

Ian Barbour

“God and Evolution”

Episode 1 of The Advent of Evolutionary Christianity

EvolutionaryChristianity.com



Ian Barbour is the elder statesman in the science and religion movement. He was awarded the Templeton Prize in 1999 and is the author of *Myths, Models, and Paradigms*; *Religion in an Age of Science*; *When Science Meets Religion*; and *Nature, Human Nature, and God*.

HIGHLIGHTS

Ian Barbour is the “grandfather” of academic and theological study of the ways in which the realm of science and the realm of faith can and do interact. **His 1966 groundbreaking book, *Issues in Science and Religion*, is widely credited as creating the modern science and religion conversation.** Early on he developed what has come to be called the Four Types Model of classifying the ways in which science and religion relate or collide with one another in religious and secular institutions, as well as in the minds of individuals. The basic categories are: **Conflict, Independence, Dialogue, and Integration.**

This episode is the only one in this series that appreciatively looks at how the discoveries in science (especially **primatology**: the study of monkeys and other primates) can help erode the ancient walls of disconnection (independence) between science and religion—that is, Why it is that human cultures everywhere have and value moral codes. Evidence has revealed that **morality (beginning with empathy) was bequeathed to us by our great ape and earlier primate ancestors**; it is not strictly a product of religious teachings. This dialogue is also one of several in this series that asserts that one can no longer point to the Bible for explanations of how **death** came into the world. Modern science clearly shows, as Barbour puts it, that “death was around long before human beings were.”

SUGGESTED AUDIENCES

This audio was chosen as “Episode 1” for the same reason that we highly recommend all college-level classroom and scholarly discussion groups to designate it as their first

listening/reading: This interview is the best and most objective introduction in this conversation series to the major issues in the religion-and-science dialogue. More, it offers a four-types framework for classifying responses and attitudes in this realm—and Barbour’s model is referenced and used by many other speakers in this series. The speaker himself is widely honored as the first academician to introduce religion-and-science as an accepted program for academic research, teaching, and study. Accordingly, Ian Barbour steps into the role of elder statesman of the entire arena, putting his own personal preferences in the background, while striving to educate listeners and to convey the excitement and value of joining the exploration.

Evangelical scholars in this series, as well as the most theologically progressive, highly recommend this particular audio as an introductory lesson. This episode is well within the intellectual grasp of any church “book club” that is accustomed to reading and discussing serious nonfiction.

BLOG COMMENT

Shirley says:

Ian Barbour’s background is fascinating. Having the experience that he has, and hearing about his contributions, makes him an ideal candidate to have started these discussions. There is no question that this conversation needed to take place, and who better than a person well trained in both domains. Hearing about his own journey in trying to consolidate these two areas is a great way to introduce this series. The intention behind this series is commendable and inspiring...The idea that science doesn’t solve everything, and neither does religion, and that neither can answer every question makes it clear that these two areas need and absolutely complement each other. Thank you for making that so very clear. Really enjoyed this conversation!

KEYWORD TOPICS

science-and-religion (as an academic subject), **“Four Types Model”** (of science-and-religion conflict), **Richard Dawkins**, **death** (biblically as punishment for sin), **Susan Haack**, **scientism**, **materialism**, **postmodernism** (cynicism of science), **collective intelligence** (science as example of), **Loyal Rue**, **interpretation** (as human necessity), **design** (as static creation or within evolutionary process), **Stephen Jay Gould**, **trajectory of evolution** (toward greater complexity and consciousness), **intelligent design movement** (criticism of), **Michael Behe**, **emergence** (as natural process leading to greater complexity and novelty), **nested emergence**, **reductionism** (“emergence” as argument against), **causality** (importance of “top-down”), **systems theory**, **holistic view**, **complexity theory**, **explanatory pluralism**, **human uniqueness**, **symbolic language** (as unique to humans), **nature** (traditionally regarded as stage for human drama and later as resource), **Frans de Waal**, **chimpanzees** (as instinctively

expressing empathy), **empathy** (as evolved prior to humans), **stardust** (atoms as created within stars), **atoms** (genesis of within stars), **Thomas Berry**, **God** (the need to reformulate our concepts of), **God** (as primarily a loving God), **God** (personal and impersonal models of), **transcendence** (as traditional characteristic of God that needs to be less emphasized), **immanence** (as characteristic of God that needs more emphasis), **love** (as prime characteristic of God), **feminist theologians** (seeing God as empowerment, not power over), **process theology**, **Alfred North Whitehead**, **Charles Hartshorne**, **John Cobb**, **evil** (problem of), **omnipotence** (of God as problematic for explaining evil), **Ursula Goodenough**, **Terry Deacon**, **deep-time eyes**

BIOGRAPHY

Ian Barbour is an American scholar on the relationship between science and religion. He is credited with creating the contemporary field of science and religion. He received his B.Sc. in physics from Swarthmore College, his M.Sc. in physics from Duke University in 1946, and a Ph.D. in physics from the University of Chicago in 1950. He earned a B. Div. in 1956 from Yale University's Divinity School. Barbour taught for many years at Carleton College, with appointments as professor of religion and as Winifred and Atherton Bean Professor Emeritus of Science, Technology and Society. He has held emeritus honors there since 1986.

In his 1966 groundbreaking book, *Issues in Science and Religion*, Barbour laid out a series of well-crafted arguments involving issues in epistemology, language, and methodology. Together, these arguments provided a “bridge” between science and religion. He has explored these arguments in detail since then.

From the outset, Barbour used the term “critical realism” to stand for the specific set of arguments he first developed in 1966. Most scholars in the field have adopted the term. Barbour gave the Gifford Lectures from 1989 – 1991 at the University of Aberdeen. These lectures led to the book, *Religion in an Age of Science*. In 1999 he was awarded the Templeton Prize for Progress in Religion, in recognition of his efforts to create a dialogue between the worlds of science and religion.

SUPPLEMENTARY VIDEOS

For **VIDEOS** of interviews with Ian Barbour conducted by Robert Kuhn for PBS, go to <http://closetotruth.com> and in the Search box on the top right, type Ian Barbour. An hour-long lecture by Barbour in 2009 is at: <http://vimeo.com/9837687>

SUPPLEMENTARY WEBPAGE

Listener comments to this audio can be found (and new ones added) at: <http://evolutionarychristianity.com/blog/general/ian-barbour-granddaddy-of-this-movement/>

QUESTIONS FOR REFLECTION AND DISCUSSION

NOTE: If this episode is the first conversation that your group is exploring, you may wish to spend your entire group discussion time on **Question 1, “The Four Types Model.”** This model is crucial to understand for all the episodes, and the question section for this topic encourages participants to speak personally about their own approach to the science-and-religion issue, and also of any difficulties in talking about this topic with friends and family.

If you have more time, **Question 10 (God’s transcendence v. immanence)** would also be excellent for the sharing of personal experience, without requiring much up-front explanation.

1. **Four Types Model: Conflict, Independence, Dialogue, Integration.** One of Ian Barbour’s great contributions to the science-and-religion issue is his early introduction of, what has come to be called, “the four types model.” He identified a simple classification system of the four basic ways that individuals or institutions navigate both science and religion. The four ways are: Conflict, Independence, Dialogue, and Integration. Barbour explains the first of the “four types”, the **Conflict** approach to the science-and-religion issues, in this way:

The most prominent [of the four types] in the media is the *conflict model*. You get the atheistic scientists on one side, who believe in evolution but not God. In the opposite extreme, you get the fundamentalist Christians, who believe in God but not evolution.

Next, he talks about the **Independence** approach:

One way to avoid the conflict is to put [science and religion] into completely separate boxes, and say they’re not related to each other at all. Science and religion are totally *independent*. **One asks how questions, about the details of the natural process. The other asks why questions:** What is the ultimate purpose of it all? What is the meaning of the process?

And that’s a good starting point, because at least it gets you out of the conflict. If they’re playing different ballgames, playing on different playing fields, so to speak, they’re independent of each other. And it’s a violation of the rules if you try to play baseball by football rules or football by baseball rules; these are just different games. I think that’s a good starting point because it avoids conflict —but the price is there’s no interaction between the two.

After “Conflict” and “Independence”, he explains the **Dialogue** approach, saying in part that this approach “requires some comparison of the methods.” There, the participants will find “some similarities,” but also “some points where there are legitimate challenges to religion.”

Next, he talks about the **Integration** approach, and here he expresses his own preference for this fourth and final approach. He says, “I don’t want to stop there [with dialogue], because there are important things to learn from science that the theologian needs to learn.” Barbour gives a few examples of how to *integrate*” and understanding of science with one’s religion, and then concludes,

I don't expect science to *prove* the existence God, but I do think science can teach a lot of important aspects — particularly this 4 billion years of Earth history and 14 billion years of universe history. I mean that's an exciting story!

Question 1A: *Where do you personally fit in the four types model? Do you see religion and science in CONFLICT—destined to forever battle it out, with perhaps winner takes all? Or do you regard science and religion as INDEPENDENT—as so distinctly different that there is no overlap, and thus there needn't be communication between them? Or are you most comfortable with the DIALOGUE model—the two may be very different in some ways and alike in others, but they should definitely be in respectful communication with one another? Finally, have you, perhaps, found ways to INTEGRATE science and religion—and, if you have, is there an institution or program that helps you with this, or is it your own personal creation?*

Question 1B: *Now let's consider the worldviews of the people who are in your life the most: your close family members, your friends and neighbors, your co-workers. Do you have a sense of which of the four they speak from? And if some stand in a different category type than you do, does the difference pose problems for your relationship? Overall, does the pervasiveness of the conflict model of science and religion manifest in negative ways in your own closest relationships?*

2. **Scientists must separate science from philosophy.** Ian Barbour says,

You get people like **Richard Dawkins**, the Oxford biologist who says science proves that there is no God. He argues that the universe has no purpose that can be based on science. I welcome what Dawkins [has to say] when he makes it clear that if he's saying "matter is all there is," then **that's a philosophical statement, not a scientific one.** You don't get any article in *Physics Review* that says QED, there is no God or there is no purpose. So I welcome a materialist [into the dialogue] as long as it's clear that when he says there's nothing but matter, that's a philosophical statement.

Question 2: *What is your response to Ian Barbour's vision of how **nontheistic scientists**, such as Richard Dawkins, would ideally enter the dialogue on issues in science and religion?*

3. **Theologians can learn from science.** Ian Barbour says, "There are important things to learn from science that the theologians need to learn." As an example, he gives the biblical story of how **death** came into the world as a result of **Adam's sin**, and thus as a judgment from God. Yet modern science clearly shows, as Ian puts it, that "we know that death was around long before human beings were." Ian says,

I think the whole evolutionary picture makes **the problem of evil and suffering and death** a little more tractable. You have to have death if you're going to have room for new individuals, new species to emerge. So that far from being a punishment for sin, death is a necessary part of the

process. And suffering, too, [is necessary] because there's bound to be conflicts if there are real centers of power [outside of God].

Question 3: *If there are important things for theologians to learn from science, such as the example that Ian Barbour gave, **is there a danger of a slippery slope?** What do you see as the relationship between biblical revelation and evidential revelation? Should the Bible always be overruled, so to speak, if settled science is clearly in conflict with particular stories and passages? And if we agree that some passages are out of sync with today's knowledge, then how can we discern exactly where truth resides? Is truth sometimes in the Bible, and then sometimes not? And what values and tools should we be using to make such distinctions anyway? If those values do not come from the Bible itself, then where do they come?*

4. **Scientism / Pessimism.** On the matter of scientism, Ian Barbour says,

I take **scientism to be the view that science is the only method of understanding reality.** It's more than science because it is saying science is the exclusive path to understanding, and that is not itself a scientific statement but a **philosophical interpretation.** I think that's a good way to put it. Cynicism is one outcome for many scientists who think the world is purposeless. **I don't think all materialists are necessarily cynics, but some certainly are; some see a purposeless universe and think that any values we have, we have to make up for ourselves.** They see some goals that are important in life. But for many it does lead to either a kind of either a stoic toughing it out—a courage to exist, despite despair—or it leads to a more pessimistic view.

We mustn't blame scientists too much because I think I'm very dedicated to science, as you are, but *scientism* is a little bit going beyond what science itself says. The **limits of science**, for me, are beautifully illustrated by a little **parable** told by the physicist [Arthur] Eddington. The parable is about a fisherman with a net with one-inch mesh. After repeated trolling he says, "There are no fish in the seas smaller than one inch." So I want to **both respect the power of science—which is immense—but also its limitation if it becomes sort of a total philosophy of life.**

Question 4A: *Where do you reside on **the spectrum** between religious faith beyond scientific understanding, and science as one's entire (or best) understanding of reality?*

Question 4B: *Do you know, or have you read of, examples of scientists (or nonscientists, for that matter) who build their philosophies around only that which can be known through science, and yet **who have not fallen into cynicism or pessimism** about the meaning of life? Are there examples of non-religious people who look squarely at the science, yet who interpret the world in ways that provide them meaning and fulfillment?*

Question 4C: *Do you know people whose philosophies are traditionally religious, yet who fail to find in their faith the tools and perspectives that can give them a fulfilling sense of meaning, hope, and purpose in life?*

5. **Science as “collective intelligence.”** The subtitle of this whole series is, “Conversations at the Leading Edge of Faith.” So the host, Michael **Dowd**, will occasionally introduce and explain his own views. In this dialogue, at one point Dowd speaks of **science as a kind of “collective intelligence” that has the advantage of being “worldwide” and “self-correcting.”** But he doesn’t use these very definite advantages of science to push for a kind of scientism. He goes on to say that humans not only engage in “**meaning-making**” but that we can’t help doing so. We are always interpreting. So Dowd says, “**Science can give us descriptions of reality, but the idea that those descriptions then necessarily lead to a meaningless universe is itself an interpretation.**” Dowd will introduce these and similar ideas in many of the later interviews, so you will probably encounter them again. But for now,

Question 5: *What is your response to Dowd’s discussion of **the advantages and limitations of science**? What, if anything, did you find helpful in how you, yourself, think about or engage the science-and-religion issue?*

6. **Emergence, the trajectory of evolution, and complexity theory.** Ian Barbour and Michael Dowd discuss some of the newest understandings of science in which “**design**” is **understood to emerge naturally within the process of evolution.** Traditional understandings of science in which the aim is to “reduce” all phenomena to a lower level of understanding—for example, to explain all of biology in terms of chemistry, and then chemistry in terms of physics—have been superseded by a sense that **the history of the universe indicates that new and novel forms keep emerging over time.** Moreover, these new forms, such as the drive to survive (which all life forms have) and the self-awareness that we humans have, cannot be explained just by looking at the cellular level of neurons or the chemical level of neural transmitters.

Ian Barbour also talks about the new understandings that the evolutionary process itself has a **trajectory**, or a direction. That direction leads to **greater complexity** and interdependence over time, and **greater consciousness.** He neglected to mention greater diversity, but you can consider that part of the trajectory of evolution, too.

Question 6: *Have you already heard about these new understandings of mainstream science? What, if anything, do you find **hopeful or inspiring** about this now widely accepted view of, what is being called, “the trajectory of big history”?*

7. **Human empathy/morality on a continuum with other mammals.** Ian Barbour sets forth the classical Christian views of human uniqueness, and how nature, in turn, was regarded as a stage on which the human drama played out. While suggesting that our capacity for symbolic language may indeed set us apart from other life forms, Barbour seems quite excited about recent scientific discoveries that suggest **we are not unique in possessing a sense of**

morality. Other mammalian life forms, especially chimpanzees, have been seen to possess empathy and to behave in ways that we wrongly had assumed were unique to our own species.

Question 7: *As scientists discover more about how other animals behave in ways that exhibit empathy, indeed morality, do you find this continuity of the human species with the rest of life as threatening, or is it something you welcome learning about? That is, if we must accept that the gift of morality is not a uniquely human capacity, then who ARE we? If we, in fact have a lot more in common with the rest of nature than previous cultures could possibly have known, then how might we interpret our special relationship to God? **Overall, do you welcome learning that we are not so much above nature as embedded within it—and a unique expression of it?***

8. **Humans as the Universe become conscious of itself.** Michael Dowd mentions excitedly that he interprets the role of humanity as “the Universe become conscious of itself.” Similarly, Ian Barbour talks excitedly about how the atoms in our bodies and all around us were created inside ancient stars—and thus, that we are made of “stardust.” Both of those understandings were derived from 20th century discoveries in science. These discoveries/revelations have been interpreted by Dowd, Barbour, and many others in ways deliberately chosen to inspire and to help our species feel connected and important in the evolutionary process.

Question 8: *Have you heard either of those interpretations before? Have you heard it said that **humans are “the Universe become aware of itself and its own story”**? Have you heard that “we are made of **stardust**”? Whether you have or not, do either or both of these two concepts appeal to you? Do they give you a bigger sense of who you really are and your relationship to the whole universe? Say more.*

9. **Poetry and reasoned argument.** Ian Barbour says,

I think that the evolution story that **Thomas Berry** presents is a very exciting one. He certainly spent most of his life broadening it and spreading it abroad. Because I think it does have to be presented in an exciting way: often it’s through **poetry**, as well as through **reasoned argument**. I think we need to do much more—in my case, in the Christian church—to express that side.

Question 9: *For taking in new ideas, where does the balance reside within you? Do you prefer to encounter new information and insights in the form more of “poetry” or as straightforward “reasoned argument”?*

10. **God's immanence v. transcendence.** Both Ian Barbour and Michael Dowd agree that traditional Christianity's view of God as supremely *transcendent*—that is, up there and out there, not here—needs to be tempered by a growing sense of God's *immanence*, meaning that God can be experienced here and now and all around us.

Question 10: *How do you think about or experience God? Is God more **transcendent**, more removed? Or is God closer and accessible, which is what the word "**immanence**" means? And how, if at all, has your sense of God on this continuum between transcendence and immanence shifted for you over the course of your life?*

11. **God's omnipotence and the problem of evil.** Ian Barbour says,

I think . . . that we need to **stress God's love more than God's power**. This ages-old problem of how you fit together an **omnipotent God and the evil** in the world and a loving God—and I would rather give ground on the omnipotence than the love. I think the tradition has had too much a model of **God as the king** who intervenes unilaterally from outside—a God of coercion, not a God of persuasion. This is where I've learned from the **feminist theologians** that power can be empowerment from within, not control from without.

Question 11: *Do you agree with Ian Barbour: Does the existence of evil in the world clash with a sense that God is all-powerful? And if it does, what do you think of Ian Barbour's solution of emphasizing God's **love** more than God's **power** (i.e., that God is more involved in "empowering" us than in having power over us)?*

12. **Emotions as well as rationality.** Ian Barbour talks about a change in scientific views. It used to be accepted that **rationality** was the most important human characteristic; it was what set us apart from other creatures. Now it is recognized that the **emotions** we share with many other of the higher mammals are not only used in decision-making but that we cannot even make good decisions without them! Pure rationality leads to bad decisions and also to *rationalized* decisions, to self-deception—that is, decisions in which the underlying emotional drivers remain hidden and unexamined (but rational arguments are made nonetheless that support the conclusions the emotions have already made). He says,

Both scientists and theologians today are giving more emphasis to the role of emotions in human life and also in higher animal forms. **It used to be that we thought of emotions as hindering our rational processes** and something to be put to one side. Scientists used to say that, too. But in the neurobiology field, it's clear that there are important emotions that are cognitively significant. They help your understanding.

[Antonio] Damasio's work, for example, showed there are at least two tracks in the brain: quick action (largely emotional from some of the lower brain centers), and slower but more rational articulation of reasons and decisions —and you need them both. The emotions can be very

important in evolutionary survival. The **empathy within the emotions**, which we do have some control over (but less than we think, probably), that we can redirect them towards other ends. And again, I think, the theologians have said that the image of God in man in the *Genesis* verse in chapter 1 and 2: some people have thought, well, it's human rationality that mirrors God. Others have said, "No, it's **human relationality and human love** that are much more important than just rationality." That is, we're not just rational creatures.

So I do think that recovering the importance of emotions—not just as sort of an add-on that clouds the water, though obviously sometimes emotions can lead to violence and can lead you to things that you later regret. But, nevertheless, emotions can be a very powerful force. And, again, in religion you need to express those emotions.

Question 12: *With science now valuing emotions and feelings, in addition to rationality, as driving forces in fully human behavior, does this make you more receptive to what science might be able to teach us about living the good life? Or does the fact that scientific norms can change in tandem with new discoveries make you uneasy?*

13. **The need for “inspiring interpretations.”** Near the end of this interview, host Michael Dowd floats his hypothesis about what important values may be held in common by the diverse speakers that he would later be interviewing in the rest of the series. He posits two commonalities: (1) “evidential **deep-time eyes**” and (2) “a **global heart** and commitment.” Barbour responds with a little hesitancy—especially around the possibility that Dowd’s framing of the matter might over-emphasize an “impersonal” concept of God, to the detriment of more personal and comforting understandings. Ian Barbour says,

I think your “**evidence based**” [description of what we hold in common] is sound, but it also needs to recognize that **interpretative frameworks** are important and are not fully determined by the evidence. . . . I’m all for your project as long as it realizes that we do have some real differences and that we need diverse models. I would say, particularly, that **we need both personal and impersonal models of God**. Most traditions have those two models. We need to talk about the creative process but in a way that leaves room for some of the more comforting aspect of the past.

Dowd responds by suggesting a third value that many may share: the importance of “**interpreting the evidence in inspiring ways.**”

Question 13: *Was this part of the conversation valuable to you, and if so, how? Did you have any new insights or did you experience any resistance to what was being said by either Ian Barbour or Michael Dowd? Please elaborate.*

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