

ETERNAL QUESTIONS

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Brother Erikos, a Forest Monk of the
Black Eagle Stoic Monastery

“to explore the eternal metaphysical questions of our time”

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“God, the Fifth Force”

One of the most memorable and personally true statements about philosophy I have ever read comes from Berkeley philosopher John R. Searle. In “New Philosopher” magazine he is quoted as saying, “I think a lot of works of philosophy are like root-canal work, you just think you’ve got to get through that damn thing.”¹

Well, you may find this episode a bit like root-canal work, but if we are to know the cosmos as God we just have to get through the damn thing. In this issue, we move full speed ahead through the four forces of the universe, imagine 200 billion galaxies as a giant evolving brain, review traditional Stoic concepts of God as conscious and providential, then return to the 21st century with a brilliant scientist who has compiled a lifetime of evidence suggesting there exists a hierarchy of consciousness from atoms to cosmos.

Professor Searle is “recognized as one of the world’s leading philosophers,” according to the publisher of his book, *Mind, Language and Society* (Basic Books, 1998). And, frankly, in my opinion most of his book would also qualify as root-canal work. But, there was one statement he made on page 35 that I've never forgotten. This is what Professor Searle said:

¹ <https://digressionsnimpresions.typepad.com/digressionsnimpresions/2014/01/john-searle-does-not-like-the-theory-of-extended-mind-1.html>

We no longer think of odd occurrences as cases of God performing speech acts in the language of miracles. Odd occurrences are just occurrences we do not understand. The result of this demystification is that we have gone beyond atheism to a point where the issue no longer matters in the way it did to earlier generations. For us, if it should turn out that God exists, that would have to be a fact of nature like any other. To the four basic forces in the universe—gravity, electromagnetism, weak and strong nuclear forces—we would add a fifth, the divine force.

That's what he said. But before we talk about the divine force, it should be pointed out that Searle was smart enough to say nothing about what that fifth force might be. And, he apparently believed his readers already knew all about the four basic forces in the universe because other than naming them he doesn't say anything about them either. Let's take a moment to review the four basic forces. Note: for those listeners who already know all about them, don't worry, we won't be long.

Gravity

Of course we know what gravity is. We live with the Earth's surface gravity every night and day of our lives. But what you may not have learned in your primary school science class is that gravity is not really a "force" at all. According to Albert Einstein's Theory of General Relativity gravity is all about the relative size of objects and what they do to each other in space-time. The larger object *bends* the space-time thing the way a large body put in the middle of a sheet deforms its nice flat surface, making it bend down in the middle, which causes the smaller bodies arranged here and there on the sheet to fall toward the middle.

You probably already knew this. But what you may not know is that although this bedsheet theory of gravity holds together planets, stars, solar systems and even galaxies it is actually the *weakest* of the four so-called forces. And, it was Einstein's gravity that showed us in the modern world that the universe was *not* a static thing; it was "a moving, organic, expanding entity."²

BTW, Einstein didn't even believe his own theory about the universe as a moving, organic expanding entity, because he was convinced the universe was static. He was so convinced his mathematics was wrong he was prepared to add a cosmological constant to *stabilize* the universe. He was trying to fix something that wasn't broken. In the 1920s, Edward Hubble, using the Hoover telescope on Mount Wilson in Los Angeles proved Einstein's equation was right. The universe is truly a moving, organic expanding entity.

² This is a direct quote from Professor Jim Al Khalili, of the University of Surrey, UK, in his excellent XIVE TV documentary, "Everything and Nothing."

The Weak Force

The weak force is also called the weak nuclear interaction, and this force causes particles to decay. This decay happens, so physicists tell us, when one type of subatomic particle literally changes into another. A neutrino, for example, that gets too close to a neutron can turn the neutron into a proton, and that neutrino that got too close to the neutron becomes an electron. Happily, for our purposes, we don't need to know how this works.

It's only useful for us to remember that the activity of the weak force is critical for the nuclear fusion reactions that power the sun and gives energy to *everything*, everything that is alive. So, that's important, right? And here's another thing. The fact that the weak nuclear force causes particles to decay at a predictable rate is how archaeologists can use carbon-14 dating to find out the age of old bones that used to be alive. And now we come to the next force.

The Electromagnetic Force

OK. Those of you sitting in the back of the room need to wake up, because this force, the electromagnetic force, is not just about large and small objects in bent space, or nuclear fusion reactions and old bones, this one is about the world of light we live in today. But first the physics. Remember John Searle and root-canal philosophy? Well, unlike a real root canal we will only spend a minute in the dentist's chair.

The electromagnetic force acts between charged particles. Opposite charges attract one another; and, yes, it does sound like we're wandering into the dynamic continuum again. Anyway, the electromagnetic force is the force existing between two electrically charged particles, and in the modern world today everything electric gets its information from electromagnetic waves traveling through space at the speed of light. Electric charge is a basic property of matter, and when we discovered how to use this knowledge our familiar world of firelight fundamentally changed in a thousand different ways.

The Strong Nuclear Force

This is the strongest force in nature. But, of course, we haven't come to the Fifth Force yet. Anyway, when we call it the strong force we mean it. Compared to gravity, which we know is weak, even weaker than the weak force, the Strong Nuclear Force is something between awesome and really scary. It's 6,000 trillion trillion trillion times stronger than the force of gravity. Yes, it's 6 and 39 zeros stronger than gravity.

So, what is it? It's the force that binds the fundamental particles of matter together to form larger particles. It holds together the quarks that make up protons and neutrons, and the Strong Nuclear Force keeps the protons and neutrons of an atom's nucleus together. (In Stoic cosmology it's Pneuma, the divine force that holds things together.) And it is with these Four Forces that we begin to imagine the Fifth Force, God, beginning with its brain.

The Fifth Force, God as a Neural Network³

We are at the beginning of a new scientific paradigm that neuroscientists such as Bobby Azarian, Ph.D., believe may be the most profound paradigm shift in the history of science and philosophy. This bold statement builds on work done by none other than Stephen Hawking and numerous others who believe the cosmos is "a self-organizing system that evolves and learns in ways that are strikingly similar to biological systems."⁴

Azarian is a science writer who searches through current science literature to come up with ideas like "the most profound paradigm shift in the history of science and philosophy." He believes that today there is a growing library of evidence from the published papers of respected theoretical physicists and scientists in various fields that propose "the Universe is not just a computational or information-processing system, but a self-organizing system that evolves and learns in ways that are strikingly similar to biological systems (ibid)."

Many contemporary scientists are quoted in Azarian's work, including theoretical physicist Sabine Hossenfelder, once a famous skeptic, who now believes the galaxies are NOT distributed randomly but are clusters held together by gravity forming larger clusters connected by "galactic filaments," which are actually long thin threads of galaxies. Hossenfelder believes that "Crazy as it sounds, the idea that the Universe is intelligent is compatible with all we know so far (ibid)," but she admits that what she is proposing is not testable and is still in the realm of philosophy.

Theoretical physicist Vitaly Vanchurin published a landmark paper in a 2020 journal, *Entropy*, that agrees with Hossenfelder. According to our science writer Azarian this article claims the universe is literally a Neural Network "with an interconnected network of 'nodes' existing at the microscopic scale that is equivalent to the network of neurons inside our skulls. This network allows the

³ I would like to thank very alert reader Paul Aube F.C.S.P. for bringing the following information about the universe as a brain to my attention. This is very current cosmology. <https://bigthink.com/hard-science/the-universe-may-be-a-giant-neural-network-here's-why/> Researched and written by neuroscientist author Bobby Azarian and published by "Hard Science" June 12, 2023.

⁴ ibid

Universe not just to evolve, but to *learn*." If this is so, then "natural selection might be happening on all scales from cosmological and biological all the way to subatomic scales..."

This is a really big study, and for those who want more, please see footnote 3. We will just highlight a few of Azarian's research findings:

- Nobel Prize-winning biologist Gerald Edelman supports Vanchurin's proposition in what is known as Neural Darwinism that proposes "the idea that the world as a whole can evolve and learn."
- In 2021, physicist Lee Smolin and computer scientist Jaron Lanier wrote a similar paper that suggests "the cosmos may possess an innate ability to learn, adapt, and evolve in a manner akin to a living organism."
- The idea that the Universe is a self-organizing system that evolves and learns through Darwinian mechanisms seems to be part of the emerging zeitgeist in cosmology. A new book *On the Origin of Time* reveals that the late Stephen Hawking decided the reductionist paradigm he defended for much of his life was incorrect. According to his collaborator and author of the book, Thomas Hertog, by the end of his life Hawking realized that the Universe is an evolving system operating according to Darwinian principles that drive the world toward higher complexity. That higher complexity includes intelligent observers of the universe (e.g., human beings).

But God has introduced man, as a spectator of himself and of his works; and not only as a spectator but as an interpreter of them. It is therefore shameful for a man to begin and end where irrational creatures do. He is indeed to begin there, but to end where nature itself has fixed our end; and that is, in contemplation and understanding, and in a scheme of life harmonious with nature.

Epictetus (*Discourses*, Bk 1: ch. 6)

The Stoic god: Conscious and Providential

What I want to do now is present a quick review of Stoic physics and our beliefs about God. If you'd like the longer version I recommend you contact the College of Stoic Philosophers. But for now, let me say without attaching any scholarly commentary or logical arguments, this is a brief summation of traditional Stoic beliefs about God, our natural world:⁵

In Stoic ontology, the cosmos is a unified whole that is finite, spherical, conscious, and providential. It is a living being. [See Gravity above. Einstein's General

⁵ Most of this section is quoted or paraphrased from *The 32 Principal Doctrines of the Stoa* found on the Eternal Questions website. It is a pdf file that is free.

Theory of Relativity shows the cosmos as a “moving, organic, expanding entity.”] Stoics believe that all parts of the whole are God. God is Nature, and nature is divine.

The Stoic Cosmos has cosmic sympathy, whereby all points in space and time are connected. [See Hossenfelder above.] All things are created from the matter of the universe with each possessing a fragment of Pneuma, the divine breath, the rational organizing principle or soul of the cosmos.

Pneuma is a kind of tension that forms and holds together the cosmos and all bodies of the cosmos. [See Strong Nuclear Force above] Pneuma is also another name for the Stoic god who acts as the providential ruling force of Nature. [See John Searle.]

Cosmic Pneuma has three levels of tension: cohesion, nature, and soul. Cohesion is the force that gives unity to a body; nature is the force that gives life and growth to biological organisms; and, soul is the force of conscious life that gives impressions, impulses, and reproduction.

Human Pneuma has four levels of tension: cohesion, nature, soul, and rational soul. Human Pneuma also has three distinct parts—impression, impulse, and assent. All sentient creatures have the impression and impulse of soul, but only humans have the power of assent from the rational soul.

The Active and Passive Principles of nature combine to form bodies that are in some measure self-determining. Thus, Stoics are vitalists, not materialists. Stoic causality states that cause exists as a body, whereas effect subsists as a change in the state of a body. The present moment neither exists nor subsists, but belongs. Past and future overlap in the present to become an unbroken chain of causes.

As Marcus Aurelius said, “To see things of the present moment is to see all that is now, all that has been since time began, and all that shall be unto the world's end; for all things are of one kind and one form (Meditations, bk 6, 37).”

In Stoic causality we must know that there are two primary causes: external and internal. The external cause is Fate, the *divine* will. The internal cause is the *human* will. As Epictetus said, even Zeus cannot compromise choices made by the human will. Stoics are NOT fatalists because we have free will. We can choose to live a life of virtue.

Free will gives Stoic philosophy meaning, and without it our philosophy is meaningless. Without free will there can be no personal responsibility for any

action taken. The first proof of free will is that we can voluntarily choose to believe that there is free will.

There's more, of course, but this should give us what we need to see where we are going when we expand the Stoic doctrine that God is conscious by adding the suffix, *ness* to that word. God is consciousness. When we say that God is consciousness we mean that everything is conscious. We already believe that in the belief in Pneuma described above.

Let me repeat part of that:

"Pneuma is a kind of tension that forms and holds together the cosmos and all bodies of the cosmos. Pneuma is also another name for the Stoic god..." You can say, God. You can say Pneuma or Logos or Zeus, because as you may remember God, the One can go by many names, and to quote Heraclitus, God is willing and unwilling to be called by the name of Zeus (frag. 65, Burnet). Call it what you will.

You can call the Stoic god Fate, because Stoics believe in teleology. There is a direction in the flow of life to some end purpose or goal. But, most importantly, God is conscious and providential, an entity. But what about the providential side of God? This is the Stoic belief that Nature was, despite the *appearance* of good and evil, a beautiful and rational place, and that all works for the best in the end. Stoics were cosmic optimists.

Personally, I believe that the greatest proofs for divine providence have always been the factual existence of Beauty, Truth and Love.

Can you imagine how unbearably grim life would be if Nature hadn't created the ability to appreciate beauty, to give us joy and wonder while we struggle through the difficult times in life? Truth is not so much a certain fact as it is a search, the search for truth. It is the *need* to search for truth that nature placed within us that is the beginning of wisdom. We disagree with the the Old Testament prophet who insisted that it was fear. (Fear of the Lord is the beginning of wisdom, according to Proverbs 9:10.)

But that's only true if you see God as everything. Those parts of God that are frightening—wars, violence, sickness, and death—would encourage seeking truth to solve and resolve such matters. But even this is an act of providence—to give us the ability to solve our own problems with the rational mind and adaptation in evolution of virtue.

And I don't intend to say anything at this time about love as a divine force. I believe even Stoics are capable of understanding that all forms of love, ranging from romance to beautiful craftsmanship to the love of wisdom, is the most

powerful force in nature. Zeno knew it and made Eros, the God of Love, the patron god of his Republic. Unfortunately, many Roman Stoics confused the concept of love with lust, and that ignorance is too prevalent even today.

Back to Pneuma, a divine force that has a kind of tension forming and holding together the cosmos and all bodies of the cosmos. But can a Stoic believe in a hierarchy of consciousness. Yes. If we can believe in Pneuma, then, yes. Pneuma has four categories, remember, with each building on the category before it. Let's go directly to the 3rd category. Each body is held together and defined by a unique mixture of Pneuma.

Stoics saw the heavier inorganic matter, such as earth, rocks and water as stuff dominated by the Passive Principle; whereas Air and Fire symbolized the organic life dominated by the Active Principle. Even rocks and dirt have Pneuma, the active principle of the divine, but it doesn't have as much as organic life. The essential point here is that Stoics already believed in a hierarchy of consciousness in nature, but they called it Pneuma. The higher up we go in the hierarchy the more complex the organism until we get to humans, the rational animal.

If God is conscious and God is Pneuma, then it cannot be that difficult to imagine God as consciousness from the atom to the cosmos. Some Stoics of antiquity believed that there was a natural relationship between the greater animal, the human, as being the master of the lesser plants and animals. So there was already a kind of belief in service to higher levels of complexity. But this was not an established orthodoxy and was more likely a reflection of speciesism.

Everything is Conscious

I regard consciousness as fundamental. I regard matter as derivative from consciousness. We cannot get behind consciousness. Everything that we talk about, everything that we regard as existing, postulates consciousness.

Max Planck (January 25, 1931 issue of *The Observer*)

Marilyn Monk agrees with Max Planck. Who is Marilyn Monk? Well, let's do some due diligence. Whenever I see an interesting quote or article making some claim about our world, the first thing I do, even before I examine the information is ask, who is the person making such a claim?

Monk wrote an article about panpsychism that was published in *Integral Review Journal*, August 2020, entitled, "A Hierarchy of Consciousness from Atom to Cosmos."⁶ For those of you who are unfamiliar with panpsychism I'm going to

⁶ Marilyn Monk, https://integral-review.org/issues/vol_16_no_2_monk

make it short. It's the theory that all matter is conscious to some degree. Everything is conscious. Everything.

This is actually one of the oldest philosophical theories in the world, going back to Thales of Miletus, 6th century BCE. In addition, Plato, Spinoza, Leibniz, William James, Alfred North Whitehead, Bertrand Russell, and Galen Strawson, have all explored this idea. (Of course, not all of them believed it).

But what do we know about Marilyn Monk? She is Professor Emeritus of Molecular Embryology at University College London. Her research has covered mechanisms of DNA replication and repair, bacterial viruses and plasmids, development of single cell molecular biology—and I'm going to stop right here, because we simply don't have time to list all her credentials and credits.

The fact that she is Professor Emeritus of University College London, consistently ranked as one of the top research universities in the world, got my attention; and, hopefully, yours. The title of the article explains her view of consciousness. It's the everything-is-conscious theory—but with hierarchy. She states that her approach is "limited to a simple mechanistic biological analysis of how consciousness is involved in increasing complexity in evolution – from atoms, to molecules, to tissues and organs, to life forms, to populations of life forms and then, after introducing the life forms into ecosystems, continuing on through solar systems, and galaxies to cosmos... it is a scheme that delivers consciousness as primary and defines matter as derivative from consciousness in evolution."

For those of you who enjoy exploring simple mechanistic biological analysis in great detail, I strongly recommend Professor Monk's article. But for the rest of us, and for our purposes here, an exhaustive review is unnecessary. I'm going to summarize the part that really matters to me, and what *should* matter to the Stoic community, if not everyone with an open mind.

Monk says her study is not about the evolution of consciousness; it's about the consciousness of evolution. Do you see which side she is on? Yes. And then she comes right out and says she supports Max Planck's statement, the one about matter as derivative from consciousness. Monk states that her approach is based upon what is known scientifically and upon the Oxford dictionary definition of consciousness as being aware of, and responsive to, surroundings.

Professor Monk is a very careful researcher and clearly wants to place her approach squarely in the center of what is first class knowledge. By using the Oxford definition, "being aware of, and responsive to, surroundings," she has extended consciousness outside the human realm into lower life forms AND even non-life forms. Non-life forms. Rocks. Dirt. And that's what this article covers—consciousness as a hierarchy from the atom to the cosmos. Everything is

conscious! I'm going to quote one passage that I consider quite excellent:

"...it is evident that all forms of life have consciousness but at different levels of sophistication, and with a very different range of consequences of their consciousness. A worm is conscious in that it detects and responds to changes in its environment. It can feel a harmful stimulus (pain). A snail can remember where it belongs in the territory of the back garden. A bacterium can detect a gradient of sugar involving special receptors on its surface and respond by transferring this information to trigger its means of movement – its flagellae – to swim towards a food source."

Again, we see the categories of Pneuma—all rational and reasonable. Monk says that "...matter is derivative from consciousness and displays a sense of belonging, meaning and purpose of everything throughout evolution..." Then, she proceeds to describe her model of the hierarchy of consciousness in quite some detail about how each of these levels function. Very technical stuff we don't need to know to get the gist of.

MORE IMPORTANTLY. Monk shows how each of these levels is IN SERVICE to the level above it. Atoms serve molecules; molecules serve cells; cells serve the tissues and organs of the body. And so on, from populations of species to ecosystems. And here she introduces another hierarchy of complexity that includes the soil, rocks, mountains, rivers, oceans and their ecosystems all the way to planets, solar systems, and galaxies. And all of these are *in service to the next level above it*.

This is really special. Not just that everything is conscious, but that everything is in service to the whole, beginning with serving the next level of complexity above each part of the whole. This is not just a good idea, but Monk says that service to the next higher order of the structure to which they belong is *essential* for survival and ensures development in evolution.

In her conclusion, Professor Monk states that her theory of hierarchy of consciousness and service includes an idea that should be of keen interest to us. She said that for humans "unconditional service is often imbued with the sense of unconditional love, [which] is an evolutionary selectable in that it activates the pleasure centers of the brain. Beyond that, unconditional love for all beings and everything works to support the flourishing of all. Loss of service, or anarchy, leads to loss or, in this scheme, extinction."

[IN OUR NEXT ISSUE](#) we continue our exploration of who and what is God by focusing on "The Problem of Good and Evil." For Heraclitus fans you will be glad to know he is especially important to our understanding.

OUTSIDE

"True Story"

Eight years before I heard of Marilyn Monk and five years before she wrote her article on the hierarchy of consciousness I was training here in California to climb Mount Fuji, Japan. It was the third and last *big* mountain I wanted to climb in this life, but the training program I had designed for myself was perhaps a bit too strenuous for my 70 years of age.

The highest mountain near my home, Cowles Mountain, is nothing like Fuji but it great for training because it has a very steep ascent that challenges both legs and lungs. One day, after I had climbed it up and down two or three times I was on my way down Cowles for the last time because the summer sun was high in the sky, and it was too hot to continue.

About 3/4ths of the way down, I suddenly had a lot of pain in my right knee. The pain immediately became so intense that in a few steps I could no longer put my weight on it. I couldn't walk. I had hiking sticks, so I lengthened them and attempted to use them as crutches. They didn't work. I tried walking down the rest of the way backwards. Too much pain. In fact, it didn't just hurt when I put my weight on it; it hurt all the time. I couldn't do anything. I couldn't move.

At first, I could see only one option: ask the next climber who came by if they had a cellphone and would call for emergency services. I had a cellphone, but it was at home. Of course, the only way emergency services could get to me would be with a helicopter. It wouldn't be the first time they made a life-flight rescue. People have injuries and heart attacks on Cowles Mountain surprisingly often, but I knew that I would have to pay for it out of my own pocket, and it would cost both an arm AND my leg, so I resisted that idea.

Instead, I stood there in pain, not moving, until suddenly the thought came to me that at some point I'm supposed to have endorphins, peptides produced in the brain that block the perception of pain to help me out in such predicaments. So, I prayed. Not to God, but to the place within that I knew would know something about endorphins. I spoke directly to my subconscious mind with the confidence that it would be aware of what was going on, and perhaps it was possible to relay the information to the pituitary and hypothalamus of the brain to secrete a feeling of well-being as soon as possible.

I knew nothing about the hierarchy of consciousness, where the lower level was the servant of the higher, I just assumed that it was possible, if not probable.

When I “prayed” to my body I was respectful but spoke more in the way of a command than a request. As best I can remember I said, “If you can hear me, then hear me now. I really appreciate what the body can do to heal itself. I really appreciate the gift of endorphins Nature has given to help us when we are in pain. This is the time when I really need those endorphins to help me get down the mountain. And, I need them RIGHT NOW!”

I said all this silently to myself, of course. And here is the amazing part. In a matter of seconds my body was flooded with endorphins. I could feel them. I tested my leg, put all my weight on it, and my knee was fine. The pain was still there, but somehow it wasn't *painful*. I walked down the mountain and drove home. I took a week off for the sake of my knee, then continued my training. Two months later I climbed Mount Fuji.

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QUOTE OF THE DAY

In 1929, German philosopher Martin Heidegger delivered a famous lecture at the University of Freiburg called, "What Is Metaphysics." After he finished there was a baffled silence. Then, a student raised his hand. "But Professor Heidegger," he asked, "What is metaphysics?" To which Heidegger responded, "That is a very good question."

For the Readers

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If you have a question or comment for Brother Erikos go to the EQ website at <https://theEternalQuestions.org> Please state your name, email address, the issue number, and the nature of your question or comment in 200 words or less.

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