The Phoenix of Metaphysics (Part 1)

Rob Burbea · Notable Dhamma Teachers — Rob Burbea · 2:30:47

I'd like to talk, as I said in the introductory talk of this series, about metaphysics - really, ontology and epistemology.

Ontology, loosely speaking, is a philosophical term for the exploration or study of what is actually real and what is not real. Epistemology is the philosophical term for the exploration of how we know - how we know what's real or not real, what kind of knowledge about the world, about ourselves, about anything can we trust, what constitutes knowledge and what does not constitute knowledge. These two areas, ontology and epistemology, are intimately woven together. They kind of really imply each other, and traditionally they form part of what's called metaphysics.

I've talked about this a fair amount over the years, woven into the emptiness teachings certainly, but also woven into the soul-making teachings. Perhaps there are slightly different openings into the territory tonight.

I'm supposing that some people will listen and feel a need to hear this kind of material - this kind of exploration, these kinds of questions, the history of our culture's thinking and explorations in philosophy and science that has gone on over the years. There will be a need for that both in terms of legitimizing for themselves practices of sensing with soul and the imaginal, but also how one relates to existence. Of course that's not different - that's not other than the practice of sensing with soul. Sensing with soul has implications about how I live and how I see and how I feel the world.

Some people will feel a need for this and others will just be interested and find it fascinating - there's some degree of eros in the exploration of these kinds of ideas and hearing about them. Other people will maybe neither be interested nor feel a need. All of that variety in where it lands with you is, to me, interesting. I hope to weave in the fact of that variety and that range of relationships to these kinds of explorations and questions into the points I'm trying to make.

But as I've already alluded to, why is this important? Why are the questions of what is actually real and what kind of knowing, what constitutes knowledge, what constitutes knowing, what kind of knowing and sense of things and sense of truth are trustworthy or valid - why are these important questions?

Well, you can, I hope, guess the answer already: all that has implications for how a person will regard or value the whole domain of practices that we're calling sensing with soul. If I've decided that this kind of thing is real and that kind of thing is absolutely not real and therefore worthless, not valuable, not valid, and if the kinds of perceptions and senses involved in what we call sensing with soul are in that category -

not real, worthless - then those kinds of perceptions and what they bring to the soul and the heart and the action and the speech and the aspiration and the dedication and devotion in human life is also relegated to the pile of rubbish, unworthy, not valid.

Conversely, though, if we can open up at least the possibilities of ontologies and epistemologies that justify and give value and validation to sensing with soul, that undergird those kinds of practices and support them, then that has big implications - not just for individuals, but culturally, for our relationships to ourselves, to other human beings, to other species, to the planet, to the world, to our desire. All of that - how we view all of that and how seriously we take it and how powerful the consequences of such practices can be.

So I think there definitely is a case for saying this is important territory. And yet still, as I said, that range and variety of how much people feel they need to open this area up or explore it or hear about it and how much they're even interested - that variety itself is also interesting and something to consider and reflect on.

But in line with what I just said, someone called Moscovici wrote: "Questions of epistemology" - questions of what constitutes actual knowledge, what constitutes knowing, and not just illusory fantasy - "are also questions of social order." We could add: questions of ontology are also questions of social order. As I said, epistemology and ontology go together, involve each other.

Why are they questions of social order? Because of what I just said - because of the fact that what we consider real often forms the limit of what we genuinely and deeply respect. So if, for example, the kinds of senses of things and perceptions, the kinds of knowing that we open up to and support with sensing with soul, if that is considered not real, we won't respect it. We'll only respect something else called real. All that shapes what a culture does, what it prioritizes, how the economy is geared, where taxes go, what people invest in, how they measure progress and well-being.

There are also issues of power involved on top of that. As Foucault points out, knowledge and power are inextricably related. When a culture as a whole, either openly or more subtly, decrees "this is real and that is not real, therefore this is worthy of respect, that is not worthy of respect," then that also automatically brings into play a hierarchy of power, of social relations and social structures dependent on which camp one falls into. If unhappily one falls into the camp of sympathizing with and finding beauty and import in the kinds of sensing with soul, for example, and they're not respected, they're not in the dominant paradigm, then they get - either subtly or openly - pushed down the pecking order in the hierarchy.

Of course, all that can happen even ostensibly in a democracy where there's free speech, or in our culture where many people are still frightened or it's taboo - even for completely irreligious and secular people, it's still often taboo to discriminate against people who have certain religious views. And yet still there might be more subtle hierarchies of power in all kinds of ways.

So I think all this is important, and I want to trace a little bit of history, lay out how things have somewhat unraveled, at least at one stratum of society - maybe a more intellectual stratum - and also at another level.

and what that might open up, that kind of unraveling, that kind of... the place where we've arrived in relation to these questions about truth and reality and knowledge. Because many, many of us will actually be ignorant about all this.

There have been certain developments in philosophy but even more so in science in the last 120 to 130 years that really open up and challenge and shape the very foundations of these questions of ontology and epistemology, and yet very little of that has trickled down to the person on the street.

So, just very briefly, historically: following the scientific revolution some hundreds of years ago, and the fathers, if you like, of that revolution—Galileo, Descartes, Locke, Newton—what came slowly, gradually to dominate... and that's an important point as well, that this revolution, like many revolutions, wasn't something everyone said, "Oh yeah, of course, that's right, I get it now, how stupid we've been." It was something that was very gradually brought into the mainstream and gradually adopted by most people unconsciously through a kind of indoctrination to become the dominant view.

What Galileo, Descartes, Locke and Newton and others instigated or brought about—we can call that the classical scientific worldview. And that has become, as I said, the dominant worldview, probably for most people on the planet right now. So that even when a person feels allegiances to other contradictory views, there's still a lot of gravitational pull towards this classical scientific worldview. I think it was Charles Taylor who noted that one of the marks of a secular age is that no one can completely, naively believe certain beliefs anymore that don't fit the classical scientific worldview. There's always a kind of pool of doubt there because of the weight of it and the entrenchment of it.

And also, because it's been so successful—and that's partly how it grew to dominance—it wields great predictive power, for instance, about where a cannonball will land or a rocket or an engine or whatever it is, and great power in what it has enabled humanity to build technologically. Hugely helpful and hugely problematic as well, but enormous power, both in terms of its predictive power and its technological power and its power over nature.

And with all that—because of its predictive power and its technological consequences or spawnings—it has come to be regarded as true. It's the truth. It's how things are. Which, strictly speaking, doesn't follow. And if we care about these things, that's a point worth noting.

But what does that classical scientific worldview, the dominant paradigm of scientific materialism, what does it hold? It holds that the universe is made of little bits of stuff. We call them atoms, but we might be, in that view, loosely referring to subatomic particles, although that would be a mistake. But loosely, the world is made up—everything is made up—of atoms, and these atoms are set in motion and then follow

their motions according to certain physical laws. And they bump into each other and interact with each other according to certain physical laws. And the whole thing runs like clockwork.

So there is no divinity present in the workings of that. And the whole thing is purposeless. The purposeless movement of atoms. It's not moving towards anything, any purpose. There's no meaning to the universe, to the movement of matter.

In its extreme form, it reduces the whole of the universe to just matter functioning like clockwork and somehow producing consciousness as well. And in fact, the clockwork analogy is interesting because it was a deliberate analogy, I think, on the part of Descartes and other people. And it was just that time in history where clocks were either becoming more prominent or had just been invented. So the idea for the philosophy and the vision of nature was given a little bit by what was present as a new technology and a prevalent technology that one encountered in the world.

It's interesting now, if you read reports on current scientific theories, how they don't talk about clockwork anymore—they talk about information, and the whole universe is just information, or the whole universe is a supercomputer, or even there are theories about the whole universe being in fact a computer simulation. The point is that it's interesting to note how the worldview can just be conditioned by what's prevalent in terms of the technology that we encounter.

But all of that either has nothing to say about meaning or, taken a little bit further, actually postulates dogmatically or posits dogmatically a meaningless universe, a meaningless cosmos. It has nothing to say about ethics, and correspondingly, in the strict view of that scientific materialism, there is nothing to say about ethics, as ethics are not integral to the universe.

It's also what we might call a kind of flatland view in the sense that it lacks meaning, it lacks divinity, it lacks a lot of dimensionality. And again, that word's a little tricky, dimensionality, but partly what we could say dimensionality is like depth. It's like what's not immediately apparent.

So actually, that scientific worldview, that classical scientific worldview, only allows certain kinds of dimensionality. For example, the mathematical laws—whether of gravity or electrons or whatever—are a kind of dimension of the being of matter. So there's matter and a deeper strata that's not separate from matter. It's part of matter, but it's a deeper dimension, if you like—the laws that matter obeys, the various mathematical equations and laws. And so it admits only that kind of dimensionality, and all the time it's supposed to keep the view that all this is subject to experimental proof. So if a law gets disproved or improved upon, or if a deeper strata of reality—a more fundamental particle, a smaller particle that makes up larger subatomic particles—is discovered or proved not to exist or whatever...

This view represents what we might call a flatland world—a flat universe without dimensionality. Yet depending on how we use that word, we can say that certain kinds of dimensionality are allowed within this framework. All of this, as I mentioned, came over time to be regarded simply as common sense—what

everyone would agree upon as the truth of things. But it didn't start that way at all.

This worldview took considerable time to evolve into the dominant paradigm, where everyone would simply accept that this is how the world is, how we think about it, how we relate to it, and indeed how we actually see it.

This world, to specify some more of its components, is a world of what Newton called absolute space and absolute time. Space is conceived as pure, empty space—absolutely still and forming a kind of backdrop for all this purposeless movement of atoms according to physical laws. Space is simply neutral, a receptacle, a backdrop. Time, too, is absolute—the same for everyone anywhere, simply trundling on regardless of what is happening or what is present.

Also wrapped up in this framework is the element and postulate of cause and effect: this effect is due to this cause or these causes in the past. Central to the conception of this cosmos, both in the idea and theory of it, and importantly in what observations for a long time seemed to verify and validate, was that the universe is made of things that are clearly this or that. It's a wave, or it's a particle, or it's this kind of particle as opposed to that kind of particle—made up of clearly differentiable things with clearly differentiable properties.

For example, the position of a particle, its speed or momentum, its energy, the time at which a certain event happened in the life of that particle or collision—all these are clear and clearly measurable things. Accurately, definitively measurable, at least in potential. They all exist independent of the observer and independent of the way the observer chooses to observe, the mode of measurement or observation, the way of looking.

These clearly differentiable entities that this cosmos is made up of are also only influenced—their behavior and manifestation dependent only on obvious interactions they have had in their vicinity. All of which became, as I said, the common sense view. If this particle possesses this property or manifestation, it's because of this interaction or whatever, which we can trace to something in its locale.

After a few hundred years of this, however, experimental results came in that started to shake up this entire worldview and caused a great amount of commotion and agitation and debate and brilliant and bold investigation and discussion and innovation. This resulted in the double revolution of Einstein's relativity theories and also the quantum revolution of quantum physics.

It was really a shattering of that whole worldview—its very foundations. Its foundational assumptions were rocked and broken and brought into question as if the rug had been pulled out from under the whole sense of the cosmos and the ability to even make sense of the cosmos.

Some of you will know some of this, but for example, classically light was regarded as a wave, and then it was seen to be able to manifest both as a wave and as a particle. What it manifested to us—whether it manifested as a wave or as a particle—depended on the kind of observation we made. These are two

complementary, or actually contradictory manifestations, contradictory attributes. To be a wave is something very different than to be a particle. A particle is a small thing in a fixed location, and a wave is not—it's spread out. What's the reality there?

There's a term called superposition. In quantum physics, this refers to something being in a kind of hybrid state of two complementary or contradictory states. For example, when we measure it this way, we see a wave. When we observe it that way, we see a particle. When we're not measuring it, it's neither one nor the other. The wave and particle states are superposed.

If that example is not that radical for you, consider also the example that's central to Schrödinger's cat thought experiment, where a radioactive particle is in a state of being both decayed and not decayed, or neither decayed nor not decayed. This radioactive decay—has it happened yet or has it not happened yet? It's said to be in a state of superposition, where it's both decayed and not decayed at the same time. But what that actually means is something very abstract.

With this superposition principle, recently in the last few decades, they've observed it in larger and larger objects. There can be a tendency for some people—and I think this is interesting when we talk about the psychology of epistemology—to hear some of these remarkable, mind-boggling results and facts about the quantum world and kind of relegate them: "That's all for very little stuff which I don't really encounter." They go about their everyday life with a view of reality that's essentially unchanged, that has absorbed that common sense, classical physics worldview and takes that to be the way it is.

But this superposition, this baffling, indescribable—at least indescribable in language or concept—coexistence somehow of this state that encompasses two contradictory states, this superposition has been observed more recently in larger and larger things. Where's the boundary?

Can I really just relegate all this, all these discoveries and conundra of the quantum world? Can I really relegate that to something that bears no relevance for my life?

As I said, these are contradictory states that are somehow existing together—even if we say "existing," I'm not really sure that's the right word. But there's a contradiction of the law of the excluded middle. If a particle has decayed, it can't be not decayed, and if it's not decayed, it can't be decayed. And somehow, before observation, that particle is said to be in a superposed state. It's neither decayed nor not decayed.

When we talk about an individual particle, physicists speak of the wave function of that particle. This really describes a sort of smudge of probability, a probability cloud of where that particle will be and how fast it will be moving and all those other properties that were thought to be independent of the observer.

One realizes that what happens when we're not observing it is all we can talk about is this abstract mathematical function in many-dimensional space. When you do a certain manipulation of it, you get the probability of finding the particle over there or the probability of finding it over here. In other words, before we observe it, it doesn't have a definite position. It doesn't have a definite velocity. It doesn't have a

definite energy. It doesn't have a definite time at which a certain interaction happened, a certain event happened in its life. It doesn't even have a particular property of being, let's say, a wave or a particle.

This is radical. The whole world of discrete, clear, independently existing phenomena was decimated and was replaced with something that really the conceptual mind struggles to understand, even though quite sophisticated and very accurate mathematics has come out of it. We can make these predictions of the probability that we'll find the particle decayed, or the probability we'll find it over here as opposed to over there. But what actually is going on, independent of the observer, remains something that the conceptual mind really struggles to understand. Yet it's clear that it's not how we usually think of the world, and it's not the picture painted by classical science as developed by Galileo, Descartes, Locke and Newton. It's clearly not that picture that's reality.

Bohr coined this term "complementarity"—wave and particle as complementary views of something. But as physicist David Bell pointed out, that's not really the right word. Complementary is when you look at the backside of an elephant and see a tail and a bum, and you look at the front side and see a trunk and big ears. Two people who can't see each other, on either side of the elephant, get those two views. If they get a few more people and put those views together—the side view, the front view—then they'll get a composite picture of complementary perspectives on the elephant. They can put that together and make sense of it. It fits together.

David Bell pointed out that actually Bohr should have used the word "contradictory"—or rather, that's implicit in what he means by complementary. I wouldn't go so far as what David Bell said; he had a particular agenda. But really inherent in what Niels Bohr meant by complementary was contradictory. These are not commensurable pictures. We cannot put these pictures together—wave and particle. You cannot put the picture together of "it's decayed" and "it's not decayed" for this radioactive atom.

As I said, the whole idea of inherent existence, an objective existence of phenomena independent of the observer, independent of the way of looking, independent of the way of measuring—that got fractured, it got broken in a very profound way. It became clear that what we see depends on how we look, depends on how we measure. What manifests depends on how we observe.

This was also found to extend to the past. We think, okay, what manifests now depends on how I observe. But what seems to go even further—what does go even further—is the fact that a measurement made now seems to determine what happened in the past. So in other words, was this particle a wave or a particle? Did it manifest as a wave or a particle in the past? It can depend on a decision I make about how I look at it, how I observe, how I measure it, actually billions of years later. So how the Big Bang was in its details, for example, is something that depends on how we look now.

This was originally an idea proposed by physicist John Wheeler, and recently it's been corroborated in the laboratory on a smaller scale, but the principle remains. How we look now determines the sense we have of what happened in the past, what was actual in the past. There is no inherently existing past. It also

depends on how we look.

You can hear, I hope, just how radical some of these findings are. Victor Mansfield is a physicist and also a Buddhist practitioner who has written a couple of books on this kind of material. He basically reports that we have an idea that a particle goes from here to there and we can trace its route. This is the flight path, so to speak, from A to B. And we can presume it took that path or we can observe it taking that path. And actually, that's not the case.

He says, "Our conception of nature is at fault. The natural yet incorrect assumption that the photon or electron or whatever has a well-defined trajectory, a well-defined path, as it works its way through the instrument in the laboratory or whatever it is, whether or not we look and whether or not we know that trajectory—it must have had one." So that's wrong. It's simply wrong to imagine that the past already exists in full detail in the present. So now he's talking about that absence of inherent existence of the past as well.

Light, and indeed all matter—electrons, protons, and everything else—does not take on either a wave or particle nature until we decide at the last possible moment whether to measure its wave or particle properties. Prior to our choice, its nature remains fundamentally ill-defined.

The profound implication is that the history of the universe is not written out in full detail. Such a fully defined and explicit past is an imaginary construction, a theory, a mental imputation—what Wheeler calls "a giant prejudice." While we can normally get away with believing in an objective past that exists in complete detail in our everyday lives, quantum mechanics reveals that at the deepest level, we must actively participate in defining the universe. Reality is not sitting out there, fully objective and independent, waiting for us to reveal its pre-existent, well-defined, intrinsic nature.

The parallels with how we teach emptiness and the radical dependence on ways of looking should be apparent. Wheeler continues: "Quantum mechanics demands that we abandon some of our most cherished beliefs about the world. Particles and waves do not exist simultaneously in some definite way, only waiting for us to call one of these properties forth. Prior to our measurement, prior to observation, the system is truly indefinite, lacking in independent existence."

There's also a complete collapse of our conventional notion of causality. Since causality requires definite objects exchanging energy or exerting forces on each other, is it any wonder that independent existence and causality fall to the ground together in quantum physics?

These ideas about the lack of inherent existence of the past were further developed by Richard Feynman and his colleagues Murray Gell-Mann and Jim Hartle in what became known as the consistent histories approach—different ways of understanding this fundamental absence of inherent existence, not just in the present, but in the past as well.

We could catalog countless such findings and observations—startling, radical, mind-blowing discoveries

that shatter our conventional assumptions. Many of you are familiar with Einstein's relativity theory and the fact that time itself, the measurement of simultaneity between events, depends entirely on the observer's frame of reference. There's no absolute simultaneity independent of perspective—it all depends on relative motion. The same applies to distance: lengths contract, space and time become relative rather than absolute.

But it's not just time and space that prove observer-dependent. Mass—how heavy something is—and the energy of an object all depend on motion and perspective. These seemingly fundamental properties that we assumed were inherent and absolute have been systematically fractured and decimated as coherent, independent notions.

Even more startling is a theoretical prediction that, while not yet directly measured, has strong theoretical support: when someone is accelerating—whether in a rocket or simply being pulled by a rope in the vacuum of interstellar space—their measurements reveal a completely different reality from that of a stationary observer. Where the stationary observer sees empty space devoid of particles, the accelerating observer measures space filled with a hot gas of particles. What's there or not there, the very existence of matter, depends entirely on perspective and way of looking. Temperature, the presence or absence of particles—all relative to the observer's state.

This catalog of baffling results continues to grow. Many quantum physicists simply get on with their work—calculating atomic decay rates, building computers and electronic devices, even constructing weapons—while essentially shrugging off these profound implications. They can achieve remarkably accurate calculations and successful engineering without grappling with the deeper questions: What is actually going on here? What does this do to our fundamental sense of reality?

For some physicists, this entire quantum revolution strikes a deeply wrong note. Something must have gone awry somewhere; there must be some fundamental error. Among that relatively small portion of physicists who actually care about the implications for ontology and epistemology—for our understanding of reality itself—there remains significant controversy.

Let me share another perspective from physicist Marcus Appleby, whose language echoes remarkably the terminology we use in discussing emptiness: "In quantum mechanics, what you see depends on how you look. Make one kind of measurement on the electromagnetic field and you will obtain results consistent with it being a smoothly varying wave. Make another different kind of measurement and you will obtain results consistent with it being a collection of discrete particles. Which of these pictures is the true one? Quantum mechanics declines to say, just as it declines to say what is going on in a physical system when no one is looking."

The fact that the outcome depends on the observer's decision as to which measurement to make casts doubt on the assumption that physics passively records events that would have happened anyway in the absence of experimental intervention. Again, there's this parallel with our perception as human

beings—is it a passive receiving? Is there even such a thing as bare attention? I'm not equating the two, but there's a parallel there.

He says this represents a subtle—though I don't think it's subtle—departure from the Cartesian ideal of total objectivity: the Cartesian ideal of the world trundling along like clockwork, independent of the observer, where potentially one can gather facts about the status of all things.

Marcus Appleby reflects on the history of physics since the quantum revolution in the early part of the twentieth century, noting that some, including Einstein, really objected to all this and said something must be fundamentally wrong. They tried to build alternative theories that were more congruent with the idea of things existing objectively and independently. But he goes on to say that no one can say for sure that Einstein's hopes will not be fulfilled at some time in the future, but it does seem that the effect of eighty years—probably more than eighty years now—of theoretical work has been to make these hopes look increasingly forlorn.

His feeling is that an adequate understanding of quantum mechanics ultimately depends not on sophisticated technical developments—not on new formulae or theories—but on some simple conceptual shift, something like the perceptual shift which occurs when one looks at a diagram like the Necker cube. You know those diagrams—drawings of cubes on a piece of paper where you can see the cube in three dimensions, and then you look again and the whole cube has flipped, as if you're looking at it from a very different angle. Or the duck-rabbit picture—those images where you look at it one way and see a duck, then look at it another way and what was the space around the duck now looks like a rabbit. Or those Escher paintings where there's a complicated scene that can flip in your vision to reveal a different scene where everything has a different context, geometry, and shape. But in all these—the Necker cube, the duck-rabbit, the Escher paintings—what you can't do is see both at the same time.

Then he goes on to say that quantum mechanics is not intrinsically weird. It only seems weird because we insist on looking at it through Cartesian spectacles—the spectacles we've inherited and absorbed almost into ourselves from the legacy of Descartes, Galileo, and Newton. Mind is separate from matter. Matter exists objectively, independent of consciousness, of the way of looking, of the way of observing, of the mind. And it's possible to get objective—at least in theory—measurements of the factual status of things at any time.

He says the problem is that Cartesian assumptions have become so deeply ingrained in our thinking that it's hard to find the right non-Cartesian spectacles.

So here's someone who isn't shrugging and just saying, "Well, whatever, I don't know, but I can get on with my mathematics and my calculations and my building computers or bombs or whatever." He's not saying he objects to these findings. He's saying what we need to object to is our insistence on our inherited and indoctrinated worldview about mind, matter, and how the cosmos is.

As these results presented themselves gradually over the years and decades in investigations in physics, at some point—stimulated by those puzzling results and by the wrestling of physicists with those findings and observations, but also by other factors—philosophers of science also began to question the whole conceptual underpinning of the scientific endeavor and approach itself. They questioned whether it might be not quite what it was racked up to be in terms of this notion—ranked up to be as an endeavor where the whole scientific enterprise was an approach to truth, a discovery of truth independent of any biases or fashions or ways of looking, independent of the conceptual framework.

Gradually, over the twentieth century and continuing still, many philosophers of science from different angles began to question the whole basis of the scientific method and what its relationship was to truth and its own kind of integrity.

Victor Mansfield offers a nice analogy here. He says the scientific method, with its demands of reproducibility, completely controlled environment, and quantitative measurement, is only one way of interacting with nature. Science is not a pure revelation of nature in isolation, but rather nature's response to our particular form of questioning. Exploring the issues of measurement in quantum mechanics leads us to realize that science is in part an expression of a unique interaction between nature and ourselves. In quantum mechanics—to our great distress, or to our great joy, I would add—we cannot say what nature is like independent of that interaction.

The scientific method has often been likened to a fishnet that captures certain kinds of aquatic life but allows many interesting forms to pass right through it. Because an extraordinarily beautiful little fish or alga escapes this net, should we deny its presence or reality in nature's ocean? Such elusive life forms might hold the key to a great deepening of our understanding.

He continues: if we do not understand the limits of the scientific method, then we are doomed to apply it where it hinders our understanding rather than enhances it.

He is a scientist, and I'm certainly not saying that science is rubbish or that it has no applicability, no use, no domain of relevance and import. But it often gets overextended. There is an overreach of the scientific method and project in what I've talked about before as scientism—believing that this scientific method and the worldview that goes with it, which is actually an archaic worldview at this point belonging to the mode of classical physics, can explain everything in the universe.

But it may very well be that this whole conceptual structure, this whole paradigm and the scientific method and approach, actually, as Victor Mansfield points out, only reveals certain things. Other aspects of reality, other phenomena in the universe, will simply not be picked up because you're looking with the wrong paradigm, with the wrong lenses.

As I said, how would we ever ascertain meaning in the universe or meaning to the cosmos? Right from the start, such things are barred from the scientific method. It's a methodology of approach that has at some

point surreptitiously become a conclusion and is claimed as a fact. It has overextended its reach.

What we see depends on how we look.

What we see, and part of how we look, is the whole conceptual framework or paradigm. Thomas Kuhn, the famous philosopher of science, wrote that paradigm is prerequisite to perception itself. This means that we're always approaching phenomena—whatever phenomena—with some kind of conceptual framework, informed by some kind of history of what it's important to look for. What are the important questions? What are the salient features here? And our whole gaze, our whole perspective is engineered and conditioned and limited and empowered, both, by that paradigm, whatever that paradigm is. What we see—perception itself—depends on that paradigm to a great extent.

As I said, there is quite popular now a certain current, both among certain scientists but also among many lay people, this kind of overreach of the scientific method and an over-claiming of its conclusions. One unjustifiably makes certain conclusions about what is established fact in the scientific world. This is quite common with some neuroscientists or with people who are hovering at the interface with the world of neuroscience—some psychologists and different kinds of people—when they claim that mind and consciousness arise from matter. They say it can be explained purely in terms of neurological or electrical impulses in the neurons and synapses, as if that was an established fact and conclusion that had been proven. But it has not. It absolutely has not. But again, there's this kind of creep of claim.

There are, as I said, limits to the scientific method that some people are becoming aware of or have written about from all kinds of different angles. If we take that example I just talked about—this idea that actually there is only matter in the universe—it can be called a philosophy of materialism or, less ambiguously, a philosophy of physicalism. But it actually doesn't explain and cannot explain—there's a kind of quantum leap, metaphorically, between matter and mind, between the properties of matter and the properties of consciousness, and no one has bridged that gap yet. Is it possible? I don't know, but it's not an established fact.

It also leads to certain strange paradoxes and contradictions. For example, just reflecting on this: if we go with this, entertain this idea of a sort of fundamental physicalism—in other words, there are just material entities in the universe—and what happens in consciousness, or the fact of consciousness itself, and the contents of the mind in consciousness, they're essentially just material, because that's really what's real: matter. If we follow that a little bit, then mind contents are essentially—some people actually think this way or articulate this way—"I feel happy, it's just some chemicals and some neurological synapses firing. There's no inherent happiness. It's just a kind of illusion, because all that's real—self isn't real, emotions aren't real—there are just states of material particles."

What that means is that something like suffering is an illusion as well. It's just atoms and molecules moving in certain ways, interacting in certain ways in the brain. But actually we don't live or think like that. Even someone who claims allegiance to that idea as a philosophy doesn't actually live like that or

think like that. And we don't run our societies that way. At least we try to, or say we do, take human suffering seriously in law and in ethics.

But if we really hold to this kind of project of proving everything is just the movement of atoms and material particles and their interactions, then it brings some strange conclusions that aren't actually congruent with how we actually live and view the world.

We can go a stage further and say: if you say suffering is kind of real, or at least respected, even though it's fabricated or built as a mental construct from simply matter—it's really in its essence just matter, there's no person suffering, there's no actual suffering, it's just some neurons creating a certain impression, but all that is just matter—if you say that, actually, then so is happiness, and so is a sense of beauty, and so is love, and so is soulfulness and meaningfulness, and the sense, perception, and conception and thought of divinity. All that, actually, is in the same category, if you like, as suffering. They're all kind of illusions based on, fabricated by, built by some kind of constellation or state of purely material elements, particles.

So all that—happiness, beauty, joy, love, soulfulness, meaningfulness, the sense of divinity—are as real or unreal as suffering and pain, even physical pain. Atoms don't hurt. They're just atoms in combinations. All these things, then—happiness, beauty, love, suffering, soulfulness, meaningfulness, sense of divinity, the perception of divinity—all are merely the movement and interaction of material particles or atomic particles that aren't immediately perceived or conceived as such. There's a conception of them as something different, there's a sense of them as something different, but really what they are is just that.

What that does, if I take this strange philosophy of physicalism to its extreme, is that it actually ends up inverting itself and kind of legitimizing all these areas of experience that are so important to us: happiness, beauty, love, meaningfulness, sense of divinity, soulfulness—legitimizing them just as much as we legitimize our suffering and our need to care for suffering and our respect for it. All are equally worth respecting or disrespecting. All have equal value: perception of divinity, beauty, soul, as much as physical pain.

So it's a strange philosophy. There's a kind of hurdle—would be an understatement—an abyss to straddle, to find the connection between mind and matter.

This kind of overreach and overclaim by those who profess allegiance to total physicalism—that material particles are all there is in the universe—leads to some strange paradoxes and conclusions.

In the world of philosophy during the twentieth century, partly instigated by the puzzling and shocking results from quantum physics, philosophers and philosophers of science in particular began to re-question the whole relationship between science, the scientific endeavor, and truth itself.

Marshall Walker states that no claim is made about the reality of a scientific model. I want to share a few quotes with you from Joel Weinsheimer's work. Walker continues: "The sole criterion is successful prediction from the simplest, most convenient, or most satisfying model"—successful prediction rather

than truth, from the simplest, most convenient, most satisfying model.

As Larry Loudan observes in *Progress and Its Problems*, theories are just as modest as models. "One need not," he says, "and scientists generally do not, consider matters of truth and falsity when determining whether a theory does or does not solve a particular empirical problem."

But philosophers, he points out, even if scientists are not concerned with truth—at least don't claim to be concerned with truth—philosophers have been. "The preoccupation of classical philosophers of science has been with showing that the methods of science are efficient instruments for producing truth, high probability, or even closer approximations to the truth. In this enterprise they have failed dismally."

So the criteria of science shift radically. Thomas Kuhn wrote a very influential book in the 1960s called *Th e Structure of Scientific Revolutions*. He suggests that we may have to relinquish the notion, explicit or implicit, that changes of paradigm carry scientists and those who learn from them closer and closer to the truth. The whole idea of science marching onward, closer and closer to the truth, with occasional shifts of conceptual framework—like the transition from pre- to post-Einstein theories of relativity—and the assumption that such shifts bring us closer to truth, is very questionable to him.

Imre Lakatos explains most clearly how "the sure and steady advance of science toward the truth suddenly degenerated into a rout." He writes: "For centuries knowledge meant proven knowledge—proven either by the power of the intellect or by the evidence of the senses. The proving power of the intellect or the senses was questioned by the skeptics more than two thousand years ago." This goes back to the Greek skeptic philosophers who questioned these foundations. "But they were browbeaten into confusion by the glory of Newtonian physics."

As I mentioned, this revolution—the scientific revolution—was so dazzling in its power to predict, build technology, and gain mastery over nature that the philosophical skeptics were essentially silenced. Lakatos continues: "Einstein's results again turned the tables. And now, very few philosophers or scientists still think that scientific knowledge is, or can be, proven knowledge. But few realize that with this, the whole classical structure of intellectual values falls in ruins and has to be replaced. One cannot simply water down the ideal of proven truth."

Something very fundamental has been decimated; some vessel has been broken in the whole structure and idea of what science is doing, how it's progressing, and what its venture is in relation to something called truth.

The clearest example of how this whole notion of truth was brought into question emerges from the history of Newton's theories of gravity and mechanics. They were immensely successful and very accurate in their predictions and power. Then Einstein came along, particularly with his general theory of relativity, offering a completely different idea of what gravitation was—a completely different understanding of space and time. Together with this came mathematical equations describing that theory

and carrying its predictive power, regarded as fundamental and universal laws of the cosmos, that were very different from Newton's.

The two theories had different ideas and models of gravity—what was happening, what it was, how it worked—and different equations describing that process mathematically. Some calculations about observed measurements will be just slightly different coming from Einstein's theory, but the fundamental edifice and ideas of what is actually occurring—in other words, the model of the universe, the model of reality—is radically different in Einstein's theory of gravity.

As Lakatos observes, "Newton's theory, the best corroborated of all scientific theories, turned out to be at best incomplete and at worst false, because it was superseded by Einstein's theory." It remains questionable whether Einstein's hypotheses might also become superseded or contradicted in the future. Even if they are corroborated, they should not be called true, because one never knows when an entirely different model or theory might emerge. Again, it might have only minutely differing predictions in some contexts about what we would observe, but the whole model of what is actually happening could be radically different.

All this calls into question: What exactly is the relationship between scientific theories—even when they seem to have been corroborated by experiment and observation many times—and truth and reality? This questioning remains very much alive in the world of philosophy of science.

Again, to quote Thomas Kuhn: "The developmental process described in this essay has been a process of evolution from primitive beginnings—a process whose successive stages are characterized by an increasingly detailed and refined understanding of nature. But nothing that has been or will be said makes it a process of evolution toward anything."

The evolution of science, in his view, is not an evolution toward something called truth or a truthful representation of reality. He calls all of this into question. "Inevitably, that lacuna, that gap, will have disturbed many readers. We are all deeply accustomed to seeing science as the one enterprise that draws constantly nearer to some goal set by nature in advance. But need there be any such goal? Can we not account for both science's existence and its success in terms of evolution from the community's state of knowledge at any given time? Does it really help to imagine that there is some one, full, objective, true account of nature, and that the proper measure of scientific achievement is the extent to which it brings us closer to that ultimate goal?"

So you can hear how radical these questions are to those of us who have grown up with a certain view of science, and that includes our contemporary culture.

There's a philosopher called Jean Grandin who talks about a conception of truth in philosophy which is different from the normal conception. He writes: "In dialectic, in that kind of philosophy, thought continually takes up new forms without there being postulated unconditionally a process of successive

approximation to truth." This is the same thing that Thomas Kuhn is saying.

But then Grandin adds: "In philosophical hermeneutics" — in that branch of philosophy, that approach to philosophy — "this infinite process is designated as 'truth.'" So truth becomes, the whole notion of truth becomes, in these philosophers' approaches, something very different from a kind of fact which one either arrives at or doesn't, represents accurately or doesn't. It's a process, and it's infinite and open-ended. A very, very different conception.

There's another related debate about the nature of scientific theory and truth. Among others, there are two theories of truth, if you like, or theories of theories of truth. One is called the correspondence model. The correspondence theory says this theory, in what it depicts and the model it lays out, corresponds to reality. In other words, reality is like this, and the model mirrors it. And that's what truth is — that's what truth is in science, that's what truth is in theory or anything else.

In competition with that theory, there's what's called a coherence theory of truth, which abandons the idea of this possibility of ascertaining whether we have an accurate representation — an accurate and final representation of truth, or even if we're moving towards that accurate and final representation, as someone like Karl Popper would claim — and replaces it with the coherence theory of truth. What that really means is that the different components of this theory, whatever it is, this model of the universe, they cohere, they make sense together, they fit with each other, and they fit with other things that we know or other models. If you have a coherent theory, or the more coherent the theory, the more we are entitled to call it true. But that's a different claim than saying it corresponds to some reality — that this is now an accurate replica of reality or representation of reality.

All this has gone on in twentieth century and twenty-first century philosophy — the whole notion of truth, and in particular of science's relation to truth, has been called into question, decimated, opened up. Over the twentieth century and beyond, partly stimulated by findings in physics and the theories of quantum physics and relativity, the whole revolution in physics that happened in the twentieth century. Partly stimulated by that, with the suggested implications that there is actually not an objective, independent existence of things, of matter or anything.

Partly also, reflecting and stimulated by those findings, there were philosophers of science who began questioning the limits of the scientific method, but also, even more fundamentally, science's relationship with truth per se, and what truth actually means. Does science in fact reveal or even approach, approximate truth?

There were also other movements in philosophy that had, on the face of it, nothing — they weren't propelled by scientific discoveries. There were other considerations: political considerations, purely philosophical considerations, linguistic considerations, cultural considerations, historical considerations. Certainly in the twentieth century, even before that, starting with Nietzsche, into Heidegger, Derrida, but you could say even back to Kant — Immanuel Kant questioning the possibility, questioning that it is

possible for us to have access to an objective, independent truth, and questioning the kind of hubris that would assume that we either do or can.

So there's a whole current in Western philosophy that questions that — depending on where you start that current historically doesn't matter — but it kind of reaches its zenith in maybe the eighties or nineties, where sometimes if you pick up any article, whether it's philosophy or articles on comparative religion even, or all kinds of things influenced by that trend in philosophy to denigrate any assumption of reaching some kind of objective truth about anything, and to denigrate even the possibility of doing so. Sometimes it's almost comical picking up some articles — they seem to sort of start with "I'm on the right side, I don't claim anything about absolute truth, and of course I wouldn't say anything like that" — a kind of "don't shoot me, I'm on the right team" thing.

There's that whole current, but again, what's interesting to me is that one of the things that's interesting is even with those philosophers who say that there is no access to truth, or there is no truth, or we don't presume that, it's not possible, we don't postulate any kind of realism — how easily and surreptitiously it sneaks back in, or it is sneaked back in, or it's actually never really been abandoned. The philosopher or whomever has not even realized that they haven't abandoned the notion of a basic reality or an ultimate truth in this or that area or domain of being or existence.

That definitely applies to some physicists who work in the area even of quantum physics, as I mentioned earlier, but even more so the philosophers who sort of tend to emphasize this point or this disclaimer and judgment even on the notion of the possibility of some kind of access to an ultimate truth or a principal truth. Still, it sneaks back in, or it actually was never really abandoned in some area or another.

If we go back to the philosopher J.N. Findlay, who is a very interesting and unusual character in twentieth century philosophy in that totally against the stream and almost in isolation, it seems, he did postulate ultimate truths, kind of mystical absolutes. There are some parallels with what we might call emptiness, but it's really something different. I may hopefully come back to this later in this talk. So he was criticized by anyone who bothered to pay attention to what he was proposing and writing about, working as he was very much on the sidelines of the academic world.

But he was criticised for these reasons, with people saying that what he was proposing was meaningless or self-contradictory or problematic in various ways. In response to these criticisms, he wrote something quite profound. Whether or not his ideas were indeed self-contradictory and empty notions—which was partly what he was being accused of—he observed that "self-contradictory and empty notions play a vast part in human experience and attitude."

There's tremendous wisdom in this observation. Self-contradictory and empty notions play a vast part in human experience and attitude. This is certainly true of humanity's limiting notion of absolutes. As I mentioned, he was interested in a certain kind of absolute, a mystical absolute. He continues: "Even philosophies which repudiate absolutes in their logic and have professedly built up radically contingent,

value-free systems generally smuggle in absolutes of some sort—matter, logical space, the totality of atomic state of affairs, and so forth. The paradoxicality and ineffability of mystical absolutes is simply a logical consequence of there being absolutes at all."

Two crucial points emerge here. First, that self-contradictory and empty notions play a huge part in human experience and attitude—a very important recognition. Second, as I pointed out earlier, even when people claim they don't believe in absolutes or ultimate reality, they usually do so implicitly. Whether that absolute is matter—probably the most common choice—or the totality of atomic states of affairs, they maintain some notion of basic reality.

This pattern appears extremely commonly, not just in academic philosophy but across all kinds of contexts. Sometimes when I teach about emptiness, someone will respond enthusiastically, saying they really appreciate the teaching and find it sensible. Then they'll mention something about the brain and how it aligns perfectly with what I'm presenting—how the brain processes information to create different perspectives, or how neurological processes explain perceptual illusions, or they'll try to account for fabrication from a neurological standpoint.

What's virtually explicit in this approach is that brain and neurons and matter are more fundamental than emptiness or fabrication. They become the agents that fabricate, that create perceptual illusions. This establishes a causality resting on neurons and neurophysiology. But as I mentioned earlier, no one has actually proved this causality. It may be that neurological networks are an indispensable part of perception, mental functioning, and mind, but what's been demonstrated so far is merely correlation. There's corresponding neurological function that may be necessary, but not necessarily sufficient for mind.

More importantly, there's a kind of smuggling back in here. One hears teachings about emptiness, reads about fabrication, and then reintroduces a supposedly more fundamental notion of brain, neurophysiology, and matter. This approach forgets that matter itself is empty—whether we arrive at this understanding through physics or through deconstruction based on emptiness. Matter itself is empty. Time is empty. Space is empty. And without time and space, as we discussed earlier, there can be no notion of causality. Causality depends on time.

In the teachings of emptiness that I favor, fabrication itself is not ultimately true. You cannot explain perception at an ultimate level. At a conventional level, certainly, you can explain perception through fabrication and examine how this works phenomenologically. But it's not an ultimate truth because causality is empty and not ultimately real. Time is empty, so the temporal framework in which fabrication occurs is empty. What is fabricated is empty, and what fabricates is empty.

Any model or proposition that retains neurophysiology or matter as a fundamental basis is insufficient, in my view, because it fails to account for the emptiness of time, matter, space, and causality.

This represents just one common instance, but even among professional academic philosophers, it's very frequent for ontological commitments and allegiances and preferences to leak out despite their professing that there's no ultimate reality, no realism they're postulating, no privileged point of view—no privileged way of looking at things, no single correct perspective.

Take Richard Rorty, for example. He would frequently say and write such things, then let slip something like "the universe is just made up of purposeless movement of atoms." It's almost caught in the cracks of his argument—he's too sophisticated to state it directly, but when he's perhaps not paying sufficient attention to his writing, it tumbles out. That's actually the underlying view.

Or consider Michel Foucault, who wrote: "We should not imagine that the world presents us with a legible face. We must conceive discourse as a violence that we do to things." We must conceive conceiving as a violence we do to things. But how can we do violence to things unless things exist in a certain way in reality prior to our discourse, prior to our conceiving? Do you see the contradiction?

So the whole notion of doing a violence to things presumes that things already exist in a certain way that we can do violence to. It's built like this, and we smash it or we distort it by our discourse, by our conceiving, by our perspective. So even these champions or apparent champions of non-realism are often betrayed by their allegiances, their predispositions, their preferences and, if you like, agendas are betrayed in the cracks of their writings and language.

As I said, all this talk of non-reality and this kind of dismissing and pulling, tearing down assumption of the attainment or even the possibility of attainment of some kind of privileged perspective or ultimate truth about anything at all reached its zenith—that whole movement in philosophy—perhaps in the eighties and nineties following the writings of Derrida and others in what was called deconstruction in philosophy. Cyril O'Regan wrote about this and pointed out, I think, really importantly, that the art of deconstruction—that whole movement to deconstruct arguments that propose or that seem to propose some kind of privileged perspective or truth about anything at all—is "a serious play that shows, unveils, uncovers the hubris of a discourse that would be complete."

In other words, you can get this complete perspective, whether it's about anything—a scientific perspective, a perspective on matter, on mind, on philosophy, on psychology, on culture, on ethics, on whatever. O'Regan continues: "Taken at its word, deconstruction cannot indulge in statement, meta-description, and, least of all, in prescription." In other words, if you really trust what deconstruction is proposing and attempting to do, then it must deconstruct itself. And it can't then offer a prescription—you should look like this, you should look without positing an ultimate reality. That would contradict itself. Or to consider itself a more privileged perspective would be to contradict itself.

So he continues: "That despite itself, it manifests a tendency to do so"—to indulge in statement, meta-description, and prescription, being prescriptive—"is evident." And then he cites a deconstructive philosopher, theologian Mark Taylor, saying that a particular work called *Erring* "clearly indulges in an

evaluative language of prescription and proscription, recommending this and prohibiting that."

He says you don't—I'm paraphrasing that a little bit—he says you don't find that so much in the work of Derrida, though even in Derrida's case "it is difficult to avoid the conclusion that he considers his own proposal to be right in the way the onto-theological tradition is not."

So onto-theology—I think it was Heidegger's word, or maybe Derrida's; I can't remember where it started—this postulate of: this is real, this is true, and this has privileged, almost divine status. *Onto* from ontology, *theo* from God. This perspective, or this statement, is true, is real, is privileged.

So Cyril O'Regan is pointing out, even in Derrida's case, all of these thinkers, they think that their proposal is right in the way that other proposals—say, for example, the philosophy of Hegel, which O'Regan is actually writing about in this case—is not. And then he continues: "Openness"—this openness of point of view—"is a prescription, a metaphysical or quasi-metaphysical recommendation. Closure"—the opposite, to say we've arrived at a truth now, this is now the best perspective we know, or whatever it is—"closure, a proscription, a prohibition, a quasi-metaphysical no-no." The deconstructionist use of the antithetical pair "closure" and "openness" has to be seen as "thoroughly evaluative."

So there's a kind of self-contradictoriness that runs through postmodernism and that whole philosophy, among other problems.

What is going on here? Why is this so? I think this is really interesting, and again, if we come back to John Findlay and something he wrote: "However much we may affect interest in the architecture of nature"—in other words, in science—"or its various departments, or in the various detached systems of ideas which proliferate abundantly in their glasting compartments"—in other words, in philosophical ideas—"it is plain that we cannot achieve clarity in regard to any of them without achieving clarity as to our empirical, conceptual and linguistic approaches to them. Without due study of these, we are more than likely to see our own thought habits and speech habits and problems merely written large on the cosmos. And there is, in fact, no easier way to fall victim to what is arbitrary and personal than to set out uncritically to be objective and impersonal."

So again, he's saying something about the whole approach—that we have to actually become more conscious of our whole way of approaching these questions we're investigating, whatever areas we're questioning. And without that consideration of our approach, our leanings, our frameworks—empirical, conceptual, linguistic—we're just going to project our habits onto the cosmos, inner and outer.

So our approaches, our frameworks constitute, in a way, or at least shape a part of what fabricates what we then conclude. Our approaches and frameworks, our paradigms—as Thomas Kuhn said, "A paradigm is prerequisite to perception itself." We can broaden, as we explore this more and more, we can broaden his statement beyond perhaps the limits of what he initially meant by it. And then, of course, whatever we're already assuming and what we might call ground assumptions that sneak in.

So I mentioned that René Descartes is regarded as one of the principal founders of the scientific method, and one of his main ideas, which many of you will know of course, is the question: Is it possible to place our method of inquiry and method of investigation and our reasoning on a really solid, clean foundation? A foundation we can trust, but also a foundation that doesn't drag in distortions, assumptions, that kind of baggage that would prevent a clear and objective seeing of the truth.

And so that was the idea. And then he postulated, well, what's the one thing I can trust? And he dismissed this and this and that and this. And he came down to this: "I think, therefore I am." This is the one thing I can trust, because he might very much question his conclusion there. But these are the principles: There's one thing I can trust. And on that one foundation, supposedly, I then proceed. And whatever follows from that is acceptable.

So it's what he would call radical doubt that underpins the so-called Cartesian method, the scientific method. You start with this, radically doubting everything. Is there one thing that's beyond doubt? And then build things on that foundation. And that's supposed to be as pure and clean and objective, distortion-free, value-free, assumption-free, desire-free method to follow.

However, as a number of philosophers have pointed out since then, there's something a little fishy here when you read his work and regard his opus. There's more than one thing, but one thing I'd like to focus on right now is something Charles Peirce pointed out.

Charles Simon Peirce was a quite influential American philosopher. Quoting Weisheimer again, Peirce observed that no one who follows the Cartesian method will ever be satisfied unless he has formally recovered all those beliefs which he has given up. In other words, someone professing to follow this method of radical doubt and that kind of antiseptic cleaning of all the mechanisms of inquiry and cogitation and deduction and observation will try to recognize what they believe and sweep those beliefs to one side. But then, actually, there's something operating that won't ever be satisfied unless he has formally recovered all those beliefs which he has given up. You have a process where what you're trying to do is recover those very beliefs that you had made a big deal of putting aside.

Weisheimer goes on to add to Peirce's comment: "It is not by accident that in matters of faith, for example, however heretical the Cartesian method, its results were quite orthodox and traditional." Here's this very heretical and radical methodology of inquiry and epistemology, but he ends up with—in certain areas at least—exactly the conclusions that were already there, the assumptions that he was already bringing to that inquiry. They were quite orthodox and traditional. The method itself seems a circular detour, less an exercise of self-sovereign reason than of rationalization.

There's a big trumpet blowing that we're going to be completely independent in our reasoning and observation, independent of any influences and conditionings and assumptions—distortions, wishes, desires. That would constitute so-called self-sovereign reason, if there even is such a thing. But the point is, actually, he's just rationalizing what he already was taught in childhood and had believed. Weisheimer

goes on: "Descartes himself does not so much make a radical beginning as justify the beliefs that he had accepted as true from an early age."

Peirce made that observation, and Heidegger, in his *Being and Time*, reached the same conclusions about Descartes. Little time passes and other thinkers look back on that proclamation of Descartes—"this is what I'm doing, this is how it works"—and shine a light on it, and it doesn't look quite as spick and span clean and pure as Descartes presumed it was or claimed it was. He's dragging back in assumptions—or really, they were never removed in the first place.

Then there's the whole question, which I've touched on before, about motivation. What is actually guiding us or pushing or pulling us, propelling us in one direction or another in regard to questions of ontology and epistemology, of reality and knowledge? It's almost like we bring back in a consideration of psychology. What's happening psychologically for this person or that person that they're actually looking to make a certain conclusion, and indeed they do make a certain conclusion? They end up with the conclusion that they had been wanting to make anyway.

There was a man called Fiertz who wrote a biography about Newton, the physicist Isaac Newton. He points out—I'm quoting from an article by Christian von Baeyer—"The source of Newton's deepest ideas about nature, Fiertz found, were his religious beliefs." Absolute space, for example, is a manifestation of God's ubiquity—God just being everywhere, totally everywhere, equally and totally everywhere. Absolute time is an expression of God's eternity. This suggestion is not introduced idly or speculatively, but explained explicitly and in detail in the *Principia*, Newton's great work on physics.

In Newton's words, translated from the Latin: "God lasts forever and he is present everywhere, and by existing forever and everywhere he has established duration and space, eternity and infinity." What's more, the idea is supported by biblical references. For example, Newton quotes St. Paul in Acts: "For in him we live and move; in him we exist." God is space, in other words. What could be plainer? This is actually an old Jewish tradition—the word *makom* for space is one of God's names in the Jewish tradition. While God's nature appears as space and time, his dominion appears in the form of natural laws. And the most obvious effect of his actions is gravity.

Christian von Baeyer goes on: "It seems that for Newton the purpose of physics was not at all to reveal the mechanism of the world, as his followers down to our time imagined; rather it was to demonstrate God's influence on the world. Since God is utterly incomprehensible to us, the laws of nature, such as universal gravitation, are incomprehensible too. Anything we can say about God is merely symbolic, and therefore the laws of nature are symbolic too."

You can point this out for other physicists like Kepler and others. What's driving the motivation here? Contrary to what many people suppose, it was actually a religious sensibility and a religious agenda. He wanted to prove something about God. Newton was actually clear and explicit and very open about that connection, about what drove him, about his reasoning.

What's much more problematic and insidiously dangerous is when both the assumptions of reality and the motivations are not explicit, when they're actually implicit. This is what we get a lot today, particularly in the discourse and philosophies of the secular worldview. Many of the assumptions, conscious or unconscious, on which the conceptual framework and worldview—the Weltanschauung—of secular modernism rests are not made explicit. In a way then, the assertions and the views are dogmatic because they're not explicit.

If you lay something out, there's a way that it's less dogmatic. People can say, "Well, I disagree with that bit." If you hide it, consciously or unconsciously, it becomes a kind of dogma.

It's not quite clear what things are resting on or what to question. And then even more so with the motivation.

I've picked up this point before in the past. Why is it that I'm presenting a picture of the cosmos like this or like that? Why is it I am so keen to insist on a meaningless cosmos as almost a dogmatic point of certainty, or as if it's been proved somehow? What's going on for me psychologically? Why is it that I desire that kind of cosmos?

Now this applies also to any other view. So this question about motivation and underlying assumption and approach—I'm going to say three considerations. Three considerations. That applies also to the view of radical emptiness. It applies if we are kind of in favor of or trying to present notions of spiritual absolutes or metaphysical realities or whatever.

So I think it's really important to realize this—the place of agenda and motivation, which is very often certainly not made explicit and very often not even conscious. I've talked about this before. What kind of self and world do I want to kind of paint for myself and then inhabit? What's my predisposition? So yes, what are my assumptions that I'm not questioning and I'm not even sharing with others? I'm assuming this and this. What is in the whole framework of the way I'm approaching things linguistically and conceptually, and what's going on in my motivation about how I want to conjure the sense of the stage, the theatre of self and world?

So really important, I think, to realize this—all of us, all of us, whatever our inclinations and hopes and allegiances are—to realize this and to admit it, bring that into the discourse. Then it's almost like a whole other level of honesty, transparency, but also range and openness and complexity comes into these kind of debates and arguments and this kind of discourse and thinking.

To throw in even more jittery-making considerations and observations into the mix—things that shake us up a little bit and shake up the ground, make it all a little bit less certain, certainly more complex—is also, I think, to point out that epistemology is personal, it seems to me.

So I've noticed, particularly in the area when teaching emptiness to people or talking with them about emptiness and about if they're on this journey of deepening understanding and exploration of emptiness,

what is it that actually gives a person a deep conviction in emptiness? And what's interesting to me is that it varies, so not everyone will be convinced by the same either meditative experiences or reasoning underpinning meditative experiences or philosophical analyses or whatever it is. It's quite individual.

What makes this person convinced at a very deep level of their being—that they would build their life around it and stake their life on it and that it affects their life deeply—what makes this person convinced deeply, let's say, about emptiness is very different than what makes this person deeply convinced about emptiness. And yet they both have a deep conviction, a deep, ingrained, passionate and powerfully effective and liberating conviction in emptiness.

This, I think, again, just observing over the years from teaching, is really interesting. For person A and person B, in those examples, what was convincing for person A is totally unconvincing for person B, and vice versa.

So there's a kind of... And when it comes down to how we're going to live, how we're going to orient ethics, how we're going to make choices in our life, what kind of liberation we're living out, then epistemology has to be personal in the sense that I have to trust it. I have to trust this knowledge or this insight or this reasoning or that perception or whatever it is. It has to be personal.

And when I observe what makes a difference for people—that actually they have this personal sense of something that they can trust—it really varies quite a lot. So I think that's very interesting.

And as I pointed out, I think, in one of the earlier talks in the series, it might be for some people, if we just talk about emptiness for a second, that they are in fact taking the teachings of emptiness and the conclusions of emptiness and the ontology of emptiness—they're taking it on board out of trust for some authority or a particular teacher, or sometimes it's me or whoever else, or some teacher from history.

What's interesting in Tibetan Buddhist teachings is they have a whole—it goes back to Mahāyāna Indian Buddhism—there was a whole exploration of these questions of epistemology. What knowledge can we trust? How do we... If you have a certain experience in meditation, how do you know whether you can trust that experience or not? If you're walking down the street, how do you know what you can trust in terms of your perception? If you're reading spiritual scriptures or whatever, how do you know what you can trust?

And so they really try to explore and expound and expand this whole area and these questions of epistemology. And one of the categories of valid epistemology is scriptural authority. In other words, you can trust this because it says it in that book, and that book's a good book.

So it might be easy for us sometimes, for some of us, to kind of poo-poo that. But again, what's interesting to me is just what a range there is in personal epistemology. In other words, what makes a difference for different people?

What really makes a deep difference so that they build their life, their choices, their risk-taking on a basis that's personal for them? It has to be personal to have that kind of faith in it. Because when we talk about epistemology, we're talking about what knowledge can I trust - it's a foundation. I dare to put my foot there because the ground is solid. That kind of knowledge.

Most of us, in a way, have that kind of trust of authority, even though some might hear what I just said about scriptural authority and think of the more familiar Buddhist teaching of "don't trust anything, come and see." The Dhamma is ehipassiko - to be seen for oneself, come and see for yourself. But actually there's this whole other teaching of scriptural authority as well. Most of us have this relationship with authority and trusting knowledge - with scientific authority, medical authority, and these kinds of things. Even if you might be suspicious of scriptural authority, we rely on it in many areas of life. We have to, because there's too much knowledge for one human being to master.

Sometimes people practicing sensing the soul and imaginal practice don't feel any need for ontological or epistemological explanations, clearings, groundings, or legitimizations. Someone might say of those people, "They're just willy-nilly trusting these images and these strange spiritual or so-called soulful perceptions. Why don't they question the reality of that? How do they legitimize that? Are they being lazy or sloppy?"

Perhaps someone would think that from the outside. But if you stand back and look at the whole picture, maybe they're not any more lazy than most human beings who have heard or read about the radical ruptures, conundra, and shifts of ontology and epistemology implied by modern physics of the last 120 years. As I said, we hear about all this from physics and what it implies, but it doesn't seem to affect many people deeply - not even the physicists themselves most often, and certainly not lay people. For some physicists, as I pointed out, there's not a vigorous and energetic pursuit of these questions of ontology and epistemology. So someone who has an affinity with sensing the soul and wants to explore that path might not be being any more lazy than the rest of us who don't pick up these other questions and conundra of ontology and epistemology that are actually the heritage, the legacy of our Western culture at present.

When you really start to think about epistemology, you realize that all and any epistemology - any sense of "I know this" or "this is knowledge I can trust" - is always, at some level, resting on assumptions. At some point, you'll reach an assumption that's basically unproven. If you say to someone, "Why do you believe that about what knowledge you can trust or what's real?" and pursue that question - "Why do you believe this?" "Because of that." "Why do you believe that?" "Because of..." - at some point, they'll just have to say, "I just believe it." Whatever reason they give, you can ask another question, and eventually it reaches a bedrock of unproven assumption.

All and any epistemology, any choice about what knowledge we can trust - whether conscious or unconscious - and by implication the ontology as well, the notion of what's real, rest on unproven assumptions at some point. There's a parallel here with the situation in philosophical hermeneutics and

the hermeneutics of literature.

We cannot get to the bottom of this. All and any epistemology rests on unproven assumptions. Can we realize this? Can we admit it? Do we even admit it to people we disagree with?

It's complex - all the things that come in here historically, psychologically, conceptually, philosophically - to actually stay true, to have integrity and thoroughness and steadiness and comprehensiveness with that assertion that there's no privileged perspective, that one is not asserting any ultimate truth or that it's not possible to do so. That's actually very difficult. There are slips and distortions and blind spots that come in for all kinds of reasons. Gaps, lacunae, shaky foundations, questionable building structures. Sometimes it's just lack of self-awareness; sometimes it may even be lack of honesty - self-honesty and honesty with others.

The position of what we might call deep emptiness - that there really is no ultimate reality, that there is no privileged perspective - is difficult to realize and difficult to sustain.

This position is also not as simple as it might sound. The fact that there is no real way something is, independent of our way of looking—that how it appears depends on our way of looking, and that it's not a something at all independent of our way of looking—these are all conclusions of the kind of deep, thorough exploration into emptiness that I would teach.

Yet all this does not equate to or allow us to say that all ways of looking and perceptions have equal epistemological and ontological validity, or that they are all exactly the same. There's something deceptively simple-sounding about the emptiness teachings, and it's possible to be a little lazy with them, a little sloppy.

What I said about epistemology resting on unproven assumptions applies also to the epistemology of emptiness. How do I know emptiness is true? How do I trust that insight, that perception? That trust—in other words, that epistemology by which I trust this insight, this knowledge, this understanding about emptiness—must also rest on unproven assumptions.

What do we do with all this? Sometimes what seems to be quite a common reaction is just to shrug and get on with things in the way that we're used to, which is basically the way we've been indoctrinated by a culture or subculture, or the way we're simply predisposed. But what ways are there—is there a way we can keep it all alive, creative, and still discover, so that there's some rigor, some integrity, some honesty, some challenge, some journey to all these questions?

For some people, given all this that I've shared—the revolutions in physics over the last 120 years, what's opened from the considerations of many philosophers of science regarding science's position vis-à-vis truth, questions of epistemology and ontology, what's been shown as the limitations of the scientific method, the calling into question of what we mean by truth—when we start to realize that we actually bring a whole package to these questions: conceptual baggage, linguistic baggage, methodological baggage,

tendencies of perception and observation, habits, motivations, and this recognition that epistemology is both personal and must at some level rest on unproven assumptions.

Is there a way we can take all that earthquake, all the fracturing of the ground that we have become used to over hundreds of years—and actually more than hundreds of years, because before the scientific revolution it was just a different kind of solid ground in terms of epistemology and ontology that everyone believed in, at least in the West—can we take all that fractured ground from those multiple earthquake realizations and honest admissions and actually retain something that has creative tension in it? Something that doesn't just end up with us shrugging and things going flaccid and sloppy and lifeless and uncreative?

Remember Stravinsky's insight about how when there are constraints, it's actually a more creative process. When he had restrictions on what kind of shape or rules the music he was composing had to follow, then it became a much more creative prospect. If anything goes, then actually we get a kind of flaccidity, sloppiness. There lacks the tension in the wire, in the material, in the soil for creativity—in terms of perception, in terms of how we relate to the world, in terms of sensing the soul, in terms of how we relate to ethics.

So looking at all this fractured ground, admitting all that, taking it in—are there ways to relate to it that still have some integrity, some rigor, some challenge, some possibility of direction and journey and following a thread, rather than it just disintegrating into some kind of wobbly, sloppy blanc-mange where everything is just okay? Because then it will correspondingly lack power.

With all this, some people—I have no idea what proportion—are able not so much to sidestep, but to find a particular avenue with all these questions of epistemology and ontology, and move in and out of the mode of what we might call the imaginal middle way, or a poetic sensibility, a poetic view of existence and experience, certainly the kinds of experience we talk about in sensing the soul and imaginal perceptions.

The poet W.B. Yeats wrote something—someone was obviously asking him about these matters—he said, "Some will ask if I believe all that this book contains, and I will not know how to answer." I don't know what book he's referring to, but the important sentence is the next one: "Does the word belief, used as they will use it, belong to our age? Can I think of the world as there and I here judging it?"

Does the word belief, used as they will use it, belong to our age? In other words, does it make sense anymore, given everything I've said? Can I think of the world as there, as independently existing, and myself here judging it as an independent, objective observer of an independent, objectively existing world? Of course, he was a poet and had access to that poetic sensibility, that imaginal middle way.

I came across an article in The Guardian by Stephen Tompkins that pointed out there's nothing in the Bible, Old or New Testament, or in the Quran, that states these texts should be read literally. There's nothing there saying you should believe all these stories and statements literally. This is something Henri

Corbin emphasized over and over again—it was really a big part of his agenda in his representations of various Islamic teachers from history: we're not talking about a collection of facts when we talk about the Quran, the Old and New Testament. We're talking about a symbolic opus.

The stories, the narratives, the parables—all of it, the whole thing is parable in the sense that it invites interpretation. And not just allegory in the sense that allegory means this represents that—where I figure out the code, so every time I read that, I understand this, and then the truth, the interpretation, the hermeneutics stop there. Not where I could rewrite the whole thing, substituting word X every time there's word Y.

So not allegory, which has a limited sort of "this means that," but what Henri Corbin calls *ta'wil*, from the Islamic tradition—this kind of open hermeneutics, open interpretation that holds the infinite possibility of interpretation, an infinite depth. Again, in our language, infinite unfathomability. I cannot box it in, I cannot reduce it to one meaning, one cause, one explanation, one representation. There's this endlessly fecund space that scripture—in this case the scripture of the Abrahamic religions—invites us into, and it behooves us to participate in that interpretation. It's something we meet, again create, discover. There's that possibility.

This is also a teaching you get in the *Zohar*, the Jewish Kabbalistic mystical text—a huge book from, well, depending who you believe, let's say the Middle Ages. And again, they're quite denigrating of people who just consider the Bible a collection of stories and historical data about whatever it is—the history of the children of Israel or whatever. While they might believe there's some truth in there, it's not just the Bible, not just the reports of those stories, whether they're factual or not, but also the events themselves that have this infinite hermeneutic. So there's again this idea, this possibility of infinite hermeneutic, this invitation to an endless interpretation.

So there is, certainly for Corbin, also in the events of life, what we would call the possibility of sensing the soul. It's not just what it seems. There are dimensions and possibilities there of imaginal middle way, this kind of poetic sensibility, this kind of openness and engagement in the endless and infinitely fecund possibility of interpretation, of hermeneutics, of image and symbol. That's one kind of stance with all this, one kind of thread of navigation with all these questions.

And again, I may be repeating myself, but I think it's important, so I will say it again. With regard to magical practice and the perceptions we have of the world through sensing the soul, given what I've said, it may be that humanity will not ever arrive at a fully complete and conclusive answer or truth regarding the ontic status, the reality status of imaginal images. So this philosophical question, again, can go on forever. And I think, rather than shrugging, I think it should. I think it's beautiful to engage in these questions with some rigor, with some integrity. What is true? What is real? What is not real? What knowledge can we trust? Even though we might never reach an answer, again, there's an infinite process there that's possible—not just unconstrained and not in relationship with the need to be coherent and to

correspond with our experience and our discoveries. But we may not ever reach an end there.

But phenomenologically, with regard to practice, we can notice that adopting or finding ourselves in the imaginal middle way—in other words, sensing images and soul-making perceptions and sensing the soul as neither real nor not real, as we talked about, this kind of theater-like quality—automatically that stance of the imaginal middle way, automatically and often effortlessly, allows us to have and feel, with respect to an image, a sense of duty with freedom. We can have duty with freedom, and we can have relative non-attachment.

So there's this imaginal middle way—again, it's between two poles, real and not real, two extremes, as they would say in the Dharma: the extreme of reification, the extreme of nihilism. And the imaginal middle way, in being between those two poles, also delivers a kind of middle way, that we can have a sense of duty and the power and the way the soul is touched by a sense of duty and the alignment that gives, and the devotion that gives in life. We can have a sense of duty with freedom and autonomy and relative non-attachment.

So again, the imaginal middle way delivers something between two extremes: a duty where there's no freedom and just attachment and no autonomy, or freedom and non-attachment and autonomy but no sense of duty. And that stance delivers that, as I said, automatically and effortlessly—this poise of the imaginal middle way, phenomenologically speaking, experientially speaking, in practice.

Similarly, we can have a sense of sacredness and meaningfulness without fixation or tightness. We can have a sense of depth that is open to more discovery, so it's not a depth and now this is finished.

So there's something about this poise in the imaginal middle way, experientially, that is very fertile. It gives us a lot—it delivers a lot of power. Not power over, but power into our being. Power for the journey, power for creation, discovery, power for navigation in life, power for meaningfulness that actually works in life. So the imaginal middle way is a very helpful, very powerful, very fruitful perspective. And it's important to notice that—that we get these gifts with it: freedom, energy, wonder, beauty, joy. They all come out of that imaginal middle way.

Conversely, we can see and notice and feel—and this is an invitation to actually, as I said, see, notice, feel what happens, what dies, and how these gifts are unavailable. They shrink, they close, they become unavailable when an image is reified or a sensing of the soul perception is reified or literalized. So again, we can look to the effects to inform our choices, our stances, our attitudes, perspectives and conceptions.

So there may be this endless, endlessly open and difficult philosophical journey to go on regarding ontology and epistemology. And there is this possibility of the stance of the middle way, the imaginal middle way, at least some of the time, much of the time, and this poetic sensibility. And this, phenomenologically, we notice yields really good results. We can trust it.

We can trust what comes out of that stance, what emerges from this poetic sensibility and the imaginary

middle way.

So that's one avenue of possibility out of this fractured landscape, this apparent fracturing of foundations regarding ontology and epistemology. There's also another territory I'd like to explore—one I began opening up toward the end of the Myriad Gates series, I think in the talks called "Icon and Eidos." There I pointed to the possibility of allowing a bit more reification, leaning somewhat more toward the reification pole within our spectrum of possibilities.

Is there a possibility of not being quite so strict or tight with the range of the imaginary middle way? Could we actually allow ourselves to lean more toward a kind of reification, permitting a kind of trust in the reality of certain perceptions and senses we have of things when we sense with soul? I'd like to explore that possibility as well—as another option for navigating this territory.

When we sense with soul, when we open to those deeper dimensions of perception, there arise certain knowings, certain senses of the nature of things that feel profoundly real and trustworthy. Perhaps there are times when we can honor that sensing, when we can allow ourselves to trust in the reality of what reveals itself to us through these deeper modes of perception, while still maintaining our awareness of the imaginal nature of experience.

This represents yet another way of working with the fundamental questions that arise when we begin to sense more deeply, when the soul's perception opens new territories of meaning and significance in our lives.

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