

## The Evolution (or Not) of Consciousness (<https://mindmatters.ai/podcast/ep98>)

Michael Egnor:

Can consciousness evolve? We have a wonderful opportunity to ask that question here on Mind Matters News.

Announcer:

Welcome to Mind Matters News where artificial and natural intelligence meet head on.

Michael Egnor:

Welcome. This is Dr. Michael Egnor on Mind Matters News. I have the privilege today of interviewing Dr. Bernardo Kastrup. Dr. Kastrup has been leading a modern renaissance of metaphysical idealism, which is the idea that reality is essentially mental rather than physical, as the materialist perspective that has dominated science over the past several centuries has held. Dr. Kastrup has a PhD in philosophy as well as a PhD in computer science. Dr. Kastrup, welcome to Mind Matters News.

Bernardo Kastrup:

Thanks for having me, Mike. It's a pleasure.

Michael Egnor:

It is a privilege. And so can consciousness have evolved by a Darwinian mechanism?

Bernardo Kastrup:

I think by definition it cannot. By the way we define matter, it could not have evolved because it performs no function. Our physicalist account of reality entails that it is the measurable quantitative properties of matter that are causally efficacious. In other words, it's mass, spin, charge, momentum that leads to effects, that leads to the dynamisms of nature, to the chains of cause and effect. And consciousness, that qualitative state that seems to accompany the quantitative dynamics of physicality, by definition cannot have causal efficacy.

Bernardo Kastrup:

That's the definition of consciousness and matter under a physicalist metaphysics. So if it cannot produce an effect, if it's something that simply accompanies the material dynamisms of the world, it could not have been favored by natural selection. And then of course, what materialist Darwinists would say is that it doesn't need to have an effect in order to evolve. Even if it has no selective advantage, it could still have evolved. And I think this basically renders evolutionary theory, unfalsifiable. Because if something, as presumably complex as consciousness can evolve, even if it has no function, even if it's not selected by natural selection, then anything at all could have evolved and we might as well just throw our arms up and start over.

Michael Egnor:

That's actually a fascinating perspective because what you've described is in fact, what Darwinists tend to suggest, that consciousness is epiphenomenal. But you're right. If something as remarkable as consciousness could take place without natural selection, then anything could take place without natural selection, and then what role does natural selection have in the explanation for nature?

Bernardo Kastrup:

Exactly. You see, they're forced into two alternatives. One, consciousness is strongly emergent. In other words, it's something that comes into being only when there is sufficient physical complexity, like the complexity of the brain. In other words, consciousness is something very complex. So they may appeal to that, but then they cannot explain why that complexity that leads to consciousness evolved because presumably it's a very different type of complexity than the complexity required to manipulate data at the cognitive level, without accompanying experience. There's no reason to think that these two complexities are the same. They're incommensurable.

Bernardo Kastrup:

So the other alternative they have is to say, well, it doesn't need to be very complex for consciousness to accompany physical dynamisms and therefore it could have just come along, even if it was not selected for, because it doesn't need to be complex. Well, that immediately puts you on the field of panpsychism, cosmopsychism, and idealism, which also defeats materialism. So it's very difficult to see how the metaphysics of materialism can survive together with neo-Darwinism. I personally think that it's the metaphysics of materialism that we have to get to rid of.

Michael Egnor:

Yes, I would very strongly agree. What do you think of intelligent design theory?

Bernardo Kastrup:

I do not know enough about it to really make an intelligent comment. I am ashamed to confess to this. But what I read about it, the limited reading I spent on this, suggests to me that there is nothing crazy about it. It seems a very reasonable thing to imagine that there are organizing principles in nature that have a causal influence on the organization of genomes in the course of evolution. And that we may not be aware of these organizing principles yet. I mean, that's a fundamental assumption in science, that there are patterns of organization out there that we don't know yet. That's why we do research. That's why you try to find out more about how the universe works.

Bernardo Kastrup:

So I think it is reasonable to imagine that the supposedly random mutations at the root of evolution may after all, not really be random, they may comply to certain patterns of organization, some organizing principles in nature, that we still do not know very well. I would say that evolution by natural selection does happen in the sense that species evolve into other species through the accrual of genetic mutations. But I think to say that these genetic mutations are random at root is a baseless statement to make. We just do not have enough data to run a randomness test to see if these mutations are really random. For all we know they are following certain coherent and consistent patterns through the course of evolution. And we do not know what the causal agency behind those patterns might be, but I think it's prudent to say that we do not know as opposed to saying that well, they are definitely random, because that's something we simply cannot know. It's just a prejudiced statement by definition.

Michael Egnor:

Sure. Jerry Fodor, who's passed away recently, but he was an atheist philosopher, a rather prominent philosopher of the mind. Fodor wrote a book called *What Darwin Got Wrong*. And I think it's one of the most insightful critiques of the Darwinian paradigm. And Fodor proposed that natural selection is an empty concept, that it does no work. And he pointed out that when you look at evolution in populations of organisms over time, the evolution is determined by a combination of the internal constraints on the organisms. That is, that an organism can only do certain things physically because of its genetic and phenotypic makeup and its natural history, what sort of environment it's in. And once you know the internal constraints and you know the environment, then you know everything you can possibly know about the evolution of that organism, and that adding natural selection as a narrative gloss to it doesn't add any information about evolution. And I think it was a very perceptive critique of the Darwinian perspective.

Bernardo Kastrup:

So if I may, instead of commenting, if I may ask you a question.

Michael Egnor:

Please.

Bernardo Kastrup:

I would agree that if we know everything about the internal state of the organism and you know everything about the environment, then you do know everything there is to be known.

Michael Egnor:

Yes.

Bernardo Kastrup:

But I would say that you know that precisely because by knowing these two sides of the equation, you know how natural selection will proceed, you will know how the environment will favor certain organizations of internal states as opposed to others.

Michael Egnor:

Well, what Fodor argued, and he carried his argument to a little more depth, but what he argued was that the concept of natural selection wasn't wrong, it was empty. That is, that once you know the internal constraints on the organism, and he described them more as constraints than organization, meaning exactly what is an organism capable of doing on a purely physical basis and once, and if you add to that, a knowledge of the natural history of that population, that you know what caused evolution. And why invoke natural selection? Natural selection just seems like an empty superfluous concept.

Michael Egnor:

My own perspective, and this is not Fodor's perspective, my own perspective is that materialists have used the concept of natural selection as if it was a force in nature. That is, as if it was a level of explanation. And I believe, and Fodor seemed to come at it from this perspective, that natural selection is not a level of explanation. It doesn't mean anything. What means things is the physical constraints

that each organism has as to what it's capable of doing and the natural history of that organism and the population that it's in. Natural selection is nothing above and beyond that.

Bernardo Kastrup:

I am not an expert in this, so forgive me if I say something that sounds ridiculous. I would imagine that sincere neo-Darwinists would even agree with this. And they would say, well, that's precisely what they mean. Fitness is a relationship between the internal state and the external state. And if there is fitness, then that internal state will tend to survive and reproduce more. Whether we need the concept of natural selection to refer to this may be just a linguistic convenience, but they probably would agree in essence. I don't know.

Bernardo Kastrup:

What I can share with you is that, my first PhD back in 2001, half a life ago, was in computer engineering. And I did run for a while in my life, experiments, computing experiments with genetic algorithms, cellular, [inaudible 00:11:35], neural networks, but applying an evolutionary paradigm to that. So as to force a certain architecture or a certain optimization structure to change and adapt according to some cost function that was determined by the surrounding environment in that computer simulation. And it was impressed on me from that time, that fitness principles clearly seem to happen in those simulations.

Bernardo Kastrup:

If you change the function that gives you the cost, you get completely different organizational structures, completely different paths for solving a problem. So I'm not skeptical of that. What I am skeptical of is the randomness of the mutations that underlie the process. My intuition is that the mutations aren't random. Randomness after all, is just an acknowledgement of causal ignorance. Everything in principle is caused, but when we don't know what the cause is, and we can't discern any pattern, we say it's random. But that's all there is to it, it's ignorance. I suspect there are organizing principles that steer the mutations down some roots, some avenues that may increase an overall cost or reduce an overall cost function or a teleological target, so to say. This is what I suspect.

Michael Egnor:

Sure, sure. And I think that teleology is fundamental to change in nature, which is sort of what Aristotle suggested. That of the four causes, material, formal, efficient, and final, that final cause is the cause of causes. That is, nature is kind of pulled along by teleological processes. The kind of program that you're describing, really is intelligent design evolution rather than Darwinian evolution. That is that everything you're describing is an intelligently designed system. And it's kind of ironic that a lot of folks who come at evolution from the Darwinian perspective, run simulations of it on a completely designed platform, which really is intelligent design research. If you really wanted to study evolution without intelligent design, you just have to leave a bunch of stuff on the desktop and see what happened to it.

Bernardo Kastrup:

If I can comment briefly on that, Mike. I'm not going to repudiate the notion that what I described is intelligent design. I suspected this myself for a while. But I would like to qualify that. I don't think that what's going on is that there is a deliberate designer that knows exactly how things should be, and which allows nature still to go through this suboptimal process, to arrive at a point, or to arrive at a structure or a function, that is already known from the beginning. This would seem to be a waste. I think

it would contradict what we see around us, that the universe is trying something, but it doesn't know really where it's going.

Bernardo Kastrup:

So what I think matches my intuition is the notion that, when the universe seems to know whether it's getting warmer or getting colder. If it does something and it gets colder, well okay, now that's not the way let's try something else. And if it gets warmer, I will try more of that. But it doesn't really know where it's going with it. It only knows on this spot, if it's getting colder or is it getting warmer? Do you know what I mean?

Michael Egnor:

Sure, sure.

Bernardo Kastrup:

It doesn't have a complete picture of the end state. Because if it had, we would be there already, I think.

Michael Egnor:

Right. It's almost a deist perspective in some sense that God kind of lets evolution run. Every once in a while he reaches in and tightens a screw here or there to try to make it turn out the way he wants it. Kind of a theological evolution perspective, which I think is not defensible. I think it's ridiculous.

Bernardo Kastrup:

I don't think God... How to say that? In a previous episode, we talked about, well, my conception of God. So when I use the word God, I'm using that conception. I don't think God is self-reflective. I don't think it is metacognitive. I don't think it tells itself, Oh, I'm doing this now. And I'm going to do that. I don't think that's what's going on. I think there are experiential states underlying nature, they are felt. They may be even omniscient. But I tend to think they are instinctive, not premeditated. So when I say it's getting warm or getting cold, what I mean is the universe may instinctively knows whether things are going a direction that is not planned because there is no planning, but which minimizes, some felt cost function, or maximizes some felt desire function. And it never knows beyond what is right in front of it. But it knows whether what's happening right now is conducive to that increased pleasure or reduced cost or not.

Bernardo Kastrup:

And it may influence things. There may be an organizing principle that influences things based on this experiential instinctive reaction at the most fundamental level of nature. This is what I'm suggesting.

Michael Egnor:

And it's kind of an interesting perspective that falls out of our conversation that strikes me as something quite relevant, is the richness of the idealistic perspective on metaphysics. In contrast with the materialist perspective. There's so much profound, fascinating stuff in the idealist perspective and materialism is really just an impoverished mistake. So I want to thank you, Bernardo. This is been Dr. Bernardo Kastrup, a computer scientist and philosopher who has been very gracious to have this conversation with us. And please join us again on Mind Matters News.

Announcer:

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