

absoluteFact - A debate on science & Christianity
Monday, September 2, 2002

Phil Ng: Good afternoon everyone. Welcome to the next event in the absolute God series. We return today to the debate: science and Christianity. Specifically focused on the question are science and Christianity friends or foes? On behalf of everyone here I'd like to welcome back again Mr. Phillip Adams and Dr. William lane craig to continue the debate. The format today shall be as follows, each speaker shall speak for an opening period of twelve minutes followed by a period of moderated discussion for the next sixteen minutes followed by a closing summation speech of five minutes duration. Our moderator today is Andrew Katay, who is the chaplain of the university. The function of the moderator is to ensure a vigorous and courteous debate. One that allows each speaker to have their say, to keep the debate on the topic and towards that end we are going to limit each speakers chance to say things to a first period of ninety seconds. So to begin this debate on the question 'are science and Christianity friends or foes' I'd like to welcome – could you please join me in welcoming – Dr. William lane craig.

William lane craig: Good afternoon. I want to say what a privilege it is to be back again. I've had a great time this past week in Sydney. I've climbed the harbor bridge. I've been to the zoo and had my picture taken with a Koala. I've sailed on the James Craig out of the harbor so this has been a lot of fun, in addition to the fun of having debates, like the one this afternoon. Well today we've been invited to address the question: 'science and Christianity: friend or foe?' Back in eighteen ninety six, Andrew Dixon White published a book titled 'A history of the warfare of science with theology in Christendom'. Under White's influence, the metaphor of warfare to describe the relation between science and Christian faith came to be very widespread during the first half of the twentieth century. What's happened however in the second half of the twentieth century is that historians of science came to realize that this supposed history of warfare is a myth. Historians now recognize the indispensable role played by the Christian faith in the rise and development of modern science. Science you see is not something that comes naturally to mankind. As the science writer Warren Easley has emphasized, science is an invented cultural institution, which requires the right soil in able to flourish. Modern science did not arise in the orient or modern Africa but in western civilization. Why is this so? Its due to the unique contribution of the Christian faith to western culture. As Easley states, 'it is the Christian world which finally gave birth in a clear articulate fashion to the experimental method of science itself'. In contrast to eastern religions or folk religions, Christianity does not view the world as divine or indwelt by spirits but rather as the natural product of a transcendent creator who designed and bought it into being. The world is therefore a rational place which is open to exploration and discovery. So up until the late eighteen hundreds, scientists were typically Christian believers who saw no conflict between their science and their faith. Men like Kepler, Voigt, Maxwell, Faraday, Kelvin and others. Moreover philosophers of science during the second half of the twentieth century came to realize that the whole scientific enterprise is based on certain assumptions which cannot be proved scientifically but which are guaranteed by the Christian worldview. For example the laws of logic, the orderly nature of the external world, the reliability of our cognitive faculties for knowing the world, the validity of inductive reasoning and the objectivity of the moral values used in science. Science couldn't even exist without these assumptions and yet these assumptions cannot be proved scientifically. They are philosophical

assumption, which interestingly are part and parcel of a Christian worldview. Thus Christianity is and ally to science in that it can furnish a conceptual framework in which science can flourish. More than that the Christian religion historically did furnish the conceptual framework in which modern science was born and nurtured. Thus we are living in an era of renewed interest in the dialogue between science and Christian theology. The dialogue between science and Christianity has been so significant in our day that both Cambridge University and Oxford University have established chairs in science and theology. Now I say all of this just to counteract the cultural myth, a myth that is rooted in ignorance and is rejected by most scholars today, the myth that science and Christian faith are foes rather than friends in the quest for truth. Now in relating the Christian world view to our scientific understanding of the world, we first need to have a grasp of the broad outlines of the description of the world found in modern science. Therefore I have sketched on the little blue handouts that you have the ten steps which lay out the contours of the modern scientific view of the world as it has developed historically. Let me just read these off: Number one - the unification of celestial and terrestrial mechanics; Two - the existence of atomic species; Three - heat as random motion; Four - the unification of electricity, magnetism and optics; Five - the evolution of living species; Six - relativity theory; Seven - quantum theory; Eight - molecular biology; Nine - the quantum ladder; And ten – the expanding universe. Now important theological questions arise in several of these areas. Unfortunately these topics are so vast that we can't even begin to scratch then surface in this debate. So allow me to just mention four areas of significant recent interaction between Christian theology and science. Take for example point ten about the expanding universe. One of the fundamental principles of the Judo-Christian faith is that God created the universe from nothing a finite time ago. This teaching was repudiated by both ancient Greek philosophy and modern atheism. Then in nineteen twenty nine with the discovery of the expansion of the universe, this doctrine dramatically verified. Physicists John Barrow and Frank Tipler speaking of the beginning of the universe explain, and I quote, 'literally nothing existed before the singularity so if the universe originated at such a singularity we would truly have a creation 'ex nihilo' (that is pout of nothing). Thus against all expectation science verified this theological prediction.' A second scientific verification of a religious belief from the same area concerns the claim of the great monotheistic faiths that the world is the product of intelligent design. Scientist originally thought that whatever the original conditions were, eventually the universe would evolve a complex life forms that we se today. But during the last thirty years or so scientists have been stunned by the discovery of how complex and delicate a balance of initial conditions must be given in the beginning of the big bang in order for the universe to permit the origin and evolution of intelligent life. In fact the universe appears to have been incomprehensibly fine tuned form the moment of its inception for the production of intelligent life. This fine tuning cannot be plausibly explained as either due to chance or physical necessity and this leaves intelligent design as the most plausible explanation. Area three, sometimes science encounters metaphysical problems, which religion can help to solve. Area seven – quantum theory – furnishes a possible example and I'm referring here to the so called measurement problem in quantum physics. According to quantum physics subatomic particles do not have all of their properties intrinsically, but only in relation to a measuring apparatus. The problem is that the measuring apparatus itself can also be given a quantum physical description but it too then lacks certain properties like location and speed unless it is related to another measuring apparatus. But that apparatus can also be described by quantum physics and off we go on a viscous infinite regress. Unless there is someway to break the chain nothing would possess any of these properties which is observed. Some physicists have proposed

that the chain is broken when measured by human consciousness. It seems outrageous to say that the whole universe depends on human consciousness for its existence. Moreover human consciousness is linked to a physical substratum, the brain, which can be given a quantum physical description. So the question inevitably arises 'who observes the human observers?' what is needed here is a sort of transcendent cosmic observer who observes immediately the result of any measurement situation. This is exactly the sort of being that Christian theism believes in. thus the person who believes in God has the recourse need to solve the measurement problem plaguing quantum physics. Finally an example from area six: relativity theory. There are two ways to interpret the mathematics of special relativity. On Einstein's interpretation there is no absolute now in the world rather what is now is relative to different observers in motion. But on Lorenz's interpretation there is an absolute now in the world but we just can't be sure which events in the world are happening now because motion affects our measuring instruments. These two interpretations are empirically equivalent. There is no experiment you can perform to decide between them. I want to argue that if God exists the Lorenz was right. Here's my argument. Premise one; if God exists then God is in time. This is true because God is related to the world as cause to effect. But a cause must exist before or at the same time as its effect. So God must be in time. Premise two; if God is in time then a privileged observer exists. Since God transcends the world and is the cause of the existence of everything in the world his perspective on the world is the true perspective as a privileged observer. Three; if a privileged observer exists then an absolute now exists. Since God is such a privileged observer his now is privileged and thus there is an absolute now, just as Lorenz claimed. Now this is a very startling conclusion indeed. In this case a theological perspective can help to adjudicate between physically equivalent interpretations of a scientific theory. It's hard to imagine how Christianity could be more of a friend to science than that. There is so much more that deserves to be said on that, but these four cases furnish some examples of the fruitful interaction between science and Christianity. A continuation of a centuries old alliance in the search for truth that has been renewed in our generation..

Phillip Adams: I'd like to thank God for organizing the telecast on the ABC last night, a program on parallel universes. Did anyone see that? I was suggesting in our last encounter that the M-theory was going to explode Will's affection for science because it is absolutely that any Christian theology, no matter how much you bend and twist it. There it was last night being discussed by a number of scientists who might have in fact talked on the matter. What we have is a new theory which is gaining immense power and is regarded by many of the first rank of scientists as being the theory of everything. In other words the final equation that surpasses everything, even $E=mc^2$ and the other theorizing that can be done from the subatomic angle to the cosmological angle. Will has to have a creation. He relies very heavily on the big bang which he sees as analogous to Christian mythology. He talks about time beginning with a singularity. It now looks very like that's all wrong. M-theory does not transcend string theory it transcends subatomic particle theory and it comes up with immense membranes which collide, overlap and coil around each other. In their colliding and interaction like waves hitting each other, like Great Ocean waves that produce forces and vortexes beyond imagination. And out of that comes not one big bang, but millions and billions, infinity of big bangs going on for all eternity and preceded this moment in time by all eternity. In other words the big bang, on which we dwell, is simply one of billions and billions and billions of coexisting universes. So instead of just this incarnation we are one of many countless and the metaphor is used of this universe

being a bubble floating in an endless sea of other bubbles. Now in many of these other bubbles the mathematics he's just postulated don't work out and the laws of physics are different. They do not resolve in the happy way they do in our incarnation and they fail. In other words the bubbles pop. But what it argues is that everything that can happen has happened. It is happening as we speak. In other words there are universes beside us that we can't conceive of that are mathematically demonstrable, and in them John Howard is not the prime minister. In them the dinosaurs still ruled. In them there are anything that any science fiction writer or ourselves could imagine and beyond them. There are billions and billions of dead universes. There are billions and billions of universes in which civilizations of one form or another and intelligent life are forming, have formed and will form. Now this is not the paradigm of science that Will is discussing. It completely and utterly replaces it and if it's half right and it looks to be like that, the exhilaration being felt in the scientific community across the scientific spectrum of scientific investigation, is that model is out the window. We are now dealing with a universe that is infinitely more astonishing than anything we could imagine. It is not a universe I submit in which a crucified carpenter is a sufficient explanation. But let's just deal with this universe, let's just deal with this model, let's imagine it's the only one we have. Is Christianity science and do they get on like happy little vegemites? Well I don't know about that, I simply don't know about that, nor did Galileo. I should also like to protest that Christianity is crucial to science; a great deal of science has nothing to do with it. Einstein was not a Christian in fact many of the great scientists of the twentieth century and indeed two of the first are not Christians, they are Jews and some of them, believe it or not have been Muslim. The Greeks had a very good idea about the circulation of the blood and they had a pretty good idea about atoms, they had a pretty good idea about planets. That information was lost through the rise of Christianity. Not to be rediscovered for many centuries. The idea that the earth was round was postulated by the non-Christian librarian of Alexandria. I'm currently involved in a project to rebuild the great Alexandria library and I love the story about the librarian, who a couple of thousand years ago heard a stick shoved into the sand at Carmeche cast a shadow, while the same stick shoved into the sand at Alexandria did not. With that tiny bit of evidence he guessed the world must be round and he hired a guy to walk all the way from Alexandria to Carmeche and count his steps and out of that he calculated the size of the globe, and got it right. All of this was lost with the rise of Christianity not to be rediscovered for many years. In fact again and again Christianity was quite miffed by scientific discovery. I take the view that all knowledge involves pain. You learn about gravity when you fall out of a tree. You learn about heat when you burn your finger. You learn about injustice when your mum or dad, or the kids at school are cruel to you. Knowledge involves pain. I think that for Christianity science has given it a great deal of pain. I will not deny however that very often, great scientific work, or work that became known as scientific, natural philosophy, was being conducted by people of religious persuasion or monks. It seems to me that they were trying to validate what they read in the bible they were trying to demonstrate what their faith told them was true and again and again and again science proved them wrong. So once again knowledge involves pain. Imagine the pain that the Roman Catholic Church, when Galileo confirms the Copernican view that we are not at the center of our solar system, let alone the center of the universe. It's little wonder that Galileo's close friend up until then suddenly decides that this man is dangerous and promotes that the papacy shut him up by threat of death or lifetime imprisonment. That's only one of the hundreds of stories about the struggle of science with religion. Charles Darwin was studying in the clergy; he was going to be an Anglican priest. He wasn't particularly a believing one, but his father was anxious for Charles to be respectable

and he told hi that he'd get a lot of respect as an Anglican cleric. Later however he goes off on a memorable sea voyage and he comes back from that with the greatest scientific idea in history and I think that most scientists would acknowledge the most powerful of all scientific ideas is evolution. Not only was Darwin's Christian wife outraged by Charles's discovery and totally opposed to him publishing it but Darwin knew that the theory of evolution, about the ascent of man, or the descent of man, would in fact reek havoc in the church and he delayed publishing for much of his life. He only published it finally when an analogous theory produced in Australia and South East Asia was about to see the light of day. Then his theory was published and all hell breaks loose Darwin and the theory of evolution was roundly contemned by the church and viciously so and it still is in parts of America. As you know the great argument that still divides Christians in the US, let alone Christians and rationalist, humanists and agnostics and atheists. The great argument is over the truth of evolution. The scope for argument is generations ago but evolution is still condemned in state after state in the United States of America and books are banned or burned. It happened hear under the premiership of that great intellectual Joe Bjekle-Peterson. There was a very strong more to get evolution out of schools and replace it with creation science. So on that one area there is a great war raging between Christianity and science. Will may say that's not real Christianity. Tell that to the countless millions of Americans who still believe in a six day creation. One of my favorite stories about science and Christianity is when Benjamin Franklin who invented the public library and in fact the United States of America does some experiments with a kite. I'm sure you know about this. He discovers how lightening works. He then produces one of the very few products form science, which is the lightening conductor. That scientific discovery becomes a product that you can purchase. At that time in the United States of America lightening was knocking off on a regular and very expensive basis these three categories of the tallest buildings. They were churches, barns and town halls. When he demonstrates the efficacy of the lightening conductor, it instantly is a roaring success and the town halls and the barns of America are protected but the churches were slow to adopt it they thought that it was wrong and that if God wanted to protect them. He would protect them, and keep the churches safe. So for a couple of generations the one category of tall buildings that continued to burn down was because religious bigotry of the church. My dearest friend Barry Jones, who as many of you know is intelligent and was at one stage the minister for science. When I put it to Barry that there is this immense conflict between science, which Will acknowledge is based on observable, demonstrated rules, which is based on the rules of physics. When science is confronted as it was in my school when I was a kid in religious instruction classes which said; yes Jesus walked on water; yes he rose from the dead and was resurrected; yes he can do conjuring tricks with loads of fishes. When this was given to me I began to try and work out how one category of teaching was telling me that there were facts and laws and principles that make life on this earth possible, when in another class we were given this topsy-turvey, Alice in wonderland, Monty python world of the so called miracle. When I put this to Barry, Barry said, 'I know. I had the same conflict and I separate them into different lobes of my brain. I have a lobe for science and a lobe for faith.' Well I don't think that works to well and I'd like to quote to you a few words of Freeman J. Dyson an English born physicist and these days is professor of physics emeritus at Princeton university. He is a 'Christian scientist' not a 'Christian' scientist. This is what he says, 'I am a practicing Christian not a believing Christian. I am a member of a community that preserves an ancient heritage of great literature and great music, provides help and council for the young and old when they are in trouble and worships God in its own fashion.' In other words Dyson rejects all Christian theology and regards it as

total nonsense, but he admires the teachings of a man called Jesus and the common sense approach to complex human behavior. In that sense, yes a scientist can be a Christian, and a Christian can be a scientist. But Christianity and science are utterly different ways of looking at the world and they will never, ever be happy in their marriage. Thank you.

Katay: Well Ladies and Gentleman I think you will agree that we have a very interesting discussion, where there will be considerable clash between the two speakers. I Think I've got a few points that I've taken down and I'd like to draw out some of the thoughts of. I might begin by asking Dr. Craig; a reference was made by Mr. Adams to the television program last night with respect to M-theory. How do you respond to this challenge that would completely overthrow your view of science?

William lane craig: Well I think that Phillips response to this point illustrates the danger of relying on popular television shows and articles for your scientific knowledge. I saw the program last night, figuring that Phillip would watch it. I was amazed at what the program had to say. Phillip tells you that it has been mathematically demonstrable that these parallel universes exist, when in fact the truth is that M-theory is extremely speculative. The equations for the theory haven't been stated all yet, much less solves, is plagued with problems and moreover these theories do not necessarily obviate the need for a beginning of the universe. Its only models like the Steinhart-Turok model for the cyclic-ecc-pyrotic model that tries to avert the beginning of the universe. Now Wednesday night I'm going to be giving a talk where I deal with this in more length at St. barnabus church on Broadway. I invite you to come to that. Let me make this single point about the model. In September last year, Alexander Valenkin argued for it and Alan Booth, who interestingly enough was interviewed on the program last night, demonstrate that even the cyclic-ecc-pyrotic models cannot avoid the need for an initial singularity. They have been able to generalize their results for chaotic inflationary models to show that even these higher dimensional models must be past incomplete and therefore involve a beginning of the universe. So in fact if you know the scientific literature on coming up with these models, in fact haven't avoided the beginning of the universe predicted in the standard model.

Phillip Adams: I've been very polite to Will but if he wants to take the gloves off I'm more than willing to do so. You have no right to insult me for my alleged lack of scientific knowledge. I don't claim, although you do in your hollow act, to be up to speed. I'm sorry but all of this. I will remind you sir that I have done twelve television show and I have done...

Katay: can we keep to the topic?

Phillip Adams: No this is the topic. I've been insulted and I have the right to reply. So stop that. And the other thing is that if membrane theory is correct. You are absolutely and utterly wrong and you are pleading as you frequently do to outmoded notions. Let me remind you that last week he suggested that life is not going to occur all over the universe rather you expressed a shy hope that it wouldn't. You prefer the universe in which we are still 'the' species. You said that the majority of scientists hold that the probability of life occurring anywhere is so remote that we are alone. That is total and utter nonsense. He likes to tell fibs. I believe that they are against one of the laws of your church.

Katay: Dr. Craig, have you been telling Fibs?

William lane craig: now the way you tell if someone's telling fibs or not is by looking at who can document their sources. My source for that statement is from John Barrow and Frank Tippler in their book 'the entropic cosmological principle' in which they state that the consensus among evolutionary biologists today is that the chances of the existence of intelligent carbon based life of comparable information processing ability to homo sapiens is so remote that its unlikely to emerge on any other planet anywhere in the known universe. Now that is my source that I give for documentation. What is your source for your view?

Phillip Adams: Carl Sagan amongst others, he's an old friend of mine who recently died.

William lane craig: He was an astronomer, not an evolutionary biologist.

Phillip Adams: Carl Sagan is a scientist of considerable repute and he made the point that there are as many stars as there are grains of sand on a beach and the possibility of there not being planets the probability of life not evolving in the universe is simply not on. You can always find a book. At the weekend I was talking about nutty theories and I told about the book that Barry Jones left me. It's a wonderful book, it was that thick, almost as thick as that book you have there [points at the bible] and it proved beyond reasonable doubt that the city of troy was in fact Oxford University. It was a work of total and utter scholarly dedication. Barry said it was wrong. It was a remarkable book, but it was also totally and utterly wrong. So don't give me one book – that's the trouble with you character, its either the bible or the Koran – there's one book, and there you've found another. It is not the consensus of scientists at all. Science believes that life is inevitable and it is happening all over, from one corner of the universe to the other. As we sit here it's probably happening in billions of other universes as well. It's a much bigger cosmology than your dreams can come to terms with.

Katay: So you mentioned eminent scientists, perhaps one or two would help to give grounding for everyone to follow this up.

Phillip Adams: Look I don't come to this.. I bought one sheet of paper because I wanted to quote from the thing about Dyson. I don't think we need to have a discussion throwing books at each other and footnotes. This is not the place to do it. I would suggest to you that Paul Davies, someone who has in fact won a million dollars for his theology as well as his science would absolutely and utterly agree with me on this and I have never heard any significant scientist deny that proposition; that life is happening all over.

Katay: OK. We might leave that question, a little unresolved there and move onto the historical question. Dr. Craig opened with a comment about the historical relationship between the Christian faith and the rise of science. The question I wanted to ask Dr. Craig was; are you claiming that this is unique to a Christian worldview amongst the religions?

William lane craig: Yes. The remarkable thing about the rise of modern science is that it didn't take place in the orient, where we have very ancient civilization. It didn't occur in other countries. It arose in the cradle of western civilization and historians of science exploring this

have argued that this is largely because of the influence of the Christian religious theology upon science. In that it furnished that kind of conceptual framework that I spoke of in my first speech. Now contrary to what Phillip Adams says its hardly the case that Greek science was lost by Christianity. On the contrary it was Greek science that was preserved by early Christianity and I think that's the best way in which the Galileo case can be understood. Historians of science look at the Galileo case and it is not so much a conflict between science and religion as between the old Aristotelian paradigm, which had a geocentric cosmology and the new paradigm of Copernicus. And what happened was that the church unfortunately aligned itself with Greek science and the old Aristotelian paradigm. They got caught on the wrong side of the scientific revolution. So it wasn't so much a conflict of religion and science as it was Greek classical science and new science. Now the interesting thing about this is that historians argued that actually the church took a very rational approach, namely that Galileo and his colleagues hadn't really falsified Aristotelian science. So that at the time the church fortunately was actually taking a very rational approach to paradigm assessment. That the old paradigm had not been successfully discredited by Galileo and therefore they were entirely rational in remaining with it.

Katay: Phillip Adams, what are your thoughts on the rise of science then?

Phillip Adams: I would have thought that the only way that the great ideas for the Greek world survived five hundred years was because the Muslim world preserved them. The so called dark ages are well known. Its simply not on, that Christianity is crucial to science. The greatest contributions to science for the last two or three hundred years or certainly in the last century have tended to come from Jews, but there is also significant Egyptian science, even Hindu science and science in other cultures. That claim it is Christian is offensive to other faiths and I thought that we are now moving to an ecumenical era. I will not deny that Christendom does not deserve credit, as Dyson does. Christianity has in fact made a useful contribution. 'A member of a community that preserves great literature and great music, provides help and counsel for young an old etc.' of course, but to say that Christianity is crucial to science is to deny for example the immense contribution of Jewish scientists and the simple fact that every major scientist alive today would not agree with one iota of Christian theology, least of all the absolutely critical idea of physical resurrection. And I'd just like to ask Will whether he believes still in the physical resurrection of Jesus Christ?

Katay: We might come to that question in a moment I just want to press on with this question of...

Phillip Adams: It was a very big question!

Katay: we can do that. It's fine.

William lane craig: Of course I believe in the resurrection of Jesus from the dead. I believe that this is historical, rather than scientific question and historically I think the case for the resurrection of Jesus is remarkably good, nor do miracles contradict science because science describes what the natural world does given that there are no interfering factors. Natural laws are idealizations of what will happen if there are no interfering natural or supernatural interfering factors. So that the presence of miracles in the world, Gods working of miracles, doesn't in any

way violate or contradict scientific law. Those laws still remain valid. I do want to come back to my point of Christianity giving birth to the conceptual framework of modern science, because I don't want you to misunderstand my point. I'm not claiming that individual scientists need to be Christians that would be silly. Obviously Einstein and many other atheistic scientists are fine scientists. What I'm talking about are those philosophical presuppositions like the validity of inductive reasoning, the orderly nature of the external world, the validity of the laws of logic, the objectivity of the moral values used in reporting science. These are philosophical assumptions that cannot be proved by science yet they are inherent to the scientific enterprise. Even atheist scientists have to use these presuppositions. So my point is the Christian worldview furnished a conceptual framework which was any ally to science in making science as an institution possible. It can do that, and historically it did do that.

Katay: the miracles Question was the one that I wanted to hear back on. Mr. Adams made the comment that one way of handling that question is to put it into different lobes of your brain, can I ask you Dr. Craig; is that what you do?

William lane craig: No, not at all. A very good book on the question of miracles is a book by Richard Swinburn who is the professor at Oxford University called 'the concept of miracle'. Swinburn points out is that miracles are not at all something that is impossible in light of modern science. Modern science describes the natural capacities and propensities of physical substances in the world. So that it would be a natural law that an object dropped from a certain height would fall to the earth because of the law of gravity. That law is violated when I hold the object in the air, or I God were to levitate the object in the air. Those laws have a built in *ceteris paribus* conditions that is to say all things being equal. This is what will happen with all things being equal, if there are no interfering natural or supernatural factors. In a miracle if God chooses to do something he doesn't violate the natural law, because the natural law describes what will happen in the absence of such a natural or supernatural intervention. So I don't see any contradiction at all between the laws of nature and science and the occurrence of miracles. It all depends on whether you believe in God. If you believe that there is a God who has created the world, called the big bang into existence and as Peter Sleightsac has said, 'resurrection would be child's play for such a being'.

Katay: So Mr. Adams, do you believe in the resurrection of Jesus from the dead bodily?

Phillip Adams: no, nor do I believe that Will or anyone of your faith can feed a small multitude with a couple of sardines and bread rolls. You can't have it both ways Will. You can't luxuriate in your muddled scientific references and revert to the occasional scientist or quasi-scientist that may agree with you while at the same time telling me that its possible to cure diseases as horrendous as leprosy or to raise up sundry people who are dead or in fact to walk on water. One of my favorite images on the Goon show is the famous Emperor arriving in London on a holiday surrounded by his own personal blizzard. Calling out 'Mush, Mush' to his Huskies as he is driving through London as snow is falling on him. You need a Goon show proposition to make walking on water work because God would have to suspend the laws of gravity. Does he just do it on that bit of water on which Jesus is walking? If he did the oceans of the world would have risen and wandered off into space. Either you believe in the laws of physics that God ordained in your big bang or you don't. you cant sort of muddle and fuddle your way through it. They are

completely different worldviews and you know it. I admire your struggle to bring them together. It's a poignant struggle, but you're not up to the task as nobody is.

Katay: Do you feel muddled and fuddled by that?

William lane craig: Well no, and Phillip really respond to my point. I mean there's nothing for me to respond to here. It's just these emotional enunciations. I indicated that natural laws describe what will happen given no natural or supernatural factors, so they have these ceteris paribus implicit clauses in them. There is no contradiction between natural law and God's doing a miracle. The whole question is; do you believe in God? If you don't believe in God, then I agree; miracles are impossible. But if there is a being that transcends space and time, brought the universe into existence, sustains it in reality, then its easy for such a being to bring about acts in the world that the objects in the world don't have the causal capacity themselves to produce.

Katay: Time has rushed on and I thank both speakers for their interaction with each other. We'll now hear their closing summations.

William lane craig: That went by all too quickly. There is so much more that one would like to talk about. What I think that we've been able to see in the first place is that Christianity is a friend of science. In the first place historically which furnished the conceptual framework so modern science could arise and flourish. Secondly it is a friend of science because it guarantees those philosophical propositions without which science could not exist. Then I looked at four points of contact in the current debate or dialogue between science and theology. First the origin of the universe and I indicated that the view that ninety five percent of cosmologists hold to today, including Paul Davies, who's been mentioned is that the universe is finite in the past, its finite in space and time. It came into existence and attempts to avert this through speculative models based on M-theory have recently been shown to imply the very same beginning of the universe as predicted in the standard model and this verifies the Christian prediction that the universe was not eternal, but that it had a beginning. Secondly I looked at the fine tuning of the universe and argued that this is directly in line with the Judeo-Christian view that the universe was designed. It certainly looks designed; it is incomprehensibly fine tuned for the existence and evolution of life and I think the best explanation for that is that it looks designed because it was. earlier I talked about the quantum measurement problems plaguing quantum physics and by having a cosmic observer you can break that chain of observers and thereby have a quantum measurement situations. Finally relativity theory I argued that if God exists then the Lorenzian interpretation of relativity is probably correct. In all of these ways science and theology interact. That's why there is today a flourishing dialogue going on between science and theology. Organizations like the European society for the study of science and theology or the Berkeley based center for theology in the natural sciences or the British organization of the science and religion forum. There is a flourishing dialogue going on between these two today and these are not at all opposed to each other. In terms of Mr. Adams responses in regard to evolution; what you would have to show there is that the Christian faith is incompatible with evolution. I don't think he's ever done it. He would have to be on the side of the six day creationist to say the only legitimate interpretation of genesis one is six day creation. I think it would be odd for Phillip to be siding with the creationists on this story. Ever since Augustine and the early rabbi's Christian church fathers and Jewish rabbi's have interpreted genesis one in indicate long periods of time

rather than six consecutive periods of twenty four hours or consecutive days. So that's not a retreat forced by modern science. Augustine and the rabbi's held that view long before modern science and as for what he said about books being burned in state after state in the united states and laws against evolution; this is absolute nonsense. As an American I can say that is simply not true. If this is the kind of credibility of the information Phillip is getting then I'm just not going to believe anything he reports without a footnote. As for miracles I think we've seen it all depends on whether or not you believe in God. The question is; do you have good reasons to think that God exists. I think there are good reasons to think that a creator and designer of the universe exist. I laid those reasons out in my Tuesday night debate with Peter Schlezak (sp?) if you haven't heard that debate I'd encourage you to ask someone with the organization here to get a tape of it because I think that would give you a good demonstration for thinking that is probable that we are not alone, that there is a creator and designer of the universe. I don't see any conflict between religion and science that Phil has bought up today. The only one proposed is Darwinism and that presupposes a rather wooden view of genesis chapter one that I'm not personally committed to by any means. In conclusion I think we can be happy that Christianity and science have been historically allies in the search for truth that they continue to be allies in the search for truth and that in our day and age there is such a renewed and flourishing dialogue between these two areas going on.

Phillip Adams: I think you should begin each of your statements with 'once upon a time' and 'happily ever after' the other day, Stephen J Gould and I, were among hundreds who worked ceaselessly for a long time to keep the teaching of so called creation science out of schools and in some states of America. It is not in fact because of progressive thinkers like you, it is because of the absolute battle by scientific colleagues of mine principally in organizations, which I helped to found, called the committee for scientific investigation of the claims of the paranormal. As to the idea that science and religion are now meeting on campuses around the world; yes there are a number of trendy organizations set up for that purpose and I'm going to talk briefly about one of them. Another great equal of mine and environmental scholar, Richard Dawkins, has called for the expulsion of these courses from any university along with the study of theology itself. My friend Freeman J. Dyson, I mentioned before, was writing about another Christian scientist, sir John Polkinghorn. Polkinghorn was a well known physicist who spent twenty years doing research in theoretical particle physics and then switched to theology. He was ordained as an Anglican priest and spent the past twenty years serving as a mediator between the church and the academic community. Doing God's work along the lines outlined by you. His latest book, and I've written about it on a number of occasions is called 'the God of hope and the end of the world' and it comes out of a program to study scientifically and theologically hypothesis about the end of our world and indeed the end of the universe. Now he describes heaven with the detail that you might expect in a lonely planet guide. The new creation will not be a timeless void of eternity, but will be a temporal world whose character is everlasting it will contain music, a specifically temporal form of art and it will also contain animals at the last meeting we were talking about your cat and how you wanted to take it to heaven with you. Well according to Polkinghorn there are all sorts of creatures up there. It's a bit like Noah's ark, quote 'we scarcely need suppose there would be dinosaurs there let alone all the vast multitudes of bacteria that constitute so large a proportion of the biomass. Throughout the history of terrestrial life each will each have its own future in heaven.' Many people and the respectable animals would never the less consider it permissible to become individuals in order to preserve this earth. Perhaps there

will be lions there, but not every lion that ever lived. He goes on to describe heaven in which every life form on earth is represented. He says in his role as theologian or scientist or idiot? It's not entirely clear. I found it interesting because I'd read a piece a little earlier which speculated about heaven; what would you eat there, would you have sex, would you need a fleshy buttocks in heaven, as one does on earth to cushion the force of gravity? Clearly pointed questions. So here's a guy who is at the front rank of bridge building between science and religion and the scientific response to Polkinghorn is nothing short of, to say the least, a raspberry. Dyson's speculations are so much grander than Polkinghorn's. To imagine that intelligent life forms exist, if they exist are there ways of thinking their aims and purposes will be intelligible to us? If they do not exist and organisms travel up from this planet to bring the universe to life, who knows the variety of forms and mental capacities that may evolve from a species that spreads out over the universe and diversifies for billions of years. Science imposes far bigger questions than religion. Religion never wanted to change anything. Religion wanted to believe in a world with a physical solid heaven, literally up there and hell down there, which Mr. Polkinghorn tells us that hell is gray, not red. I'm very grateful for that. You have two modalities; you have the constant thrusting and questing in science, not just Christian, all science, always testing always hypothesizing and giving up when the idea is wrong and going on versus religion, all religion, not just one, Christianity, which is about the preservation of dogma, which is about the preservation of rules, which is about keeping things the way they are. Nothing could be more difficult than science and Christianity, nothing.