

What is Global Health-2013- The Religion of Science Conquering The Unknowable Dr Robert Pollack

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This is Wig, What is Global Health?

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The podcast of the Journal of Global Health

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at Columbia University.

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This episode, The Religion of Science conquering the
unknowable,

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is the first part of a two-part podcast series,

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dealing with issues of religion and science.

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In this episode, I, Emma Chang,

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have the honor of speaking with Dr. Robert Pollock,

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a highly influential and involved academic figure

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on Columbia University's campus.

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He currently serves as a professor of biological sciences

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an adjunct professor of science and religion at the Union Theological Seminary,

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a faculty member of the Earth Institute, and the director of the Center of the Study of Science and Religion.

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In this podcast, Dr. Robert Pollock discusses the nature of science in relation to the concept of unknowable

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and describes the boundary between religion and science.

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To begin, I ask Dr. Pollock for his own personal definition of religion and science.

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I'm happy to do this as a biology professor at Columbia and as the director of the Center

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for the Study of Science and Religion at Columbia and as somebody who came from Coney Island,

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Abraham Lincoln High School many years ago to Columbia College from which I have never

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left.

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So to answer the question really means answering the question in a Columbia based context.

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I've been around but this is my address.

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So now I can define my definitions of science and religion,
and then they'll sound like

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they emerged through the Columbia College Corps, because
they did.

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So I would say I understand religion from its root, which is to
be tied back, relegated,

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if you will, held back from wrong behavior, which is to say a
set of behaviors and rules

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faith beliefs and understandings not derived from any
previous argument but self-evaluant

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and requiring obedience for the sake of some larger claim of
justice, fairness, goodness,

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or for that matter supernatural survival after death. It doesn't
matter the reason.

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The main thing about being a religious person is that you
claim a constraint on your behavior

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which you do not claim can be explained by other aspects of
the world.

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It's a a priori, this we do, this we don't do.

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I think in that revision is a specifically human trait.

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I don't think other primates have the mental capacity for the imagination

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and interactive social ability sufficient to come to agree as groups

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as to what we do and what we don't do in advance of the temptation.

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So I'd say everybody is religious.

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The issue is whether their religion is self-serving or whether their religion is compassionate

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or whether their religion is like or unlike the people you're familiar with, that helps

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you feel comfortable or not comfortable with a person's religion, but everybody is religious.

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The most bizarre religion in my experience is the religion of science.

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And the religion of science simply says, "Everything is explainable."

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And if I pick the right way to ask it, I can explain it in my lifetime.

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So that there's nothing unknowable.

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And I think that's a religious position, the same as any other religious position, because

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science is, in my experience as a scientist, the one stable human way to understand something

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that is unknown about nature and converted from unknown to known.

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This machine for asking of nature why is it this way is built on the most wonderful framework

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of human imagination.

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The answer doesn't become right because you're smart, clever or articulate.

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It becomes right because you frame your question in a way that can be subject to disproof.

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And then the science, the experimental part of science is to try your damndest to disprove

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your idea.

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And when your idea resists this proof, it becomes a scientific fact.

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So the edifice of science is the edifice of what scientists have failed to tear down.

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And that's why science is intrinsically competitive, sometimes quite unpleasant, but honorable.

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Age, circumstance, title all fall before the experimental structure which shows something

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to be so because it so brilliantly fails to disprove something.

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Religion-science boundary in my mind is very simple.

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It's the question, is there anything that science cannot approach?

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Is there anything unknowable that the machine for going from unknown to known can't approach

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because it's intrinsically unknown?

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My understanding is the question itself requires a statement of faith.

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If you say it's a statement of faith, beyond everything

currently unknown, there is nothing

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unknowable, then your religion is that of science.

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But you can't be sure of it because it's beyond what's already unknown.

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So you don't know the answer, but you believe everything's understanding.

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Okay, that's a religion to me.

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The other religions, which we call religion all say in one or another way, beyond everything

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known and everything unknown but knowable is something intrinsically

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unknowable. I don't care what that unknowable thing is, the idea to have

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the modesty and humility to say I will never know, none of us will ever know

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something begins the life of being religious in a

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non-science basically. So the question you frame, I will put

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differently, there's a religion of science and there are all

other religions.

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all other religions admit something unknowable.

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Science is the religion of denying the unknowable.

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Both are religious positions.

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For my part, I choose the ordinary religious position

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because it seems to me the only thing to do,

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since I can't be sure.

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Why would I want to claim something

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that as a scientist I can't test?

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It's not disprovable.

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So I throw out my hands and I say,

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I live as if there's something unknowable,

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because I can't do other things.

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That makes me really disbursed.

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- So just like something that you said

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about denying to a noble,

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that's just because I went to talk with Stuart Fierstein

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recently and his, what a book about ignorance.

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So do you agree with his opinion?

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- Tell me what his opinion is.

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- Like his opinion is scientists,

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they are in this constant state of ignorance

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and they can't ever, just like you were saying,

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not being able to access a noble

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and they kind of have to learn how to embrace that.

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That was part of his argument.

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And he was just like talking about the role

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ignorant in science. You can never find exactly the answer,

but you can keep trying.

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I would agree with that, but I don't think that's exactly what I'm saying. I'm saying

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that there are matters of importance to a mortal human being which are not accessible

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to science. It's not that science has to keep trying. It does. To go from unknown to known

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is a fantastic accomplishment of the human mind. But to say, "Because I accept things

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may be unknowable. I will make my choice as a scientist to study those things that I think

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can be knowable and I will live inside a residue of unknowability. Now I set up the center

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for the study of science and religion because what I just said is the residue of unknowability.

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Turns out to be full of interesting problems. Like, if we're all mortal as a consequence

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of natural selection, how do I know what's the most important thing to do?

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So I say one answer, which is my career is, I don't know, but I will bet that it's worthwhile

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to take what I do know and teach it to people much younger than me so that they will have

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it in hand when I'm out there.

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That's an optimistic religious position which drives the justification for teaching frontiers

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of science, which I'm going to be doing in the spring.

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So that's one answer to two.

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So I think it's the fullest economy science or religion.

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The economy is fantasy of total knowledge as against settling for good enough.

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So I think also another thing I want to ask about is that in science, there are always

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these studies or popular articles that say the majority of scientists are atheists.

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There are certain really outspoken scientists who claim that they are atheists.

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So why do you think that is so?

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Does that indicate something about how scientists think nowadays?

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Serious, first class scientists begin their careers and stay in their careers in all ways,

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always saying, "I have nothing to say, I can't say if you're right or wrong because

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I don't know how to take your question and turn it into a disprovable testable hypothesis."

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One way to say, "I can't take God's existence as a disprovable, testable hypothesis," is

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to say God doesn't exist.

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Another way is to say, "I don't know."

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Pascal's bet.

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"I'll live as if it's so because it's a better life."

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Both are equally valid responses.

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Neither is a scientist's response.

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That's my point.

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So the question goes to when people who wish to be freed from the burden of unknowability

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use the language of science, it sounds like science is atheistic.

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Science is neither atheistic nor atheistic.

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It has nothing to say because nothing is disprovable about the idea of heaven or the idea of an

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afterlife or the idea of an informing intelligence or the idea that commandments are given 4,000

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years ago by which you must live.

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choose to live by that, that's one kind of life. You choose to say, "No, I'll go along

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with my own mind." That's another kind of life. And there are very many kindly caring,

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good people who have no religious life. But they are not necessarily scientists, and they

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don't have to be scientists. There's no science in atheism. It is a religious position. I will

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find what's important to do without calling upon anything that isn't subject to disproof.

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I don't have that strength. If there are people strong enough to say, "I'll make my way as a

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moral person with nothing but data," good for them. I had a teacher who was a rabbi,

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a translator of Jewish text into many languages including Chinese, Russian, and Spanish and

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Portuguese. He lives in Israel. His name is Adin Steinsoltz. And when I was asking him your question,

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he said this way. He said, "If you have a friend who says the throne of God is empty,

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that person is stronger than you. Make sure you retain his friendship, but first make sure he does

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not put himself on that throne." That's a good reason to be a religious person. So to avoid the

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risk of putting yourself on the throne of saying you know things you don't know.

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Okay, a scientist never says anything he or she doesn't

know. An atheist might

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run into that risk. A religious person runs into that risk all the time. That's

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why it's hard to be a scientist and a religious person. You have to often just

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have nothing to say. And also like I know in some of your articles you've kind of

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talked about how being religious can also give you certain moral constraints so

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that's also kind of linked to what you're saying. I guess I guess I I'm a

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biologist and I'm more and more impressed with what our DNA's got to tell us

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about our history and our essential central totally defining necessity for

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socialization and the interest in others and the interest of others in our

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life from conception to death.

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And it's most apparent in the first year of life when an infant

is totally helpless without

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being cared for and loved.

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And in that caring and love and looking at each other, the infant and the mother become

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two people rather than by imitation.

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It's not by imitation, it's the discovery of a mind in one's own.

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And it becomes apparent again at the end of life when people are again helpless and there

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There is no utility to them and there is no productivity from them and there is only the

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human obligation to care for them.

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So one of our projects which you will find in the CSSR is run by a wonderful student

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named Ashley Shaw.

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She runs a volunteer program at the Terrence Cardinal Cook Hospital on Fifth Avenue which

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is a tertiary care hospital for end of life.

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It's not a hospital.

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It's to keep people socially engaged and out of pain for as long as possible.

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And it's run in a religious context.

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It's run in the Catholic Church.

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Operates it, welcomes people of any background.

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In the medical director, I think would laugh at the idea

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that he needs to know whether somebody in there

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is religious enough.

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The whole operation is religious by the willingness

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of people to put their time in with people who are going to die.

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And if you want to know the burden of that kind

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of religious life in science and medicine,

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it's that all the funding algorithms

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that reward hospitals for effectiveness,

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reject this hospital because everybody dies.

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So there's no recognition of the medicine

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of the end of life yet everybody dies.

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So there the question back to you is,

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it's not a science question,

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it's not a religion question,

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it's an education question.

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Why do people deny what they know?

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How do they so effectively act

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as if they're not gonna die

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so that the political structure

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does not accept the success of a hospital which carries
people at peace to the end of their lives.

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Why is that invisible?

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That's invisible in the same way a person who is both religious and a scientist is invisible doesn't fit the categories.

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But the categories are categories driven more by denial of what's frightening than they are by full acknowledgement of what's so.

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And also another question that I had was since you do teach *Frontiers of Science* and you

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do teach at the college, I was wondering if you personally thought like school curriculums

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were oftentimes, for example, they don't teach anything about creationism, they only teach

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about evolution.

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And do you think that this is like some a flaw in the education system and something that

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is kind of driven by our like our perception of science today?

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In teaching *frontiers*, I have more than once had a student say, "Okay, I'll say on an

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exam what you want me to say, life is four million years old,

the species is seven million

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years old, natural selection is its mechanism, it's driven by random errors such as the positive

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selection for survival of the sequence, all of life is DNA's way making more DNA.

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I can say all of that, but I know the world was created six thousand years ago."

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And I know everything is as it says in the Bible because the Bible is really true.

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And I wouldn't want to argue with somebody like that, and I wouldn't want somebody like

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that to argue with me.

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So what I discovered to say when a student says that is, what I began by saying to you,

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"Look, I'm stuck if we can't disprove an idea."

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The problem with your response is you're in a world of non-disproavability.

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So believe it, enjoy it, live by it, I have nothing to say.

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But you're stuck with the failure to disprove natural selection.

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So you've got to fit it in somehow.

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I wouldn't say throw anything out, but fit this in, or deny reality.

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And once I said, here's an example of a non-disprovable version of what I do.

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Here's a hypothesis.

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The world was created not 6,000 years ago, but 20 minutes ago, complete with memories.

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How do you disprove it?

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You can't disprove it.

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You don't have to worry about it. You just can ignore it or not as you want.

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That's the position of creationism.

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It's not subject to this proof. It's not interesting.

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The statement of the age of the universe that has been subjected to this proof and

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keeps coming up with the same number, no matter what you do,

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is 13.7 billion years for the beginning of the

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and then a long pause, two-thirds of the time, nothing where we are and then

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the creation of the sun and planets at about five billion years, life beginning at about four and a

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half, four billion years, and just in the most radically recent time mammalian life, 250 million

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years, quarter of a billion years, primates maybe 50 billion years, 30 billion million years, and

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humans in only maybe a million years tops and the covering of the planet by

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subpopulations of African humans, maybe 100,000 years,

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60,000 years. And in that time, this species by imagination is overtaking the planet's

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function. But better or worse, 80% of all mammalian biomass is either us or what we eat.

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So we've run the planet for our own purposes. Now,

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There's no design that says that will happen. There's no design that says we'll survive that happening.

00:17:55.580 --> 00:18:01.080

We have to be smart enough to figure out how to get past this impasse of our own successes as a patient.

00:18:01.080 --> 00:18:03.820

Saying creationism doesn't help.

00:18:03.820 --> 00:18:11.100

Doesn't help. Doesn't explain the problem. It doesn't have a mechanism for doing what's next. Praying and waiting won't work.

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We've been too successful at covering the plan. How you figure out what to do starts with acknowledging the problem.

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So there's no place in frontiers of science or in any science for any non testable idea

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Science is what can be disproved?

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And so and that's my answer so if you have it fine as piece of American history

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It's a piece of American behavior. It's piece of American sociology, but it is not science

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So when you were still working in the lab

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Yeah

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Did you still basically have the same system of beliefs or approach to religion that you have now?

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I think I hadn't thought about it much.

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I think I was more worried about getting the paper out first and getting the grant out and getting the money and going on a meeting.

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I travel a lot, I get a lot of calls.

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You can look on my CV on the web and you'll see a huge amount.

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I mean, something like, I mean, there's 100 papers in those 24 years and then another 100 papers since,

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but the first set of papers are all data-driven, the second set are not.

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Okay, so I'm still writing.

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I'm just not bound by my discovery of something through a disprovable hypothesis being tested.

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being a pastor, let other people go that. I will try to

understand its importance to the world.

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So do you think that in a way the competitiveness, competitive nature of science could be why

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there's this religion of science where people just...

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Yeah, sure. But on the other hand, this country is founded deeply on the right to go as far as you

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can in a competitive situation. And I don't know, have you ever heard of a mathematician who was a

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Professor here 50 years ago named Samuel Eilenberg. Samuel Eilenberg is a mentor of mine. He was one

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of the generation of Eastern European Jewish intellectuals who got out from under the hammer

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of the Nazis in time because he was recognized as being such a brilliant mathematician that he

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he was getting a job in America.

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So most of his family died, and most of his cohort died.

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But Sammy was a professor at Columbia.

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And once when I was the dean of the college,

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I asked him to speak to women in science

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about why this was the right life.

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And he said, on the matter of competitiveness,

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he says, "Publish or perish is a terrible, terrible

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stricture, but it's a wonderfully, wonderfully easy gift compared to have the right name or

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parish, have the right color or parish, have enough money or parish. So I live by publisher

00:20:46.100 --> 00:20:53.220

or parish. It's a lot safer. And that's an answer. Okay? This country is free for competition.

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It's also free for not competing. So I work now with people who know no science but out

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of religious conviction do interesting things. People who volunteer to be with dying people

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and change their bedpans and their pajamas, they're not scientists. But I am convinced

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that my work is to help them. And also another thing, I looked at your CV and your bio and I

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know that you teach a course called DNA Evolution and Science. I do. So I was just curious how in

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that course do you integrate like both the spiritual kind of elements of it and the more

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concrete biological? Well, of course, I decided decades ago the deep, the deep first decision

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Is "go it alone" or "don't go it alone"?

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Not going it alone.

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And so in my center, I don't go it alone.

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My fellow director is a woman named Cynthia Peabody, a graduate of Union Theological Seminary,

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and we teach this course since she was a student in it about seven years ago.

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And we teach it together.

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And I don't front the theology, and I don't front the religious end of it.

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I front nature.

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And I try to find the language to present evolution to theology students, ministers in

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training in a way that allows them to confront your question, "But what do I do with the Bible?"

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And I don't say, "Pick me over the Bible." I say, "Here are facts. How do we fit them in?" So I'll

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give you a single example of what turns out to work. What turns out to work in the discussion of

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Genesis with Cynthia and other people. What turns out not to work is to say, "Damn it, this is the

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science. You better believe it because you don't tell people to believe in science. You tell people

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to follow the argument and show us where we're wrong. Disprove it. Make me wrong, you'll get a

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Nobel Prize. Make evolution wrong, get three Nobel Prizes. That's easy. Now I'm going to say we know

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this is the final answer. We're saying this is the best answer we've got so far.

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So I think that my own text answer to this kind of question was once in this class.

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Somebody said, "What about the literal reading of Genesis?"
And I said, "The literal reading of Genesis

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requires one seventh of the time since the universe began to
be set aside from change. That's the

00:23:07.760 --> 00:23:14.080

Sabbath. That's not in nature. That's a teaching about what
we have to do in spite of nature.

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The story of the expulsion from Eden is the story of us as a
species who lived in a heavenly

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place without sex, without death, without work, and by
acquiring the ability to have this conversation

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to ask what's right, we were thrown out to wear into nature
without losing the ability

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to ask what's right. That makes us completely heavenly in
nature. We're trapped in exile

00:23:39.920 --> 00:23:45.120

forever because we don't have an answer to those questions
in nature. They're

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Edenic. So that's how I answer these questions. I don't
answer these questions by saying,

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"You're wrong." I say, "We're stuck. What do we do?" Except

begin to understand our obligation

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to each other. I'm absolutely this is this kind of a side thing from what I've recently

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researched a little bit but apparently this is now this kind of field called ethylogical theology.

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Are you aware of that? Okay, so do you have any thoughts on that field? Well, sure. I mean,

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ecothology, it's not, I don't like the word field. It is a way of asking about our obligations to

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each other and the natural world and it takes the position that our obligations to each other are

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just an aspect of our obligation to the natural world.

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That there are no passengers on planet Earth,

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everyone is steering.

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And that you can't hand over your obligation

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to the rest of the species by saying, I'm busy.

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So the biblical references in all three monotheistic religions

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have to do with be fruitful and multiply

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and being in charge of this place.

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The reading of the biblical text is very straightforward.

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the experiment of heaven to give this planet a thinking species with a moral

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core, fails many times. Fails in Eden, fails in in in the Bible, it fails over

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and over again, fails in the flood, the speeds, things to wipe down, start over again.

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Which by the way is how natural selection works, but this is all in the mind.

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So I think the field of eco-theology says, "Okay, from our religious tradition,

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Jewish, Christian, Muslim, and Eastern religions as well.

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What have we got that other people thousands of years ago saw clearly helps us to understand

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the boundaries of our obligation, not just to the stranger, not just to our family, not

00:25:34.720 --> 00:25:38.680

just to what, but to a rock and a cockroach.

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What's our obligation to the Atlantic that flooded out five million people?

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Do we just get angry?

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Do we understand it? Do we understand we live in it? How do we adapt to it? Do we really

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control or do we learn as an aspect of religious life to ameliorate and diminish our risk to

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the planet in the process of diminishing the planet's risk costs? But those are tough questions,

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right? I mean, they imply, for instance, understanding the impact of social injustice.

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Is it right for me to tell somebody who lives on a hundredth of what I live on, "You have

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fewer kids because they're going to burn more coal?"

00:26:22.760 --> 00:26:23.760

It's not right.

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And yet, if it's not a planetary response, global warming continues.

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So those are ecotheological questions.

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What have we got to say to somebody who's suffering besides, "You better keep suffering

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because otherwise I'll start suffering."

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That's a serious matter.

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What have our religious traditions got to say about a planetary problem?

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And beyond be fruitful and multiply and run everything.

00:26:48.900 --> 00:26:53.660

Because we have been fruitful, we have multiplied, we do run everything and it's approaching

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a real blow up.

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But we are smart, we are thinking creatures and so ecotheology is the way of saying let's

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think about this and let's not reinvent the bicycle.

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Let's go back and see what our religious traditions have to say about this.

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Whether it is Sermon on the Mount or whether it is Isaiah or

whether it is the Buddha,

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there is no question that you can find statements of modesty and humility without incompetence.

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You can be modest and you can help.

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This concludes this episode of Wig.

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I would like to sincerely thank Dr. Pollack for his time and insight and please stay tuned

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for part two of this podcast with Dr. George Saliba.