, he doesn't know, this divine input must really have been from the outside.

So I went up to the chaplain after, and I said, inspiration, that's a very interesting concept, give me something to read about this Christianity business and let me have a look at it. It would have to be not too long before the end of the term. And he gave me quite an interesting set of things to read. He said, read Dostoyevsky's *Notes from Underground*, read *Honest to God* by Bishop Robinson--you may remember the popular book back in the '60s--read the epistle to the Romans, a great converting epistle, you know, it converted lots of people. Anyway, I was a very studious little chap, and I went off and read all these things, and when I had done so I went back to him and I said, okay, I read everything you asked me to read, and I have a question for you. And the question is, how can you believe all this stuff? I really wanted to know why.

And he said, every morning when I wake up, I pray, "Oh Lord, I believe; help mine thou unbelief." And I said, even you, you don't believe it really either, you're masquerading with this white collar

on. And so we used to have these terrific arguments about it; became great friends, as it happened. But somehow it was a lucky thing, having not had any kind of religious input, then being presented with this, somebody trying to make the case to me, and the case just not standing up.

BINGHAM: It is interesting that, I mean, literally in the last four days, five days after the meeting of the British Association for the Advancement of Science, Michael Reiss, who is Director of Education at the Royal Society, which is Britain's major academy of science, I suppose, founded in 1660, had to resign because he gave a talk entitled "Should creationism be a part of the school curriculum?" And I believe, I think he makes that case, does he not, I mean, he is indeed a cleric, isn't he. Could you speak to this a little bit, because this is an interesting story?

GRAYLING: He's Professor of Science Education at the Institute of Education at the University of London, and he's, as you say…

BINGHAM: [Interposing] So that's next door to your college.

GRAYLING: Exactly, and he is, as you say, ordained. And he's a Fellow of the Royal Society, and was their Director of Education Policy. Now it happens that he's been; it was I think a mistake, on his part, and a misrepresentation, on the press's part, which is the usual way that these things get out of hand. He said that he thought that when school pupils brought up the question of intelligent design or creationism in science classes, that science teachers should talk to them about it, should be prepared to respond and explain why the idea of creationist thing didn't, doesn't wash, and what the scientific view is. But the line that he was taking was that they should be treated with respect, these views, and they should be responded to. So you might think that that was a reasonable thing to say.

But the Royal Society itself has always had, as a policy, since the issue really blew up, that I.D. and creationism have no place in the science curriculum at all, and that responsible science teaching should teach science and not, you know, all these different stories. And other people have commented, as I have myself done, that of course schoolchildren should be taught about the religions and the mythological traditions and the legends, on a comparative basis, as part of history or social studies or something. And that if these questions were to arise in a science class, that science teachers should say, the proper place for this discussion is in your history lesson or your social science lesson, although they could take the opportunity perhaps to talk a bit about why scientific method is the more appropriate thing to be applying to those sorts of questions.

Seems to me that the, that Reiss' resignation was the right thing, it was the right thing for the Royal Society to say, I'm afraid you're going to have to quit this. Not because it's strictly fair to Reiss, but because it reinforces the point that the Royal Society came to make, mainly that science is one thing, and that all the different sorts of creationist stories and legends, of which of course there are dozens and dozens, are more properly dealt with elsewhere.

BINGHAM: What do you think we should do, what should be happening vis-à-vis science now, in terms of getting it before the public? Proposals?

GRAYLING: Well I think everybody in science who has the ability and the interest ought to be trying to communicate with a much wider audience about what they do, why they do it and why it matters. And that people who care about science, even if they're not in science themselves, should support that and should try to make people conscious of the fact that there are a number of different sciences, that many of them are of great and immediate interest and importance to progressive flourishing of society and to individuals. Because the case is easily made in connection with biomedical sciences but, you know, even in pure research in physics and in chemistry, we never know what new ideas might come forward and new things be discovered, and that tends to happen all the time.

So make the point that science is important, that investment, even in blue sky science, really matters, that as an intelligent, mature society, we should always be pushing the limits of research, always be prepared to put our hands in our pockets for the big things like the north-south hemisphere investigations of the sky, you know, because there's been controversy about the funding of that just recently, the CERN project. You know, there are all these big endeavors, and all the really important projects involved with science education and public understanding of science and keeping science alive in schools, that all those things tremendously matter. Why they matter--say something about the history, because the history of science is very exciting--and the preparedness of governments and societies as a whole, really to fund this properly and make it work and put their shoulders to the wheel. That, I think, is what we need to be saying now, because so long as the caricature view prevails, and as long as there's this, you know, polarized debate between religion, as if that were one thing, and science, as if that were one thing, goes on, what we're going to get in the end is a very evacuated, a very tenuous understanding of both sides of the argument.

BINGHAM: Do you have children?

GRAYLING: I do. I have rather a superfluity of them; I've got four from two marriages.

BINGHAM: Any scientific inclinations there, or philosophical?

GRAYLING: Yes, my eldest child read mathematical physics and Edinburgh, and my third one, who has just gone off to boarding school now, is very interested in mathematics.

BINGHAM: Do you, if you think back, this is another one of these difficult questions, I know, can you name; who's the smartest person you've ever met and who's the wisest person you've ever met?

GRAYLING: Well that's very hard to say because I've met a lot of very, very, very smart people, of course, having had the very great pleasure of spending some time, both as a student and as a teacher at Oxford, I met a tremendous number of smart people there, taught by a lot of smart people there. One of them is sitting in the audience right now, Jonathan Glover, whose lectures, by the way, were a tremendous pleasure to attend.

Wise people; you know, wisdom and smartness, and wisdom and education, wisdom and anything else, don't always go hand in hand. And I've met some wonderfully wise people in the oddest places, you know, in the outback in China and in the Himalayas and where have you. Not because they were Buddhists meditating or anything like that, but just because they were interesting people to talk to. I suppose really the wisest person I ever knew was a great aunt of mine, who--now you see that there is a detachment between wisdom and knowledge. She believed in reincarnation, took up the piano in her '80s in the hope of having a head start on everybody else next time round. But sort of independently of that, her general take on life, and her rather generous and expansive view about human foibles, which I think was the very essence of wisdom.

BINGHAM: One final thing; what are you optimistic about?

GRAYLING: Well frankly, I'm optimistic about this humanity, perhaps. I'm optimistic that, despite the fact that there are quite a few bad people around, and that we are all of us at different times capable of being very stupid, I think we're also, most of us anyways, capable of sometimes being sober and reflective. Especially when we're challenged to be, you know, when a friend comes with a problem and wants us really to help out, and we care about that friend and so we think hard about what we might say to them. You know, that's when we ask the best of ourselves. So we can sometimes be thoughtful and good, we can be good people sometimes.

And that fact about justice is a very optimistic fact. Because I think that even though terrible things happen, and the wounds that humanity causes itself are frightful sometimes; nevertheless, the ordinary daily life of most human communities, preceding as they do on the basis of trust and

mutuality and a lot of affection and a lot of friendship, that's a very heartening fact about us. That all we have to do is keep faith in that side of us and hope that we survive this difficult period now when, as Theodor Adorno said, we've become so clever but not terribly wise, and so we're at a parlous juncture in human history, these great weapons of ours and our rivalries and so on. I mean, if we can survive that, than maybe the better parts of human nature will prevail.

BINGHAM: Anthony Grayling, thank you very much.

GRAYLING: Thank you.

BINGHAM: Are there any questions, incidentally? Jonathan Glover has one.

JONATHAN GLOVER: I'd like to make a comment, and then if I may, ask a separate question.

The comment is that I want to express a bit of disagreement with you. When you said you were relatively happy for a philosophy department to be shut down, as against a chemistry department, now I hope I'm not just showing self-serving self-interest in saying that I disagree with that. I think that there are very good reasons for thinking that children are natural philosophers. Children ask questions and are, like you were in your description of your religious teaching at school, have the glorious capacity to be dissatisfied with answers. And particularly at the age of roundabout 13, many, many people have the experience of suddenly realizing that they're told a whole lot of things by their families, their schools, the television they watch and so on, and realizing that if they'd grown up at a different time or in a different place they would have a totally different set of beliefs.

And what tends to happen is that that, to my mind, one of the deep and central human interests about the world and our place in it, gets hugely underrepresented in our education system. That people are encouraged on the whole, when they're 13, get on with learning your mathematics or your chemistry or your law, or whatever it is that will get you a job. One of the reasons why philosophy departments aren't closing very much is that there's a huge demand, because there's a huge unsatisfied interest in pursuing these absolutely fundamental questions. And I think that's something which we ought to try and satisfy.

Finally, just to ask a totally different question. You said very interesting things, I thought, about the difficulty of distinguishing, in our picture of the world, between what comes from the world and what comes from our cognitive constitution, how the way our brains work. But I suppose the question I want to ask, because I find it really fascinating, is, we know that some other species have brains that aren't good enough to understand physics, for instance; you know, we'd be astonished if a dog started to take an interest in relativity, we know it's out of the question. Presumably there are certain limits on our brains. If there are such limits, which are cramping our understanding of the world, do you think we're going to be able to detect those limits? And if we do detect them, what should we do about it?

GRAYLING: Well, first if I can respond to your comment, I have to say that I agree with you absolutely, that children are, as you say, natural philosophers. In fact I've given talks at prep schools to 12 or 13 year olds, and as you say, they're very, very… so I'm with you on that one. I did say that I'd rather see a philosophy go than a chemistry department go; it doesn't follow from that that I want to see philosophy departments cancelled, for entirely self-serving reasons, I'm prepared to acknowledge those, but also for the reasons that you put too.

It seems to me that one slight danger associated with having academic departments where subjects are neatly swept into them and slightly kept out of the way is that philosophy, which should be everybody's possession, we should all, everybody should be--like the reading of history, it ought to be the pertinence of any civilized existence, that people should read philosophy, and that philosophy should be written in a way that it can be read by the general public. But it does tend to get swept off into a corner of academia, that relatively few people study in any depth. It ought to be

part, I think, of our general education, as a whole, so I'd extend your point really, and say that philosophy really certainly be a part of education, even if philosophy departments, in the competition with science departments, may be a bit vulnerable.

Well, we're very familiar with arguments like, for example, Colin McGinn's, that we're just not constituted to understand how our own consciousness arises from workings of the gelatinous gray matter of our heads and so on. And I find that kind of argument rather a pessimistic one. It seems to me that what one ought to do, however hard the subject, is to keep on trying to understand it, and just try to ignore the limits, because even if you were bashing your head against a limit there's still a great deal to be learned from the experience. I think it was the, Paul Valéry, who had that wonderful remark, "A difficulty is a light, [speaking French], but [speaking French], an insurmountable difficulty is the sun," it really illuminates your understanding. So if we did come up against the limits of our capacities, it would still be worth trying to stretch them that little step further.

However, it's a very, very intriguing question what it would be to recognize that one had arrived at such a limit. That's a very, very interesting question, I think one that I don't have an answer to but is certainly hugely worth pursuing.

PATRICIA CHURCHLAND: I have a question that arises out of the discussion about why science right now is not a sort of popular pastime that it was, say, with the Victorians. And one of the things that I wonder about, and perhaps you can speak to this, is whether people now have a very romantic conception of what day to day life was actually like before, let us say, the Industrial Revolution, and certainly before there were antibiotics and before there were vaccines. And so they think of life as being wonderfully pastoral, with people running about fields joyfully picking daisies and cheerfully milking the cows in the morning, and life was all sweet; and of course we know very well that life was, in many respects, not at all sweet, especially for those people.

So do you think maybe what we should be doing is making movies about what life was really like then, and showing gangrenous legs and people with smallpox and what life was like during the Hundred Years' War, to sort of remind people that, yes of course it is irritating sometimes to get stuck in traffic, but it's nothing like having smallpox?

GRAYLING: Yes, I agree. I mean actually that's a very rich question, because there are lots of different things that one could abstract from it. One of them is that we take for granted what science has done for us in positive respects, and we take also for granted that we can grumble that science, biotechnology has done that frightens us, like their use in weapons of mass destruction and so on. But we're very unconscious, and I think it's even true of scientists themselves, of the history of science, and the way science arose from genuine curiosity and the great adventure. You know, naturalists with their butterfly nets and microscopes and collecting jars, and people like Faraday and others who were, somehow when you look back at them, they seemed to be fully integrated members of society, and yet in their kitchen they had a little bit of electrical apparatus and they were finding out about electromagnetism. But all those stories are very wonderful stories, and very inspiring ones, and that it would be a good thing, both for trainee scientists and for the general public, to know much more about how very much part of the texture of life, all that hinterland of adventure really was.

But I do agree with you that the other aspect of taking for granted what science has given us, in the way of our teeth and bones and general good health and the rest, would be given a boost by the realization of just how horrible life could be, even as short a time ago as the 1930s and before the invention of antibiotics. And, in fact, just recently in London, the Wellcome Institute there put on an exhibition of excavated skeletons. I mean, London is a very old city, more than 2,000 years old, and we walk every day on layers and layers of bones; and every time a building is excavated, foundations thereof, they find burials, they find bones. And by examining them – because the

Wellcome Trust is a biomedical research institute – by examining them, they've been able to say something about the lives and diseases and deaths of these individuals. And it's horrific; you know, even something like an abscessed tooth, which could be life threatening if left untreated, or the syphilis or the scurvy or the dietary deficits these people suffered, you can see them in their bones.

And it's an extraordinary revelation, really, to think that the quality and character of our lives now is utterly different from that, and as a result of the huge progress made for us by science. Because it's also rather salutary to contrast our experience in the rich, comfortable, largely safe west and the life of people in Africa and other developing countries to all those, many of those things are still endemic.

AUDIENCE MEMBER: Thank you. Earlier on in your talk, you talked about how you separated out arts and science and you had to determine. It seems to me that, when I look at a faculty of arts nowadays, you know, anthropology used to be an art, in arts, and it still is I suppose, and archeology and sociology and psychology; but all of them are, it seems to me, are kind of leaning over towards the scientific method, and are now essentially becoming sciences. I mean, when I read Patricia Churchland, we're talking science there, in philosophy, and Dennett and so on. Do you have a, you know, is there really that much difference there anymore? The introspection that used to be part of the way that one determined the philosophical structure, whatever, seems to be moving towards biology now; and are arts and sciences melding together, do you think?

GRAYLING: It's a very interesting question now, isn't it? Because it looks as though the recent history of these different pursuits recapitulates the history of philosophy itself, at least in the modern period, because you could argue that, if you think of philosophy as inquiry, I mean after all, our predecessors in classical antiquity didn't think of themselves as doing philosophy as we think of it now, or science as we think of it now and so on, but just inquiring in general, really trying to make some sense of things.

AUDIENCE MEMBER: [Interposing] It means "love of knowledge," doesn't it? Philosoph.

GRAYLING: It literally does, but what it really portends is inquiry, is trying to understand, find out, make sense, come up with decent ways of thinking about things; constructing conceptual frameworks that make us deal with the data better. And you might argue that in the 16th and 17th century, what happened was that philosophical interest into nature, into the natural world, found ways of asking its questions, and found ways of answering them, which were particularly productive. And these took the form, if you at the way Galileo, for example, does things, of using quantitative methods rather than, you know the sort of stupid things, saying, you know, your heart beats because it's got a pulsating fact of being; everything falls because they want to get to the center of earth and so on. But finding a different way of describing the relationship between things, which is much, much more predictive, powerfully predictive, and more adequate to the phenomena.

So it's as though philosophy, having found, with respect to a certain set of questions, a good way of asking them and a good way of answering them, was able to see that bit of inquiry become independent, to grow up as a powerful new set of disciplines. Same thing might be said about the beginnings of psychology in the 18th century, or sociology and empirical linguistics in the 19th century, with artificial intelligence, cognitive science in the 20th century--although there, philosophy of mind and computer science and neurology started to come together in very, very interesting ways.

But it's right and proper that more and more of what we investigate, what we're trying to understand, should come into this very well disciplined structure which, broadly speaking, science is, because it's a disciplined set of methodologies and ways of making, in a very cross-testable way, empirically based quantitative way, advances in our understanding of something. It may be that, in

just the same way that even fundamental physics ends up backing philosophy, because there are some philosophical questions it prompts, so it might be that there will always be an aspect of these pursuits which are, or require the techniques and the methodologies of the humanities, or of philosophy. But the more scientific they can be, the more likely we are to make progress with them.

BINGHAM: Anthony Grayling, thank you.

GRAYLING: Thank you. Thank you so much.