

Exploring the Mind-Brain Relationship and Challenging Materialism

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Mike Egnor:

Welcome everyone to Mind Matters News. This is Mike Egnor. I have the great privilege today to interview Dr. Angus Menuge, who has edited a wonderful new book called *Minding the Brain: Models of the Mind, Information, and Empirical Science*. Thank you for joining us.

Angus Menuge:

Thanks for having me, Mike.

Mike Egnor:

Thank you. I contributed a chapter to your book, but when I contributed the chapter, I didn't have a chance to read all of the chapters. So when I got the book in the mail, I've been reading all the chapters and I can't put the book down. It's really an incredible book. It's one of the best books. In fact, it's the best book I've ever read on the mind brain interaction. So congratulations on an incredible job with this book.

Angus Menuge:

Oh, thank you. It was certainly several years of hard work. We were just so pleased with the range and depth of all of the contributors and to bring together people from so many different academic disciplines so that we can start to break out of these silos, and that philosophers can listen to neuroscientists and computer scientists and psychologists and vice versa I think was quite a coup.

Mike Egnor:

I think that's one of the great strengths of it, is that each chapter is frankly brilliant in its own way and they come at the question of the mind brain relationship from all different directions, and there seem to be themes that consistently arise.

Why did you want to put the book together? What really was new about this book? You had mentioned that it brings people from different disciplines together.

Angus Menuge:

Really, what we thought was that there is a danger within every area of contemporary science of people feeling like they're locked into one implicit paradigm, and that implicit paradigm is some version of materialism. And so we thought, well, but actually there are lots of criticisms of materialism and they come from philosophy. They even come from neuroscientists such as yourself. They come from all over the place. And wouldn't it be nice if there were a fair airing first of all of these criticisms of the materialist view, but then also an exposition of all the alternatives? Because it seems as if many people aren't aware that there's not one; there are many alternatives out there to materialism and that perhaps some of these would actually be a lot more fruitful for scientific work than the implicit materialism that they may have unconsciously picked up.

Mike Egnor:

Yes. Yes. To help our listeners kind of wrap their minds around this, what is materialism or what is physicalism, which is another word for it?

Angus Menuge:

The basic idea of physicalism, which was the dominant position in philosophy of mind and certainly in psychology throughout the early and mid-20th century, was that we could understand everything about the human being in just the same way that we could understand physical processes going on in nature. So when we're looking at the world around us, it seems there's all kinds of things that we can explain just using physics and chemistry. Well, why not apply that same kind of understanding to us?

And really, the key thought is this; in natural science, we make this assumption that we can understand things in purely impersonal terms. In other words, we don't need to bring in subjectivity or goals or purposes or anything like that. We can simply say that, well, given this particular undirected cause, you will have this particular undirected effect. That's the kind of thinking that we would use if we wished to explain a chemical reaction or a glacier going down a valley. Maybe we can apply that same kind of thinking to human persons and reduce us to really nothing very special, just another part of the physical world.

Mike Egnor:

It seems like kind of a bizarre way to look at a theory of the mind to remove from it everything that's mental. That is that if you try to understand the mind as a series of physical interactions, you can only do that if you strip everything mental from what the mind is because there's nothing about the mind itself that would lead you to think it's a physical interaction. The mind involves thoughts and concepts and propositions and intentionality, a sense of aboutness, and physical things don't share any of those properties. So it's kind of a bizarre idea that you would try to explain the mind in purely in physical terms.

Angus Menuge:

Yeah, it really is. There's a great essay by C.S. Lewis called Meditation in a Toolshed, where he makes a distinction between two ways you can try to understand something. One is from the outside. So it's like the scientist who is looking at what's going on in the brain of someone when they're in love. The other is from the inside; what is it like to be in love?

Of course, when we're investigating the mind, we have a vast amount of information about what's going on in the mind, which is directly available to our own consciousness. And it does seem to be almost a kind of insanity to discount that enormous amount of evidence that we have, that every ordinary human being has when we're trying to investigate the mind and saying that, well, in the end, none of that really matters. We ought to be able to understand ourselves in just a way that we understand a rock slide or something else where there's nothing distinctively mental going on.

Mike Egnor:

The other kind of bizarre thing is that we have direct access to our own minds. We experience it first person. It's not perceptual. You can turn the lights out in your room and you still have your own mind there with you. Whereas material objects, we only know secondhand. We only know through our senses. So why we would deny the reality of the things that we experience directly and attempt to ascribe that reality to things that we can only experience indirectly and experience through the thing we're denying, which is our mind, is a bizarre way to look at the world.

Angus Menuge:

It really is. It seems to go back to a point that C.S. Lewis made. When we're looking out of the window, we focus on what we're seeing out of the window, but we don't think about the fact that we're looking out of the window. And so, to some degree, this kind of thinking about natural science is so focused on the object that we're investigating. It forgets about the subject.

And as you say, we have immediate access to all kinds of things in our consciousness. And science itself, in fact, relies on them as you're also pointing out, because every scientific experiment in the end is experienced by a human being and they convey a report to somebody else who has an experience of understanding what that data may show. And so, without conscious experience, you really wouldn't have any activity of science going on. And the same, of course, for reasoning. The same for intentionality that is thinking about things. All of these things are actually presupposed by the activity of science, even though they may not be the objects that most scientists are studying.

Mike Egnor:

Absolutely. One of my favorite insights in the philosophy of science was made by Werner Heisenberg, one of the pioneers in quantum mechanics. He said that we have to be careful that nature reveals herself to us according to our method of investigation. So that if we approach a particular problem in science as if it were just a material question of how does the brain work and the mind must be a part of the brain, well then a scientist may come to the conclusion at the end of his research that that is the case, that the mind is purely a material product of the brain, but nature in that case is simply revealing herself according to our materialistic methods. It doesn't mean that's what she really is. It doesn't mean that's what the mind really is.

Angus Menuge:

Yeah, that's a great point. We can sometimes artificially set ourselves a limit like methodological materialism, which basically says we'll only allow physical causes for any phenomenon, and then conclude well, that there must only be such causes. The analogy I give my students is that this is a bit like saying there aren't any small fish because you never catch them in nets with big holes.

Mike Egnor:

Right. Right. That's very true.

On the question of materialism or physicalism, what have been the dominant theories? This is such a bizarre way to look at the mind. How have people tried to make this work materialistically?

Angus Menuge:

All right, so in the beginning, the earliest materialist theories were behaviorists and there were different versions of behaviorism. But what they thought was we could try to understand our attribution of mental states to other people, like so-and-so is in pain, on the basis of their behavior. So perhaps what we mean by the word pain or what pain signifies is simply an admission, for example, to withdraw one's limbs or wince or cry out and so forth, and that really pain can be understood as a behavioral response to some kind of physical stimulus. And if you do that, you don't need to have anything distinctively subjective in the middle. You can just rely on behavior.

That view, of course, did not last for very long because there are just so many counter examples. You can have method actors or football players who will create enormously convincing behaviors to indicate they're in pain when they're not. Maybe they want a penalty or something like this. And on the other

hand, you can have very stoical people who actually are in incredible pain but don't produce any pain behavior.

So it became obvious that pain, whatever it is, it's an internal state of some kind. You can't really define what something is in itself just by its causes and effects.

Mike Egnor:

Well, it would also seem, I mean it's kind of self-refuting. You would imagine if a behaviorist wanted to understand the processes in his own mind when he's thinking about behaviorism, would he then simply videotape himself sitting at his desk thinking and thereby understand what he's thinking? I mean, behaviorism itself is a mental process that often involves no behavior whatsoever. You're just contemplating it.

Angus Menuge:

Right, exactly. So there's a number of these positions involved, this same kind of problem, that you have to make an exception of yourself from what you believe is going on in general.

So yeah, that theory fell to the ground quite quickly. And then the next wave of theories were various forms of the identity theory that said, well, if pain or other states really have to be understood as internal to the organism in some way, maybe what it means to be in pain is to be in a particular kind of brain state. And there were different kinds; type identity, token identity.

But of course, then the basic problem is that as we study the brain from a variety of physical approaches, whether from physics or chemistry or biology, we don't discern that it has any of these distinctive mental properties. And then Leibniz's law applies that two things cannot be identical if they have different properties. And no state of the brain in and of itself seems to have subjectivity or intentionality or rationality, but our thoughts and experiences do have all of those properties. So that didn't seem to work either.

And then the more recent approaches have been functionalist approaches. They were really inspired by developments in the new field of artificial intelligence as computers became more available. And they noticed wow, what the computer does is based on many factors, including the input, also the interaction between internal states of the computer and then the output. And it seems as if these functional states are very abstract in the sense that they could be realized very differently in different organisms.

So one problem for the type identity theory is just that different organisms that feel pain turn out to have incredibly different neurophysiological setups. So quite implausible that you could say that pain was the same type of state in every organism that feels pain. But if you have an abstract view of it, a functional role, then maybe that functional role can be realized very, very differently in different organisms. And that approach is still probably the dominant physicalist approach.

But again, it has the same underlying set of problems that we can very easily develop a computer or a robot which will realize the functional role of pain, but without experiencing pain. All we have to do is give it sensors, for example, for heat. And then program it so that when it detects a certain level of heat, it will withdraw its robot limb or it will say, "Ow," or whatever we program it to do, and it will produce all the clusters of behavior that will define that functional role. But the problem is it isn't really in pain and its states are not really about anything. We don't think that it actually has an experience of pain or that there's something it's like to be the robot.

Mike Egnor:

It would also seem to me that, and Bob Marks has a wonderful book on Non-Computable You out now on this topic that the mind is not any kind of computation, that you really can't explain mental processes at all by computation. It seems to me that the hallmark of a mental process is intentionality, is the aboutness of a thought. And the hallmark of computation is that it lacks aboutness.

That is that, for example, a word processing program. It simply processes the keystroke and makes it into a letter on your computer screen, but the word processing program doesn't know or care about the opinion that you're expressing if you're typing an essay, you can type an essay expressing one opinion and then the opposite opinion, and the word processing program doesn't know anything about it at all. In fact, if the word processing program did have intentionality, if it did contain a meaning that would only allow certain opinions to be expressed but not others, it'd be much less valuable as a program because then not everybody could use it.

So computation is the opposite of what the mind is. So I think it's a bizarre theory

Angus Menuge:

And because anything that's computational can be reduced to some set of rules; an algorithm or a recursive procedure. But it seems as if we actually have insight. Right now I'm teaching a class in advanced logic and we're going through Gödel's theorems. What's so interesting about those is that at the end of the day, you can see that for any particular theory, there's going to be a sentence which you can see is true, but that the theory cannot prove.

And so there's an interesting argument philosophically, well, if we were machines, then the theorem would apply to us and they would have to be a Gödel sentence for us, well, would we be able to see that it's true even though we couldn't compute it? It seems that we would be able to see that it's true.

Mike Egnor:

And if we couldn't compute it, then our mind couldn't be a computation. Right?

Angus Menuge:

Right.

Mike Egnor:

Right. That's fascinating.

How about eliminative materialism? I know that that's growing in popularity.

Angus Menuge:

Yeah, that's one of the two extreme options. I say the extreme options in philosophy of mind are either eliminative materialism or panpsychism. So the first one, eliminative materialism says that, while our common-sense views of the mind that we have beliefs and desires and that these are the reasons for our action, are all of them simply false, like the belief in phlogiston or the humors. It's just an old pre-scientific theory that we have to get rid of. And so then people like Paul and Patricia Churchland will claim that you can explain everything about what a human being does in terms of the transitions between neural activation patterns, and at no point do you actually need to appeal to what an individual believes or wants or their goals or anything like that.

The position is, I suppose, in a way consistent, because if the mind presents a problem to physicalism, well then you can get rid of the problem. But the difficulty is, can anybody make any coherent sense of the theory? Because if we try to understand it, for example, then it seems that understanding is an

intentional state. Or if they give an argument for it, how exactly are we supposed to accept the conclusion if we're not capable of accepting things? Because, again, accepting something is an intentional state.

Mike Egnor:

Right. I think of eliminated materialism as kind of an implicit confession. And I actually have some respect for eliminated materials like Paul and Patricia Churchland in the sense that they're admitting that the mind can't be explained materialistically. Unfortunately, they've jettisoned the mind instead of jettisoning materialism, which would seem to be the more reasonable approach.

Angus Menuge:

Yeah, I agree. In a way, it is an internally consistent position, but that seems to be too small. There's a great quote from G.K. Chesterson where he said that, "The materialist world seems to essentially exclude everything that is really in it. When you understand clearly what they are saying, that none of the ordinary things that people believe exist actually fit within that picture." And so to achieve consistency by throwing out the data doesn't seem to be a good approach. We kind of prize theories that can account for as much data as possible.

Mike Egnor:

Yeah. John Searle, who's a philosopher at Berkeley, who's not a dualist at all, but Searle has commented that it almost seems like the materialists will just say anything to justify a purely materialist perspective irrespective of the evidence. They'll just say anything.

Angus Menuge:

Yeah, Searle is interesting in that way because he's recognized, for example, that if you think through what we mean by acts of reasoning, they presuppose free will. And of course, free will is a real problem for any version of physicalism because it requires the mind to have some kind of independence from the processes that are going on in the brain.

But if we don't draw a conclusion because we see that it is a right answer, as somehow we're only impelled to draw a conclusion, then it seems that we're no different from our computers and calculators. And although they've been engineered so that they follow logic and arithmetic, we don't think that they are actually reasoning. They're just designed in such a way that they follow the dictates of arithmetic and logic. And that isn't the same as endorsing a conclusion because you want to find the truth, for example.

Mike Egnor:

Precisely. Precisely.

Well, Angus, it's been absolutely wonderful to speak with you. We will be doing more sessions very shortly. Thank you so much, and thanks to our listeners. I've been speaking with Dr. Angus Menuge regarding his wonderful new book, *Minding the Brain*, which I highly recommend.

Please stay tuned for more discussions. Thank you.

Announcer:

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