

In Doubt We Trust

Programme 2

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PTC

I've come back to Durham and I'm standing now outside one of the Observatories owned by the University where I studied physics. It houses a telescope for studying the heavens. There's a spectacular views of the City of Durham from here too. It reminds me of my 3rd year Astronomy project to measure the heights of mountains on the moon. We had to climb up here in the small hours of the morning to take measurements when heat and light pollution were at a minimum. It felt like making a pilgrimage and the reward was a bit like that too. For to stare at the moon even through a moderately powered telescope is to stare onto another world. The universe is such a vast place that we are bound to doubt our own place in it. The project's left me with a lasting impression of amazement and uncertainty about who we humans are. (0'54)

SCRIPT

Durham is a resonant place for me because a few years later, I was also ordained a priest in its great cathedral. That didn't work out, though. I left the church and doubt became a crucial issue for me.

Last week I looked at how the remarkable insights of modern science offer us the hope that we can be pretty sure about many things, and yet that very same security can nurture a troubling lust for certainty that results in excessive scepticism, even cynicism. In this second programme I want to look at how doubt and uncertainty are not just an inevitable part of our lives but how an ability to tolerate doubt – to embrace the unknown – is a necessary skill for us and might be, perhaps unexpectedly, enriching.

CF: The scientific method as we know it is based really on 18th C concepts by Descartes – *Dubito ergo cogito, cogito ergo sum* – I doubt therefore I am - uncertainty and doubt are therefore built into the process of what we call scientific knowledge and discovery. So science advances just as the level of doubt and uncertainty of the community is reduced. But it's never reduced to zero. (0'30)

SCRIPT

Professor Carlos Frenk is the Director of the Institute for Computational Cosmology in the University of Durham. He is also my old physics tutor and spends his working life, in a way, living with doubt. On a wall outside his office is a poster that reads, 'Dark Matter – Does it Exist?' It rather neatly sums up his research because he has spent much of his life searching for this elusive stuff. If dark matter exists, it would make sense of the way visible matter in the universe hangs together. But we cannot see it and so it can only be inferred. It's possible that there are other reasons stars and galaxies don't fly apart. So there are no guarantees dark matter exists at all.

CF: [Using our current theoretical ideas about how gravity should work we come to the conclusion that there must be something there which we don't see which is

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producing the gravity. Now, how do we know that that is the right answer?] And so a fraction of the community would say look this is too fanciful to pretend the universe is full of something you can't even see that we've never discovered in a laboratory and maybe there isn't anything called dark matter, maybe it's our theory that is at fault. So we can't even be sure that dark matter exists. So for me it would be really pretty distressing to find out all my life I've been chasing a chimera. And on another level I would be delighted to be proved wrong because science advances when you prove that something is wrong. So if it turns out that it's not dark matter and its gravity that would be great because we would have learnt something new. But we wouldn't be sure either because there will always be an element of doubt as to whether that was the correct description of the universe or not. laugh (0'57)

SCRIPT

In fact, this dance with doubt is not just a question of whether physicists have the right models and evidence. It turns out that uncertainty looks like it is written into the very fabric of nature itself. Modern physics is based on quantum theory, and at the heart of quantum theory is a concept known as The Heisenberg Uncertainty Principle. It caused another Copernican revolution when it was discovered in the first part of the 20th century, fundamentally undermining 19th century notions of a deterministic universe. Science writer and journalist, Michael Brooks.

MB: The uncertainty principle is interesting because what it says is there are limits to what you can know about any particular system that you're looking at. So for instance in quantum theory the classic is that you have an atom and it's moving along but you can never know its momentum and its position at exactly the same time and in quantum theory there are basically pairs of things that you can never know simultaneously with sort of infinite accuracy. And so scientists know full well that they can never know everything and that's actually quite a useful lesson probably to take into the large world.

MV: Do you think some sciences are more aware of uncertainty that underlines the subject?

MB: I think in Physics it's certainly the case that people are very aware of uncertainty, you know you are not a good scientist if you don't include measures of uncertainty in your results. Now there are other fields where people come up with hypothesis that seem to fit all the data, I'm thinking in terms of evolutionary biology in some ways which has been incredibly successful but actually when people discover things that don't quite fit the paradigm then it becomes more difficult to shift the view and I think perhaps biology is one of those areas where views can get quite entrenched and it can be very difficult to change the way people think. (1'09)

SCRIPT

It's almost as if news of the uncertainty principle has not yet reached other parts of science. Biologists do not have to deal with it on a day by day basis as physicists do. But the model of reality that many biologists use is, broadly, still a 19th century one and it's quite possible that uncertainty plays a crucial role in some of the problems with which modern biology is struggling, such as the nature of consciousness. Whatever the truth of that, I also wanted to ask Professor Frenk how dealing with uncertainty in his scientific work affects him on a personal level.

CF: You cannot do research in physics part time. What I mean by full time is from the moment you wake up to the moment you wake up the next day because many of

us even dream about physics when we are asleep. So because we have been trained to look at the universe in the context of this uncertainty I think we learn to approach not just physics problems but any other problems human problems, relationship problems religious problems in the overall spirit of this basic uncertainty. So in that sense physicists are impoverished because we are not sure of anything. So my wife is always complaining, she's been my wife for 35 years, yet I'm always doubting what she says. And she says why are you always doubting what I say. If I told you I put the washing machine on then I did it. Then I say I'm a physicist I'm trained to doubt everything. So yes, the answer is that not just as physicists but as humans our whole outlook on life is coloured by this big lesson we have learnt from our physics research that you can take nothing for granted in the universe. So you might think physicists are all very unhappy and trying to tear their hair out because they don't know anything about anything – it's not that bad. (1'19)

SCRIPT

Talking nothing for granted in the universe is, of course, not just a discovery of modern science. It's a lesson human beings have had to learn in every generation and, I think, is the main reason one key figure in Western civilisation is still remembered, that of the ancient Greek philosopher, Socrates.

There's a story about Socrates that his loyal friend, Chaerephon, went to ask the famous oracle at Delphi whether anyone in Athens was wiser than Socrates. No-one is wiser, the Pythia replied. And that puzzled Socrates, because if there was one thing he was conscious of, it was that he knew very little at all. But over time he worked out what the oracle meant. He was wise because he was conscious of what he didn't know. His wisdom – his philosophy – was not based upon the accumulation of facts or certainties, but upon an appreciation of the limits of human knowledge and the attempt to flourish as a human being no less.

Karen Armstrong, Historian of Religions.

KA: People who came to talk to him always thought they knew exactly what they were talking about but after half an hour of his relentless questioning they found they didn't know a thing about goodness or courage or justice and at that moment they experienced aporia, doubt, and became philosophers Socrates said because the only wisdom was to know you don't know anything. Socrates said the unexamined life was not worth living. You had to submit even your most cherished beliefs to that rigorous critique and then finally experience the profound depth of human ignorance. (0'40)

SCRIPT

This Socratic questioning is valuable because it takes you to the heart of what it is to be human. We know a lot. Socrates was not against science. But this can blind you to what you don't know and what can catch you unawares is also far more likely to catch you out.

Socrates fascinated people with his love, his desire for, this new wisdom. But some were profoundly disturbed by it too. Angie Hobbs, Associate Professor in Philosophy and Senior Fellow in the Public Understanding of Philosophy at the University of Warwick.

AH: A very vivid case in point is Alcibiades whose one of the glamour figures of 5th century Athens. Very beautiful, very charismatic, a politician and a military man. And Socrates saw his gifts and tried to engage him in debate and tried to give him training in philosophy and Alcibiades was utterly beguiled by Socrates and speaks of being literally enchanted by his words but when Socrates sits Alcibiades down and really examines him and points out that he is not being the best person he could be, that sometimes lets himself down, that he doesn't know all the things in his youthful arrogance that he thinks he knows. Alcibiades does not like this one bit and he runs away because he preferred the praises of the crowd because they didn't question him, they didn't make him doubt himself. They bolstered his ego. They didn't ever try to critique his ego. And it's a very sad story and it all goes horribly wrong for Alcibiades. After he leaves his discussions with Socrates he drinks more and comes up with more and more wayward schemes. He runs off and joins the Spartan side against Athens and then ends up dying in murky circumstances in Asia Minor. And he's a test case, it just shows how people get very disturbed and angry when their certainties about themselves and their world are questioned. I think we take things terribly personally at the moment and I think it's an enormous over-reaction and not remotely helpful. (1'51)

SCRIPT

So how does one do doubt well, without being disturbed, even unhinged, by the experience? One approach is to draw a distinction between the rigorous doubt deployed by scientists, who will from time to time quite brutally demolish the theories of their peers, and the kind of doubt that might have value for us at a more personal level. What's needed here is not a science of doubt but an artful deployment of questioning, so that people can hold themselves together even as they tease their assumptions apart.

It's a skill that the Rev Professor David Wilkinson had to learn rather rapidly to avoid causing too much upset when he moved from studying physics to theology.

DW: I remember as an undergraduate at Cambridge University being thrown out of a class in theology because I was deemed to be too disruptive. That was simply because I wanted to ask question after question after question. That was the background I'd had as an astrophysicist and that was the method of pursuing truth. But in the politeness of certain theological circles, not true of all, but it was in that particular thing I was asked to leave the class. So there was a re-learning of the language of doubt, a re-learning of the etiquette of doubt.

MV: So what is the etiquette of doubt in the world of belief?

DW: I think there's a sense that belief is very personal and you need to be careful in questioning too hard because it gets close to the bone. [This was an interesting thing about Charles Darwin and his relationship to his wife, Emma. Darwin, or course, didn't want to pursue some of the doubts he had too strongly in public because his wife had this very strong evangelical faith and there's some evidence to say that Darwin tempered some of his public statements because he didn't want to attack the personal belief or faith of the person he loved. And I think that within theology there is always that personal element to it that is there in science but is not always that important.] But I think the intellectual process of questioning, of doubting that which the other person accepts as fully true is common to both. (1'32)

FX car

PTC

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I'm on my way to visit the former Bishop of Durham, David Jenkins, he was the Bishop who ordained me a priest. He also got into a lot of trouble for airing his questions about certain bits of the Christian story – such as the Virgin Birth. When lightning struck York Minster when he was consecrated some thought it might be divine comment. I also remember telling him the night before I was ordained that I felt I didn't believe enough to become a priest and he said to me not to take myself so seriously. I've often wondered what he meant by that. (0'35)

FX car door, hubbub

MV: I remember coming to see you on the night before on the retreat and you said to me 'don't take yourself so seriously'. Now I don't suppose you remember that exactly but do you have an idea about what you might have meant by that?

DJ: Yes. I think I meant ok this is what you feel now and you are good at thinking and good at linking well go on thinking and go on linking you see and see where you get to. Because the most faith can be is a pilgrimage and as you can see from lots of bits of the Bible and some of the Psalms and so on – pilgrimages have as many downs as ups and that is why having contact with a few lively congregations where there are a few people who are questioning, struggling, maintaining and still ready to worship – that's the point you see. The very part of pilgrimage is questioning and being questioned and of course being questionable. The last thing one must be it seems to me is to be sure. There's always more to be learnt. There is a sense in which perseverance is the name of the game but being a persevering person can be very awkward. (1'12)

KA: I suppose I see doubt itself as a rather negative term and I prefer to think about unknowing. (0'08)

SCRIPT

Karen Armstrong, historian of religions

KA: And the fact when we confront what we call the God or sacred or Nirvana we cannot know what we are talking about and this instead of being something perplexing should be a source of wonder and delight and transcendence because if you've got it all sown up there's no transcendence at all. So I think throughout the history of religion until about the late 17th century this principle of unknowing was recognised as absolutely foundational. (0'32)

SCRIPT

I have to say that when I left the church the idea that we are not capable of summing up what God is, was very frustrating. I wanted a notion of God that I could grasp, weigh up, and then either accept or reject. But since then I've come to realise that a concept of God I could grasp would not be worth the paper it was written on. It would be an idol.

To put it another way, God-talk – whether you believe God is a reality or a delusion – is so fascinating because it's the supreme case in which we humans have to deal with the limits of our knowledge, with doubt.

And it needn't always be frustrating, as a book written in the 14th century makes clear. It's called *The Cloud of Unknowing*. Karen Armstrong again.

KA: The Cloud of Unknowing is quite a joyous book, quite a jaunty book. When the author says to his disciple – are you going to ask me what God is and I have to tell you I don't know. There's a very cheery aspect to all this. Now he's very influenced by Denis the Areopagite in the 5th or 6th centuries and it's a sign of our spiritual state in the West that today we've never heard of him. He used to be in the West a huge authority and given almost the same authority as the Apostles or people who knew Jesus. And Denis makes it clear that we cannot know God but there's nothing wrong with this. (0'44)

SCRIPT

The author of The Cloud of Unknowing might be said to have a Socratic take on doubt. He was convinced it's humanly enriching. But this is arguably harder for us to accept now. So much of what shapes our lives today is built on what we understand – all the technologies that enhance our world and improve our lives. And yet, big questions remain, about God or at least meaning. Doubt is perhaps a more painful process for us as a result – leading to what other spiritual writers refer to as the dark night of the soul.

The Archbishop of Canterbury, Dr Rowan Williams.

RW: The great 16th century mystic St John of the Cross famously says that the journey towards God is a journey into deeper and deeper night, darkness and at the very darkest point that's the point where it turns towards dawn but you never quite know when that moment's coming.

MV: So what happens with that journey into darkness and into doubt?

RW: What happens is bit by bit recognising how much your own ideas about God or ideas about the good life are affected by your own desires, your own fantasies and a great deal of what's going on in the way St John of the Cross and others talk about it is that there's a stripping away of the fantasy, the projection of what's going on and somehow that is bringing you close to what is real in God and what is real is so elusive so difficult to put into words as with John of the Cross you can only do it in poetry or metaphor and well is that doubt or faith but underneath it is that fundamental commitment to growing. (1'03]

SCRIPT

What we're coming up against here is the tension between science and religion. It's one of the main culture wars of our times. As we've seen, both deal with doubt, just in different ways. However, the explanatory triumphs of science have knocked religious traditions off balance.

Karen Armstrong explains.

KA: I think in the West, Christianity took a downward turn once Newton claimed to have found a proof for God's existence. He looks at the solar system and says there must have been a God to start this off. Finally he says science is able to prove what the Bible has told us that there is an intelligent, wise being up there who is clearly and here I quote 'very well versed in mechanics and geometry'. This is obviously Newton himself, a larger version. But what he's done with the best of intentions was to reduce God to a scientific explanation. Now the great philosophers of the past, the great Christians of the past, would have been horrified by this idea. When the doctrine of Creation Out of Nothing was first evolved in the 4th century in the Greek speaking world, the conclusion was that creation could tell us nothing about God – creation out of nothing – ex nihilo – and therefore could have nothing in common with the God that is being itself. Thomas Aquinas takes you thought a lot of proofs and

then says but we don't know what it is we've proved. All we've proved the existence of a mystery. So the idea that the world could give us absolute certainty about God was a complete innovation and one that couldn't stand because in a few generations other scientists found that they could dispense with the supernatural explanation for the universe. And that wouldn't have mattered at all if the churches hadn't taken this on board and made Newton's God in the West central to their conception of the divine and made the Creation absolutely a key doctrine of Christian belief. (1'52)

SCRIPT

In fact, no less a figure than Socrates could be said to have seen this coming. He lived in a time of scientific innovation too, and argued that we need different kinds of understanding for different parts of life. To know how to build the Parthenon on top of the Acropolis, you need scientific knowledge. To know why the young Athenian democracy is valuable but fragile, you need politics and human psychology. To know what you are going to do with your life, you need to ask moral and/or religious questions.

The ancient Greeks apparently found it hard to hold onto these distinctions, and we seem to too. Dr Rowan Williams.

RW: There's been this hoary long running soap opera of the conflict between religion and science because people have bought into this model of hard knowledge, soft knowledge and real knowledge, fake knowledge and so forth and religion has both suffered from that and sometimes it's played along with it in certain kinds of religious fundamentalism. People have said 'well ok, you want hard knowledge, you want scientific knowledge, I'll give you scientific knowledge. We can prove from the fossil record that creation took 6 days' or whatever and a lot of religious people I think will rather bang their foreheads against the wall at that point and that's precisely not what this is about.' (0'41)

SCRIPT

The rise of Christian fundamentalism, especially in America, is a source of concern to many in mainstream churches but according to Karen Armstrong, who has studied fundamentalism across Judaism, Islam and Christianity, the increasingly hard line and aggressive tone that has been adopted by fundamentalists has much to do with the way conservative beliefs are ridiculed, especially in liberal media. The culture war is conducted in a reactionary way – as a zero-sum game that only one side can win. So how should one deal with groups who are absolutely certain that they are right.

KA: [Christian fundamentalists can't entertain the idea of doubt because what they are hoping for is a certainty which is unsustainable and unrealistic and was never offered by religion in fact. But liberals can be just as hard line. But] try to listen to the underlying message of some of these ideologies which when you unpick and decode them and listen to them carefully instead of just dismissing them as idiotic, reveal a fear and anxiety which no society can safely ignore. We're terribly good at talking about things in our society, we're not so good at listening. And dialogue is one of those words used constantly in politics and religion. The ideal is that if only we engage in dialogue peace will break out but it's not Socratic dialogue. It's a dialogue which means trying to bludgeon your opponent to accept your point of view. The Prophet Mohammad is said to have remarked that my people will be blessed when there is diversity of opinion among them. Nobody can have the last word about God. (1'09)

SCRIPT

There's a related issue to tease out here. For if fundamentalisms of all kinds are unappealing to many, they can easily still set the tone. When fundamentalism steals the headlines and stirs up anxiety, it's easy to get locked into a vicious spiral in which one certainty must be combated with another. The risk is not just that we no longer know how to trust doubt, but can't even imagine doing so.

I asked David Wilkinson whether he saw this as a problem in the religious sphere.

DW: I think there is something about a society which has been dominated by a destructive form of doubt and the uncertainty of post-modernity to say that we do want something which is certain and we can rely upon. I also think there is a sense of attraction to those who speak with confidence about their own experience. The church in the latter part of the 20th century in the UK has really lost its confidence and I think for, the churches which have this confidence in the message of Jesus but have a degree of humility in how they welcome people are ultimately the churches that will grow. (0'43)

SCRIPT

Karen Armstrong.

KA: People have been led to expect absolute, cast iron certainty and then they are quite naturally thrown when this seems to have fallen by the way side. I think too that one of the major problems as been that modern scholarship development, say biblical criticism, which goes on in universities and academic circles by committed Christians is not brought to people in the pews who are just encouraged to sing a few hymns and think that everything is as it was 300 years ago – it hasn't, it has moved on. So the faithful should be encouraged that when they hear a clergyman say 'I do not know about this' they should fall to their knees in gratitude. (0'50)

SEGUE

RW: I'm certainly not one of those who thinks that clergy should in the pulpit publicly agonise over what they're finding difficult. I don't think that's the point of preaching at all. (0'09)

SCRIPT

Dr Rowan Williams – explaining that to do doubt well, so that it doesn't overwhelm you, you need a framework within which to articulate your questions in a way that deepens them and doesn't destroy you.

RW: In preaching and teaching you set out the world in which believers are invited to live and you deal with some of the difficult questions more pastorally, more directly. But it is interesting that people will still look to the church and the church's leaders wanting a clear answer and this often strikes me as quite paradoxical. I've occasionally been in interviews like this were people have said 'Well, surely the church has a clear view on this?' And I want to say though I've very rarely had the courage to say 'if I gave you a clear view would you immediately then obey it or see it as obvious or see it as right? No you wouldn't you'd want to discuss it. And it wouldn't be any use at all my saying 'no point discussing it that's the truth.' In other words if it's to make any difference you have to work it through together, you have to build a relationship with allows you to work it through so that if there it has truth indeed there it has time to emerge and really to bring people along. (0'56)

SCRIPT

I finish this series where I began, alongside Durham Cathedral where I was once ordained, but this time I've taken refuge in a warm tea shop on Palace Green. I'm with Dana Delap and Matt Woodcock who are both to be ordained themselves later this year. They've had different but difficult journeys, grappling with issues of faith and doubt in the modern world. But, Dana and Matt will help set the tone with which we discuss these things in the future. So I asked them about the place of doubt in their lives.

D & M: I've never doubted the existence of God but I've doubted aspects of my faith and it's been a very, very long journey of the church saying wait you're not ready yet and here I am in my mid 40s and the church has said yes.

MV: So although it was an unpleasant experience, your faith in the church has sustained you too?

D: I'm not sure I have a great deal of faith in the church because the church is made up of people and people necessarily get things wrong in my theology and we screw up all the time. But I have faith in people's desire to try and get things right and even when the system doesn't work terribly well nevertheless God can work through the system.

MV: Matt do you want to tell us something about how you've got to this point, what's it been like?

MW: I'm still trying to come to terms that I am at this point but I found it quite difficult actually. I came to college with lots of this is definitely what I believe. This is a deal breaker, if I don't believe that there is no way I could be a Christian even. And been to college has just totally swept away a lot of what I thought was right and thought was a deal and I felt quite scared and like before I was sat on a rock and I felt as though I was sat or stood on sand and I would go back to my room and think what do I believe. So there was a process of wrestling and struggling I've had to do for the last 2 years but ultimately its been very, very helpful.

MV: do you think that will continue into the future or that this phase is over and you are certain once more?

MW: I hope it continues. I hope I can lead a church where we can ask questions and have difficult conversations and wrestle because if we don't and we think we are all sorted and that's that and black is white and white is black then I think that's when the church becomes rigid and that's we stop being relevant actually. (1'58)

SCRIPT

It's a hopeful thought on which to conclude, though not an easy one. During this series, it's been clear that doubt is part and parcel of what it is to be human, but it can be both a curse and a blessing. I've been told that an inability to be honest about uncertainty can damage our democracy, and that it contributed to the financial crisis of 2008. I've discovered that it's a tricky issue to deal with because the desire for certainty that can ruin us, is also at the heart of the scientific quest that has so demonstrably improved our lives.

At a personal level, it was doubt that took me away from the church, and whilst it seems obvious to me now that God can't be proven like a scientific theory – Socrates knew as much – my discussions have revealed something else. My former bishop, David Jenkins, put it this way: everyone needs a community of people with whom to share these struggles, with whom to strike a constructive balance.

But do doubt we must. And we're much more likely to flourish if we can befriend our limitations and love life's mysteries.
(I think this is just a little long I wonder if the second paragraph can come down a little)