Dr. Mario Beauregard Sees an End to the Era of Biological Robots | Consciousness Science

Alex Tsakiris

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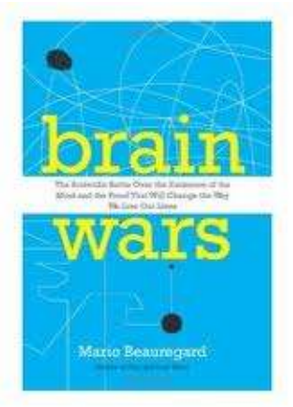
Interview with Dr. Mario Beauregard about his new book, *Brain Wars*, and the battle between old brain science and new brain science.



Join Skeptiko host Alex Tsakiris for an interview with neuroscientist and author Dr. Mario Beauregard about his new book, *Brain Wars: The Scientific Battle Over the Existence of the Mind and the Proof That Will Change the Way We Live Our Lives*. During the interview Beauregard discusses the coming revolution in the way science understands consciousness:

Alex Tsakiris: Near the end of your book, *Brain Wars*, you talk about a shift in consciousness within science. I'd like you to talk about whether you really think that is likely. I mean, we are so enmeshed — we are so married to this materialism — can we really get beyond it?

Dr. Mario Beauregard: Well, I can say that at least in my own field there's an increasing number of scientists and also in other disciplines challenging the old materialist worldview, so it's done not only by scientists but also by philosophers themselves. In the last few years we've seen books come out about the waning of materialism and so on. Now several different scientists are starting to question this. We're in a transition period, like I said before, and in certain circles scientists are creating a sort of union where they're getting together and trying to get organized.

For instance, there's a special issue of a mainstream journal in neuroscience called, *Frontiers in Human Neuroscience*, and next year there will be a special issue about the possibility of non-local mind. This is a sign of the times because only 10 years ago or 15 or 20 years ago, this would not have been possible at all. Now it's becoming possible to discuss these important issues publicly and even to challenge the mainstream view overtly. This was not possible at all before.

There's a progress regarding this evolution in our field. I think that there eventually will be another big revolution in science and this will be about mind and consciousness. The same kind of revolution that they've had about 100 years ago in physics from classical physics to quantum physics. We'll have probably the same in our own field.

At the same time in parallel, like you said at the beginning of the interview, if you talk to laypeople, most people do not believe that they are strictly biological robots and don't have any influence over their brain activity or what's happening in their body. So, if there's the start of really a transition within science, it will go quickly because the rest of the world is very sympathetic regarding a non-materialist view of consciousness and of human life and the universe.

Mario Beauregard's Website

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Today we welcome Dr. Mario Beauregard to Skeptiko. Dr. Beauregard is an Associate Research Professor at the Neuroscience Research Center at the University of Montreal. He has a Ph.D. in neuroscience also from the University of Montreal. He also has two post-Doctorate fellowships in experimental neuropsychology. He's the author of over 100 publications in neuroscience, psychology, and psychiatry. And he's here today to talk about his latest book, *Brain Wars: The Scientific Battle Over the Existence of the Mind and the Proof That Will Change the Way We Live Our Lives*.

Mario, thank you very much for joining me today on Skeptiko and welcome.

Dr. Mario Beauregard: Thanks to you.

Alex Tsakiris: So your book, *Brain Wars*, and this battle over whether we are really just biological robots, as our friend Stephen Hawking likes to say, is a frequent topic on this show. I think you're going to find an audience who is well aware of a lot of the issues. You really do a great job of presenting it in your book and pulling it all together. Can you tell us a little bit briefly about what your book is about?

Dr. Mario Beauregard: Well, the starting point is what we call the "modern scientific worldview," so it's the worldview that is based on classical physics and this view is based on a number of fundamental assumptions like materialism, determinism, reductionism. So applied to mind and brain it means that, for instance, everything in the universe is only matter and energy that form the brain as a physical object, too, and the mind can be reduced strictly to electrical and chemical processes in the brain.

It means also that everything is determined from a material or physical point of view, so we don't have any freedom. We're like biological robots, totally determined by our neurons and our genes and so on. And so we're reduced to material objects and we are determined by material processes. So that's what we call the modern scientific worldview but…

Alex Tsakiris: Dr. Beauregard, is that really where science is at? Because I think that one of the problems that the people on the street, if you will, folks that I talk to that are not engaged in this debate, they take a view of it the way that a lot of folks in America and North America treat Catholicism or even Christianity. It's like, "Yeah, yeah, yeah. Kind of but I don't really hold to all that."

Do most people really believe any of that? And to what extent is that really the mainstream view within science?

Dr. Mario Beauregard: Well, it's the mainstream view I would say still in the biomedical field. It is also in philosophy. However, in physics everything changed 100 years ago so they've had their own revolution from classical physics to quantum physics and the de-materialized world. So the founding fathers of quantum physics realized that the universe is not constituted of tiny physical particles like billiard balls, for instance.

But they realized that there's a very important mental component in the universe and this relates to the so-called measurement problem or the observer effect. The physicists and his instruments, they are influencing to a certain extent the outcome of the experiment at the micro-physical level, whether they are measuring either particles or waves. And so now it's recognized in quantum physics that you cannot explain the universe or understand the universe without making reference to what we call mind and consciousness. But in the bio-medical field, including neuroscience, it's a different ballgame.

Most scientists in my field of research, for instance, are not aware of these—they don't know very well quantum physics and they are not aware that there's been a revolution 100 years ago regarding these fundamental issues. And it's the same thing pretty much also in other fields like psychiatry so we find a lot of biological reductionism in psychiatry, especially with regard to the use of frogs 5:22, for instance,

and so on. And so in philosophy it's the same thing still. So even though physicists have shown that the universe cannot be reduced to a physical machine nearly 100 years ago, most scientists and philosophers are either not aware of that or they don't want to accept that.

Alex Tsakiris: Don't we have to be a little bit careful when we tread into the physicist's territory and quantum physics in particular because there's a lot of push-back? There's a whole tsunami of push-back on the way that quantum physics has been weaved into a lot of New Age thought. I'm not saying at all that that's what you're doing but I think there's a lot of fuzziness there. I think what we can say at the very least is that it's clearly an unsettled issue and we have to take seriously the thought that quantum physics suggests that consciousness may be fundamental in the way that we generally think of matter as being fundamental. So I'm with you on all that…

Dr. Mario Beauregard: Yeah, yeah, that's exactly my point. Yes.

Alex Tsakiris: Yeah, I just don't want to get into that whole battle of whether the observer effect really is and whether "shut-up and calculate" and all that kind of stuff. I do think we can't shy away from it and that's one of the things I really appreciate about your book. You don't shy away from anything. But we can't shy away from the fact that quantum physics may very well be best interpreted as being supportive of these ideas that you're talking about.

Let me switch gears for a minute because one of the things I really want to focus on and I just mentioned it. I really appreciate that you're clear right from the start about talking in these military terms. It's a brain war; it's a battle over science. So I want to spend a good deal of time talking about the book and the particular issues that you bring up because I think, as you just said, one thing it does is show how easily falsifiable some of the materialist's positions are.

But at the same time, I want to understand. I want you to tell us why we are in this war at the end of the day. Why there is this battle because I think a lot of folks tune into the fact that there's a war. That there is a battle. But they don't get it. I mean, so you've done these experiments that find that people can control their brain. So what? Why is there a war? Why is there a battle?

Dr. Mario Beauregard: Well, because there's a commitment to a certain form of ideology in mainstream science.

Alex Tsakiris: Why? Why is there such a commitment?

Dr. Mario Beauregard: Why? Because at the birth of modern science the scientists decided to keep a certain distance from the power of the Church, understandably. And that helps science to evolve, to make great progress. But at the same time, the founding fathers of modern science rejected in a certain sense the domain of subjectivity—the first-person perspective and mental experiences. These things were considered to be only secondary qualities and at the beginning they thought that these things were not that important.

They decided to focus more on the physical world, matter, as they called that. And so this point of view became dominant and made progress during the 17th and 18th Centuries. And in the 19th Century these materialist and reductionist point of view became synonymous with science. In the 20th Century it started to be challenged, first by quantum physics but also in other domains. We're now at the beginning of the 21st Century and this view is still considered to be the norm. It's the mainstream view because it's based on a number of beliefs and assumptions like we said before.

For a long time these assumptions seemed to explain very well the phenomena that were under investigation. However, now there's increasing evidence showing that a number of phenomena do not fit within this conventional materialist framework. It cannot be explained very well by this framework and this is exactly what I'm discussing in my book, *Brain Wars*.

Alex Tsakiris: And I think you do a wonderful job of it. I want to get to that data. I just want to drill into this point a little bit further because I think having covered this with a lot of different people, I think there's something a little bit deeper going on. And that's that there's a comfort level that we all have with our consumerism, our materialism, our society that we've built. It's a wonderful, wonderful society, especially when we look back historically at how much people have struggled just to barely survive. We look at all the things we have—the cars, the airplanes, the iPhones, all that, and we are so enmeshed in this materialism that is both consumer materialism but also scientific materialism.

I think it's very, very scary—is the only word I can think of—for folks to contemplate anything else. Could we really maintain our way of life that we've all become so comfortable with? We're better than this other country; that we have a right to starve that other country, deprive them of money, of oil, of food, whatever it is. Can we really maintain that if we take the long-term, larger picture view of what it would mean to be post-materialistic both from a consumer standpoint but also from a scientific standpoint? Don't the issues get really big really quick when you think this thing through?

Dr. Mario Beauregard: Yes, that's a very good point. I agree with your analysis but there's something else also. Scientists are humans and humans have their own belief systems and they become attached in the long-term with their belief systems. So a number of scientists have believed very much in this materialist view for centuries. So it's like it has become a central dogma in various fields including neuroscience. It's very dangerous, it's scary for a number of people if you're starting to challenge this mainstream dogma, this central dogma, you know?

It's a little bit like in many other domains of society, including religion. If you threaten the beliefs of religious groups then you might be in trouble and that's exactly what we see also in science. At a certain point, when the co-called "anomalous" data accumulates there comes a point where the old paradigm cannot exist anymore. I believe that now we are in that sort of transition period toward a new paradigm. The next scientific revolution should be about mind and consciousness in my view.

Alex Tsakiris: Very good. Well, I think you do a nice job in the book of pointing out how dramatic the existing paradigm is frayed at the edges. I like the way you start and tie together a lot of science that we all think we're very familiar with and we're comfortable with and you show us how that really violates this scientific materialism that we've all become so accepting of.

So maybe you want to talk a little bit about, for example, the placebo effect. And also hypnosis. And how these two areas, and there are chapters in your book where you do a very nice job of bringing people through some of the research in a very accessible way. But tell us the placebo effect and hypnosis, how those violate the very strict understanding of reductionist materialism.

Dr. Mario Beauregard: For a number of materialist thinkers and scientists the mind is totally powerless. It cannot exert any power on what's going on at the brain level and also in the body.

Alex Tsakiris: Can you break that down and explain why that would have to be true if you're a strict scientific materialist?

Dr. Mario Beauregard: There are a number of materialist positions so this is a position that is called epiphenomenalism. It means that these proponents recognize that my mental processes do exist but they are powerless. They cannot exert any influence. That's one position but you have other positions like eliminative reductionism, so you're trying to eliminate all mental processes like philosopher Daniel Dennett or Churchland for instance, so they will say that consciousness and all the other mental processes are simply illusion. That the only thing that exists is electro-chemical activity in the brain.

So if this is true then of course you cannot influence the activity of your brain by your beliefs, your expectations, you see. But that is exactly what the placebo demonstrates, that your beliefs and expectations about false treatment can significantly alter what's happening in the brain and also in the physiological systems connected to the brain.

So for instance, in the last decade there have been several brain and aging studies about the placebo effect and in some cases, for instance, there was a very interesting study done at the University of British Columbia. They did a study to measure the impact of the placebo treatment on people suffering from a severe form of Parkinson's disease. In Parkinson's disease there's a great level of destruction of the nerve cells, the neuron producing a chemical messenger that we call "dopamine." Dopamine is the key chemical messenger in motor function but it's also involved in many other activities.

But in that specific case the patients had a level of destruction of about 70% to 80% so the level of destruction of the nerve cells producing dopamine was quite high. And of course they were severely impaired from a clinical point of view. They had trouble to move; they were experiencing a lot of tremors. So the neurologists doing the study presented them a fake treatment. It was only distilled water but they told the patients that this was potentially a revolutionary treatment, a new treatment for Parkinson's disease.

And following the injection, after a few minutes, they scanned them with technology that we call "functional magnetic resonance imaging" or FMRI. Pardon me—in that specific case it was positive emission tomography. So they were interested in measuring the activity of dopamine in the brain. So very rapidly those patients who believed in the fake treatment, which was distilled water, they started to produce dopamine and to release dopamine into their brains in an amount comparable to that seen in young, healthy people. And in parallel, they started to get much better from a clinical point of view. They had less tremors; they had more strength; and they were more optimistic, at least for a certain period of time.

So this is a very nice illustration of the power of what we call "mind" and by mind I mean all the mental activity and mental events. In this specific case this effect is related simply to the beliefs and also the expectations that the patients had regarding the fake treatment. So it's a very nice illustration.

Another interesting case is that of hypnosis. Hypnosis is based on the suggestions coming from a hypnotist and the subject of the experiment accepts the suggestions. Now the experts in this field of research consider that all forms of hypnosis are in reality self-hypnosis. That means that if the subject does not want to accept the suggestions from the hypnotist it won't work.

So again, during the last decade there's been a number of brain imaging studies that have been done simply to measure whether there's something happening at the brain level because skeptics have been arguing for a long time that hypnosis is simply wishful thinking. It's only based on social compliance from the subjects who only want to please the hypnotist. There's nothing else.

So several research teams have attempted to research this question using brain imaging. For instance, there was a very interesting study done at Harvard. The researchers were looking for the neural correlates of color vision. Correlates are physical processes in the brain and whether electrical or chemical, they are related to a specific mental activity. For instance, it can be perception. Perception of color. So in that case they scanned the subjects, highly hypnotizable subjects, which means that these people had the capacity to enter quite easily into a trance state deep enough.

And so these subjects were able to imagine that they were looking or seeing different types of patterned colors in accordance with the suggestions of the researchers doing the study. So it was very interesting because when they were presenting simile 21:13 that were colored but the researchers were telling the subjects that these were only gray, the brain regions associated with the treatment, the processing of color in the brain, were not activated even though the simile were colored.

The reverse effect was also measured; it was also observed in this study. That is when there was no color in the simile there was still activation in the regions of the brain processing colors. So again, this is a very nice illustration that what's going on at the mind level can exert a great influence over what's happening in terms of brain activity.

Alex Tsakiris: Right, exactly. Like I said, you do a very nice job in the book and I really encourage

folks to get the book whether you're a skeptic or a proponent or whatever. Just as a person interested in science I think you'll enjoy the way that you bring forth this research and you really document it in a way that's easily accessible. You do have a nice annotations, references to the research if people want to go look it up. That's all there.

So the question then remains. So why are we still having a war? You've just now linked up for us two things that we already were pretty accepting of. Hey, we all have heard of placebo effect. We know that every study, every pharmaceutical study, every scientific study has to allow for placebo effects. So they must recognize that there's some reality to it.

And hypnosis has become so common that I think at least one out of three people have had some kind of hypnosis while at the dentist or someplace else. So given that we accept these modalities, these treatments, these understandings that violate strict materialism, why are we still in the battle? Why do we still have the war?

Dr. Mario Beauregard: Well, because a number of scientists consider that you can interpret these phenomena using a strictly materialist framework.

Alex Tsakiris: How do they do that? What would be the…

Dr. Mario Beauregard: Well, you will see that for instance, you can reduce the beliefs and the expectations of the patients regarding the fake treatment to electrical and chemical activity in specific portions of the brain. So what they are saying essentially is that it's the brain acting upon the brain. You don't need mental functions apart from the brain to explain this kind of phenomenon. That's what they're saying.

Alex Tsakiris: But doesn't that result in some kind of recursive logic that at the end of the day gets into all sorts of other problems? What is the starting point in their explanation for such an activity? It gets into the whole neural-plasticity argument, you know? Like if we show that neural-plasticity is real and that we can re-wire our brain—and you've done some research on this as well—then doesn't it ultimately lead to the question of what was the beginning point and wasn't there some observer, some consciousness that might have started this process?

Dr. Mario Beauregard: Yeah, but for them the neural-plasticity is simply the brain re-wiring itself. Again, they don't need consciousness and other mental functions to explain that. That's what they're saying but I don't think it's a good explanation because the brain to me will respond to the expectations or the beliefs and so if your beliefs are negative about a bogus treatment, then you will experience something totally different in terms of the chemical messengers involved in the response. And so it's called the "nocebo effect." It's exactly the reverse.

So you need a person and a consciousness in order to produce phenomenon like that. Otherwise it doesn't make any sense at all. The brain itself is quite neutral so you can influence it in one way or another. For instance, we've done other brain imaging studies, positron emissions and tomography studies, and in that case we measured the activity of serotonin, which is very much involved in mood regulation and also in emotions, a lot in emotions.

So we asked our subjects to simply remember and try to re-enact the saddest episode of their lives. We add another condition in which we ask the same thing but this time they had to re-enact the happiest moment of their lives. And in a matter of only a few minutes we measured either increases in terms of serotonin production or decrease. Increases in the positive—the happy– state and decreases in the negative state—the sad state within a few minutes in regions of the brain related to emotions and mood regulation. You see? So this shows really that the contented self of the mental processes, their nature will influence the direction that the brain activity will take.

So that's why I'm claiming that it's not possible to interpret this kind of phenomenon without recognizing the existence of mental processes.

Alex Tsakiris: That certainly seems a lot cleaner but it seems rather obvious. What about this argument—and you'll hear this sometimes, too. What about folks who say, "Okay, just because you've shown that maybe this strict materialism as you defined it doesn't work in this situation, maybe there's something else down the road that "science" will discover that will explain this. We don't need to jump to this idea of there being a you inside your head, there being consciousness, there being dualism, no matter what word you want to throw at it. We don't need to jump off of this ship that we're on just yet, just because we have this finding." How do you respond to that?

Dr. Mario Beauregard: Yeah, this is called "promissory materialism" and this concept was proposed by a famous philosopher of science, Karl Popper, in the 20th Century. Popper analyzed the text of the materialists across a number of centuries and the funny thing is that he realized that they were exactly saying the same thing 300 years ago or 200 years ago or 100 years ago. So they've always been arguing this and so that's one aspect of the thing. But now we have evidence showing, in my view, that these materialists' outlook is simply wrong. It's false.

I'm referring here to the studies about the so-called near-death phenomenon, near-death experience phenomenon, especially during cardiac arrests. Why is this important? Because during cardiac arrest there's the blood flow to the brain will cease following a number of seconds, usually quite rapidly, and if you're measuring electrical activity in the brain using and EEG or electroencephalograph, the EEG will become flat within 10 to 20 seconds usually.

So in that kind of state, according to mainstream neuroscience, higher mental functions are not possible. Yet during the last 10 years I think there's been four or five different studies documenting over 100 cases of patients who have reported conscious mental activity during a state of cardiac arrest. So this is quite interesting. It's very hard for materialist scientists or philosophers to interpret this kind of phenomenon.

Alex Tsakiris: Yes, and you know we've covered that topic extensively on this show. But I do like the way that you summed it up there and the way that you sum it up in your book is quite nice.

So let's get on to the other elephant in the room here. Dr. Beauregard, one of the criticisms of your work and it's sometimes made explicitly and sometimes just subtly implied, is that you're pedaling some kind of Christian agenda. You really are trying to convert people to some kind of religion. How do you respond to that?

Dr. Mario Beauregard: I would say that this is not true at all because I'm not religious at all. I don't have any religious affiliation so this is funny that you mention it here. However, I consider myself to be a spiritual person but I'm not pushing any religious agenda here. I don't have any ties with religious organizations.

Alex Tsakiris: Great. I'm glad you've had a chance to get that out there because I think it's often subtly implied and sometime not even so subtly implied that that's what's really going on here. At the same time…

Dr. Mario Beauregard: Well, that's totally false.

Alex Tsakiris: Because at the same time, though, I think we can be too reactionary the other way because we have to—I'm just throwing out my opinion but I really want to get your opinion—but I don't think we can play down the spiritual implications of some of this work.

For example, the near-death experience science. We can look at it purely analytically from the science standpoint and we can say, "Wow, this looks like there's something there," and we would be very inclined then to take the next step in terms of what they're telling us about spirituality and how it does link back at least in some general way to some of the wisdom traditions and religions that we've had over time.

So what are your thoughts on that? Do we need to go there? Do we need to say, “Hey, there are some spiritual implications here that may have to be dealt with once we cross this chasm to a post-materialistic world?” Or do we just keep our nose to the grindstone and ignore all that and just pretend like it’s all just about materialism?

Dr. Mario Beauregard: No, no. I agree with you because of course when we speak of so-called near-death experiences during cardiac arrest, for instance, the people usually are reanimated within a few minutes. Usually two to three to four minutes, because we cannot stay in that kind of state for a long, long time without severe cerebral damage. So when they report something about their transcendental component of their experience, whether it’s meeting with a beautiful being of light or meeting with deceased friends or relatives and so on, that from a scientific point of view cannot validate it or not. We can only attempt to validate the report from a perceptional point of view.

So the out-of-body component of this experience, that can be corroborated by an external source and it’s been done in a few cases by members of the medical staff. Of course, like you said, what they are reporting from a subjective point of view seems to validate some spiritual traditions. It seems to provide certain evidence that there might be spiritual realms out there. I’m open-minded to this kind of suggestion. Like I said, I’m a spiritual person and this would not surprise me at all if there are a multitude of spiritual realms that we don’t know yet. And I don’t think it’s not scientific to have that kind of point of view.

Alex Tsakiris: It’s human, isn’t it? I mean, that’s the part I think we have to acknowledge; that these are fundamental human questions that the whole endeavor of science is why it came about was to understand who we are, what place we are, what place we have in the universe, what happens to us when we die. These are the ultimate questions so I think that this couldn’t be more fairly put that these are real concerns that we all have. We have to acknowledge that.

Dr. Mario Beauregard: Yes, and also spiritual experiences have been reported across all traditions, cultures, and since the beginning of time, you know? So they really do exist from a subjective point of view. Now of course we don’t have a scientific explanation for these experiences yet but what I’m saying is that we need to remain open-minded regarding this aspect.

Alex Tsakiris: Very good. Near the end of your book, *Brain Wars*, you talk about a shift in consciousness and I’d like you to talk about that and whether you really think 1) that is likely; that can come about. We are so enmeshed, we are so married to this materialism, can we really get beyond it? And related to that is 2) how might that come about? Is it going to be an evolutionary change or does it require a radical, revolutionary shift?

Dr. Mario Beauregard: Well, I can say that at least in my own field there’s an increasing number of scientists and also in other disciplines challenging the old materialist worldview, so it’s done not only by scientists but also by philosophers themselves. So in the last few years we’ve seen books come out about the waning of materialism and so on, so now several different scientists are starting to question this. We’re in a transition period, like I said before, and in certain circles scientists are creating a sort of union where they’re getting together and trying to get organized.

For instance, there’s a special issue of a mainstream journal in neuroscience called, *Frontiers in Human Neuroscience*, and next year there will be a special issue about the possibility of non-local mind. This is a sign of the times because only 10 years ago or 15 or 20 years ago, this would not have been possible at all. So now it’s becoming possible to discuss these important issues publicly and even to challenge the mainstream view overtly. This was not possible at all before.

So there’s a progress regarding this evolution in our field. So I think that there eventually will be another big revolution in science and this will be about mind and consciousness. The same kind of revolution that they’ve had about 100 years ago in physics from classical physics to quantum physics. We’ll have probably the same in our own field.

At the same time in parallel, like you said at the beginning of the interview, if you talk to laypeople, most people do not believe that they are strictly biological robots and don't have any influence over their brain activity or what's happening in their body and so on. So if there's the start of really a transition within science, it will go quickly because the rest of the world is very sympathetic regarding a non-materialist view of consciousness and of human life and the universe.

Alex Tsakiris: Very good point. So Dr. Beauregard, tell us a little bit about the research that you're currently engaged in and also if you want to tell us anything else we can find out about the book that would be great, too. What are you working on nowadays?

Dr. Mario Beauregard: I'm doing brain imaging experiments regarding some types of altered states of consciousness and especially spiritual consciousness. That's one thing.

I'm also investigating the capacity of the human mind to influence or to control the activity of regions involved in emotional responses, called emotional regulation. So that's one aspect but from a theoretical point of view I'm also in the process of developing a new theory about the role and the impact of mind and consciousness in nature.

Alex Tsakiris: Great. Do you want to tip your hand a little bit and tell us what you're thinking in general terms?

Dr. Mario Beauregard: Well, I'm planning to present this theory in this special issue that will be published next year in the *Frontiers in Human Neuroscience*. The basic idea is about mind, consciousness are irreducible. They cannot be reduced to matter. They are fundamental in the universe as much as the fundamental forces of physics and so they are as important as what we call space, time, and also the physical world.

So what I'm planning to do is simply to demonstrate that from an empirical point of view. I'm presenting a series of empirical evidence showing that mental processes and events exert a great influence within the brain and body but also outside of the physical body, beyond the confines of the brain and the body. So in essence that's the gist of it.

Alex Tsakiris: Wow, that's exciting. That's a great teaser for the upcoming article. We'll certainly look for that.

Dr. Mario Beauregard: You know what? The good news is that when I'm presenting these things to, for instance, the Department of Psychiatry or even to some neuroscientists, these days now they are more willing to listen and to reflect about these things. Like I said before, 10 years ago this would not have been possible at all. So it's a sign that things are starting to change really.

Alex Tsakiris: That's very interesting to hear from someone who's on the front line of this work like you are. I really value that opinion and I think folks will take heart in that. So the book is *Brain Wars: The Scientific Battle Over the Existence of the Mind and the Proof That Will Change the Way We Live Our Lives.*

Dr. Mario Beauregard, thank you again so much for joining me today on Skeptiko.

Dr. Mario Beauregard: Thanks very much, Alex.