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A New Paradigm for Science and Religion
Week One: “The Rise and Fall of Scientific Materialism”
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Hello, my name is Alan Wallace. For the last 50 years, basically all of my adult life, I've focused on the study and practice of Buddhism since I first went to Germany and then India in 1970–71. Over the last 35 years or so, I've sought to bring together my understanding of Buddhism in theory and practice with modern science. As an undergraduate, I studied physics and philosophy of science at Amherst College, and during my doctoral studies at Stanford, I studied philosophy of mind, philosophy of religion, and philosophy of physics. I've been teaching Buddhist theory, practice, and meditation for about 44 years.

In this first lecture in the series, which I've titled "The Rise and Fall of Scientific Materialism," I'll begin by giving an unusual introduction to myself. I am a human being, not a robot. The reason I know that I'm not a robot is that I know I'm conscious. I'm absolutely certain of this, and nothing could persuade me otherwise, whereas there is no reason to believe that robots are conscious. Computer science has no understanding of consciousness and therefore no idea how to generate it. Science fiction writers can have a lot of fun thinking about conscious robots, but that's science fiction and not science.

During this four-part lecture series, I'll be presenting a new paradigm rooted in radical empiricism for both science and religion. Religion often gets bogged down in its dogma, closed-mindedness, and fundamentalism. We all know this. But what's not as commonly known is that science also has gotten bogged down in a lot of unquestioned metaphysical assumptions that can be synopsized by one term: materialism. During this four-part lecture series, I will challenge both sets of assumptions and propose alternatives that can give rise to a much more fruitful, interactive, dynamic, and respectful interaction between science and religion.

As a primate, I am a human being, but there is a lot more to me than simply being a biological organism genetically programmed to survive and procreate. I seek a life of meaning, virtue, and genuine well-being, and I want to know reality as it is. None of these aspirations, which have

been guiding lights for my entire life ever since I was an adolescent, can be explained in terms of physics, chemistry, or biology.

Finally, I am a sentient being, which means that like all other sentient beings, I wish to be free of suffering and to find an enduring sense of happiness, if at all possible. As a Buddhist, I have encountered and embraced a way of viewing reality, a matrix of meditative practices, and a way of life rooted in ethics, nonviolence, and benevolence, which highlight the root causes of suffering and genuine well-being. This is what I've been focusing on for the last 50 years, and this brings us to the topic for this first lecture, the rise and fall of scientific materialism.

When I was educated in science during the 1960s, the science that I was exposed to—physics, biology, chemistry—was all completely blended with the metaphysical assumptions or beliefs of materialism. I was never taught there was any distinction. To give a summary of the kind of science I was exposed to and to which I was planning to devote my life as an environmental biologist, I will quote some of the leading scientists from the 20th century.

Nobel Prize–winning physicist Richard Feynman says, "There is nothing that living beings do that cannot be understood from the point of view that they are made of atoms acting according to the laws of physics." I am a living being; therefore, I am a robot, and everything I do is dominated by the laws of physics. He's simply saying we are robots.

And then we have another Nobel Prize winner in physics, Steven Weinberg, now speaking about reality as a whole. He says, "The more the universe seems comprehensible, the more it also seems pointless." So I'm a robot, and I'm living in a pointless universe with no meaning whatsoever.

But what about evolution? I'm a primate; I've evolved. Our species has evolved over millions of years, the last 200,000 years as homo sapiens sapiens. The eminent and late biologist Stephen Jay Gould writes, "Evolution is purposeless, nonprogressive, and materialistic."

Then, we can top it off with another very renowned and eminent physicist, Stephen Hawking: "The human race is just a chemical scum on a moderate-sized planet, orbiting around a very average star in the outer suburb of one among a hundred billion galaxies."

If that's what you believe, if that's the worldview that you've embraced, if you've been taught this science and you believe that's who you are, if you're not depressed, then you haven't been paying attention because this is an incredibly depressing way to view reality as a whole and our own existence as human beings. If you're not depressed, wake up and start now, because that would be a reality-based response to this kind of worldview.

And then who are we? I'll cite another Nobel laureate, the neuropsychiatrist Eric R. Kandel, who was one of the pioneers of modern neuroscience. He writes, "The brain is a complex biological organ possessing immense computational capability: it constructs our sensory experience, regulates our thoughts and emotions, and controls our actions. It is responsible not only for relatively simple motor behaviors like running and eating but also for complex acts that we consider quintessentially human, like thinking, speaking, and creating works of arts. Looked at from this perspective, our mind is a set of operations carried out by our brain. The same principle of unity applies to mental disorders." Once again, we're getting the word now from neuroscience: you are a robot.

As one neurologist, Antonio Damasio, said, "You are a brain carrying a body on your back." You're actually making no choices at all. You're simply programmed. Your brain is a gushy, organic computer. But if you start feeling depressed about this, then the neuroscientists have a

snappy answer, and that is that all mental disorders, including depression, are simply imbalances in your brain. All mental disorders are nothing more than brain disorders, and therefore, what's the response? How do you address the reality of this source of suffering? Obviously, manipulate the brain, and the most practical way to do that is with drugs, and so now we have the incredibly lucrative industry of psychopharmacology producing so many antidepressants and drugs for anxiety, PTSD, ADHD, and insomnia. If you have any kind of mental problem, the motto from the psychiatric profession, fully bolstered by neuroscience, is "When it comes to drugs, just say yes."

The only problem with using these psychopharmaceutical drugs to treat all manner of mental diseases is, in fact, not a single one cures a single mental disease. All they do is suppress the symptoms. In other words, the whole field is a field of anesthesiology. It's not medicine. It simply suppresses the symptoms by acting upon the brain but without getting to any of the underlying causes of mental distress. In this materialism-dominated view of human existence and the mind and brain, we have a view of reality that is existentially depressing, and their antidote for that is to take drugs.

One can bemoan this from an outside influence, saying, "Oh, what have the scientists done to us?" But in terms of looking for an antidote to this pathology of materialism and this reductionism of the whole universe to physical phenomena and the emergent properties of phenomena, we don't need to look outside of physics itself.

21st-century physics has offered the most devastating critique of materialism of anyone, more so than philosophy or other branches of science. For starters, we have the principle of conservation of matter and energy, the notion that there are no nonphysical influences on the universe. But when it comes to the 21st century, it turns out that about 95% of the forces in the universe are unaccounted for. There's no balance. There's no conservation. We can see this in the context of

the expansion of the universe and the coherence of the galaxies and so forth in the universe. Scientists don't have a clue how to explain this, so they simply attribute the rapidly accelerating expansion of the universe to something called dark energy and the fact that the universe is unreasonably orderly to something called dark matter. The only problem there is they have no idea what dark energy and dark matter are; they're simply assuming that the causes must be physical. They don't know that. It's just speculation. The only thing they know about are physical causes, so they have limited our imagination to thinking that the only influences on human existence or the universe at large are physical.

So how do the physicists themselves undermine the mythology of scientific materialism, the blind dogma, the metaphysical belief system? We can go right back to Richard Feynman: "Everything boils down to energy and matter and their emergent properties." Feynman comments that the conservation of energy is a mathematical principle but not a description of any concrete mechanism. He adds, "It's important to realize that in physics today, we have no knowledge of what energy is." So everything boils down to matter and energy, except we don't actually know what energy is. This is from a Nobel laureate.

Let's go back to Steven Weinberg. He writes, "In the physicist's recipe for the world, the list of ingredients no longer includes particles. Matter thus loses its central role in physics. All that is left are principles of symmetry." Bye bye, matter; bye, bye atoms; principles of symmetry are all that's left. This is 21st-century physics.

So much for matter and energy, but how about space-time? Let's look to one of the leading theoretical physicists alive today at the Institute for Advanced Studies at Princeton, Nima Arkani-Hamed. He writes, "Many, many separate arguments, all very strong individually, suggest that the very notion of space-time is not a fundamental one. Space-time is doomed. There is no such thing as space-time fundamentally in the actual underlying description of the laws of

physics. That's very startling, because what physics is supposed to be about is describing things as they happen in space and time. So if there is no space-time, it's not clear what physics is about. That's why this is a hard problem." Physicists themselves have completely torpedoed the notion that the whole universe consists of matter and energy, space and time, because one by one, if you're looking for their objective existence, you can't find it. You find a nonexistence.

We'll now shift ahead to cutting-edge, theoretical quantum mechanics. I'll cite another outstanding physicist, Hans Christian von Baeyer. He writes, "While the experimenter, the observer, and the theorist are investigating something external to themselves, what they are dealing with directly is not nature itself but nature reflected in human experiences." The point here from cutting-edge theoretical physics is that we know nothing about the physical universe or even whether it fits into our category of "physical," which is a human-generated category. We know nothing about that world independent of human experience, but there is no such thing as human experience without human mind, without consciousness.

The domination of modern science by scientific materialism has been utterly catastrophic, frankly, especially for the mind sciences, because point after point after point, the domination of the mind sciences—neuroscience, cognitive psychology, and so forth—has strangled us in terms of actually understanding the origins of the mind, the nature of the mind, how the mind and body interact, the potentials of the mind, and what happens at death. Instead of scientific knowledge, what we have is a very deeply entrenched system of illusions of knowledge, beliefs that are never questioned, that are taken to be fact. The whole notion of fake news that we've heard a lot about over the last four years propagated by some very, very high-profile politicians (or businessmen presenting themselves as politicians) wasn't an invention of the last several years. Fake news is the news that the beliefs of scientific materialism are scientific facts, and that is just propaganda. That is superstition.

Thomas Huxley, one of the most eminent biologists of the 19th century and early 20th century, writes, "Of all the miserable superstitions that have ever tended to vex and enslave mankind, this notion of the antagonism of science and religion is the most mischievous. True science and true religion are twin sisters, and the separation of either of them is sure to prove the death of both. Science prospers exactly in proportion as it is religious, and religion flourishes in exact proportion to the scientific depth and firmness of its basis."

It's a very popular tendency now to secularize Buddhism, but in fact, we in the West have superimposed on Buddhism the very notion of religion. We've splattered religion on Buddhism, and then we think we're doing something new by secularizing Buddhism, but often this is nothing more than simply trying to create a fillet of Buddhism that accords with the metaphysical beliefs of materialism. Anything from Buddhism that is not validated by science or even challenges scientific beliefs is then considered to be garbage to be thrown out.

Maybe we should reassess now and take a fresh look at Buddhism through the lens of empiricism and pragmatism. If we're looking for secular Buddhism, we need look no further than the first Buddhist, and that is the historical Buddha. He was a secular Buddhist, challenging dogmas of all kind, both religious and materialistic. We need to catch up.

Thank you for listening to this first talk. The motivation for these talks is actually entirely constructive. It's quite clear to me that science right now is on the verge of the greatest revolution we've ever seen. The second revolution in physics—quantum mechanics and relativity—is unfinished because scientists have not yet understood the role of the observer. Likewise, we've never had any revolution in the mind sciences, but it seems like right now we're on the cusp of one. The only way we can break through to a true revolution in the mind sciences that can catalyze a revolution in others is to question our assumptions. And what better technique than to step outside of our own civilization and take a fresh view from outside in? That's exactly what

the Buddha's own teachings encourage us to do. We're perfectly free to question the views of Buddhism, but how much more fruitful it will be to question our own assumptions and revolutionize our own worldview. I'll see you next week.