

Debate on the mind and scientific method (continued) on
<http://forums.philosophyforums.com>.

Quotations are in red and the responses by Death Monkey (Kevin Dolan) are in black. Note that sometimes a quote (in red) contains a previous response. This is usually found at the beginning of the quoted portion (in red) and separated from the actual quote by a horizontal line. This is usually done to provide a context for the quote before responding to it.

Monroe,

Quote:

What do you mean by "mental properties"? If you are referring to any aspect of my mind that I can possibly know I have, then it has physical effects on my brain. In that case, there is no way that I could possibly scientifically describe the brain without also scientifically describing those effects. And I cannot scientifically describe those effects without explaining what causes them. My explanation may be wrong, but it is not leaving their cause (consciousness) out.

no, you can describe a phenomenon without describing its cause.

But such a description is *not* a complete scientific description of the physical facts! Look, if there is some sort of supernatural spirit interaction with the brain to produce consciousness, then we can look at the brain and see those physical effects. We could construct a scientific model of the brain which simply explains how the brain reacts to those effects, but we cannot provide a scientific model which says what those effects will be, where they come from, or anything else, other than that they are simply there. That means that we have not provided a complete scientific theory which accounts for all of the physical facts.

The *only* way a scientific explanation of the brain could *possibly* leave out consciousness, is if it leaves out some of the physical facts about the world.

Quote:

as for mental properties, i mean just our minds- beliefs, desires, qualia, etc. (my terminology comes from my 'property dualism', that the physical aspects of the brain, and the mind, are both just sets of properties of a common substance, but that they are not mutually reducible to each other)

Fine. By that definition, a complete scientific explanation of all of the physical facts *cannot possibly* leave out those mental properties. Its explanation of them may be wrong, but they cannot be left out, because to leave them out is to say that their physical effects have not been explained by the theory.

Quote:

I suspect, though, that when you say mental properties, you are not referring to anything which I could possibly know that I have. If they are something p-zombies do not have, but real people do, then by definition, there is no way I could possibly know that I have it. This directly follows from the definition of knowledge. You may believe that you have them, but you know perfectly well that even if you didn't, you would still believe that you did. Therefore your belief clearly is not justified. You have no way of knowing whether or not you are a p-zombie.

no, they are the things which you know most intimately. they are your consciousness. by definition you actually do know you have them, and p-zombies do not since they do not know anything (unless you want to say knowledge is a type of behavior, which is a highly problematic position) you are the one who has no way of telling (for sure) whether i am a zombie, not me.

You cannot get around this problem by saying that zombies don't have knowledge, or beliefs. That is just semantic acrobatics. There is absolutely nothing about your first-person experiences which allows you to logically conclude that they are not brain processes. That is an inference you draw based on a metaphysical assumption. You do not know that it is true.

Quote:

how are you justified in saying anything like p-consciousness exists? are you just defining it to be a set of brain processes by fiat? how does this get you anywhere?

I am defining it to be what the p-zombie thinks of as consciousness, as I already said.

Quote:

you also assume p-zombies have thought. this is a big Assumption.

No, it is not. It only becomes problematic if you insist on defining every single term associated with the mind in a way that presupposes that they are not physical. Property dualism does not claim that p-zombies do not think, or believe, or know. It says simply that they lack phenomenal consciousness. Things like thinking, believing, remembering, etc... are all understood to be cognitive processes which the brain performs. The p-zombie may lack the phenomenal experience of thinking, but it still thinks. And it still has something which it is going to think of as its phenomenal experience of thinking.

You want to present p-zombies as being mindless automatons, but this is not consistent with their definition of being physically identical to us, and what we know about the involvement of our brains in our mental lives. P-zombies may have very different kinds of minds, and mental lives, than we do. But to say that they have none, is simply to define those mental terms in such a way that they *only* refer to those aspects of the mind which we have, and p-zombies lack.

In effect, your rebuttal to my argument amounts to nothing more than refusing to allow me to use any words to refer to what is going on the p-zombie's head. I have even tried to invent new words to refer to it, such as p-consciousness, and now you tell me there is nothing going on in their heads at all. That is nonsense. if there is nothing going on in their heads, then they are not p-zombies.

Quote:

So regardless of whether property dualism is right, or physicalism is, either way, a complete scientific explanation of the brain is going to include a scientific explanation of consciousness. If property dualism is right, then that explanation will just be the wrong one. In either case, it is simply incorrect to say that a scientific explanation of the brain leaves consciousness out. It does not. What it leaves out is the supernatural source of what you think of as consciousness. But that is perfectly OK, since you can never know that it exists. It is not something which needs to be explained. Only that which we know exists, requires explanation.

sure, if you simply define consciousness to be a set of brain processes.

I have done no such thing. The point is that the definition of consciousness does not stipulate whether it is, or is not, a set of brain processes. My scientific explanation says it is, and may very well be wrong. But the fact that it is wrong about the nature of consciousness, does not mean that it is leaving it out. indeed, if it did leave it out, there would be nothing for it to be wrong about.

Quote:

but you still haven't justified the position that the question, "how does the brain give rise to qualitative experience?" can be answered.

What am I supposed to justify? If it is possible to provide a scientific theory which models all of the physical facts relevant to brain activity and behavior, then it follows that the question "how does the brain give rise to qualitative experience?" will be answered by it. If it cannot, then there are supernatural influences involved, and the question cannot be scientifically answered. My justification for thinking that it can be answered is exactly the same as my justification for any other scientific theory. I do not think that the supernatural exists. If it does, then I am wrong, and there is no reason to think that consciousness, or anything else, can be scientifically explained.

The justification for thinking that consciousness can be explained scientifically is exactly the same as the justification for thinking that any other feature of the world can be. It is the justification for scientific epistemology itself. It is the assumption of naturalism. That assumption is an axiom of scientific

epistemology. Maybe it's true, maybe it's not. My justification for thinking that it probably is, is simply that scientific epistemology *works*.

Quote:

Again, those facts are inferred from your memories. They are not the memories themselves.

memories are representational, aren't they? if the representation is true, it is a fact.

I'm not going to get back into this representation discussion again. Memories are patterns of neural connections in the brain. There are facts about memories, and there are facts which your cognitive processes can infer from memories. Memories are not facts.

By Death Monkey (Kevin Dolan)

Metacristi,

I do not, in principle, disagree with any of what you have said. At least, not if I am understanding you correctly. I have absolutely no problem accepting that ad-hoc hypotheses, as you put it, can serve a useful role in scientific methodology.

My disagreement is purely one of terminology. I do not think that hypotheses which do not have substantial empirical evidence to support them, should be referred to as scientific knowledge. This goes for scientific theories which simply have not been sufficiently tested yet, as well as for metaphysical hypotheses which simply cannot be empirically tested.

That does not mean that I am advocating logical positivism, or that I am completely dismissing such ideas as being of no value to science. It just means that I think that such hypotheses do not meet the epistemological criteria necessary to be considered "knowledge".

There are all sorts of things in modern science which are very useful components of the scientific methodology, but which are not scientific knowledge, ranging from theories which have not been empirically verified yet (such as the Higgs Boson), to prototypical models which have not been developed to the point of testability yet (such as String Theory), to metaphysical interpretations of theories, which are untestable but nevertheless serve useful as teaching and visualization tools (such as the various interpretations of QM).

I do not deny the value or importance to science of any of these things. I just don't think we should call them scientific knowledge, for the very simple reason that they are not things which we know are true.

Geoff,

Quote:

What has become crystal clear, and what has been re-emphasised many times in the short period I have been here is that cognitive science, if it is going to survive at all, must be inter-disciplinary. That means, quite specifically, that the foundationalist materialist position you are trying to defend (the one that insists that to understand anything you have to understand it in terms of physics) is under attack for being too restrictive, too dogmatic and incapable of dealing with the multi-disciplinary nature of cognitive science.

I have never advocated such a position. The neuroscience lab I work for is also multidisciplinary. If it was not, I wouldn't be working here. After all, I am not a neuroscientist.

I do not think that we are going to understand how the brain works in terms of physics. We can't even understand how complex molecules work in terms of physics. Chemistry is assumed to be reducible to

quantum mechanics, but the reduction cannot actually be done. That is, complex chemical properties cannot, in practice, be logically deduced from QM.

Quote:

By its very nature cognitive science has stepped outside the boundary of normal materialistic science. Cognitive science is a conglomeration of computer science, AI, linguistics, psychology, anthropology and philosophy. In order to make sense of all these things together you CANNOT just insist on physicalism and science as epistemologically privileged.

On this point I very much disagree. You can toss metaphysical philosophy into the mixture, and call it part of cognitive science, if you want. But metaphysical speculation is never going to actually tell us anything about how the mind works. Linguistics and sociology may be of use in trying to help construct a framework from within which we can try to understand how the mind works, but the bottom line is that once you have a possible model for the mind, the only way to assess its accuracy is through empirical testing. And without such testing, it is just a guess.

Quote:

Whilst materialism itself will yet live on, exclusively materialistic approaches to philosophy of mind and cognitive science will not. In terms of what people are being taught at Universities RIGHT NOW, that exclusive approach is already dead. Basically, people who are trying to limit our search for an answer to computationalism (and now functionalism) are marginalising themselves. Cognitive science itself is moving on. People who insist on defending the old restrictive ways of thinking about this problem will succeed only in marginalising themselves and missing the boat.

People who insist on pretending that metaphysical speculation can ever be more than speculation, are missing the whole point of science. Computationalism and functionalism are two very specific ways of looking at specific aspects of the problem. Neither tells the whole story. Neither is synonymous with physicalism. If your approach to understanding the mind recognizes that the criteria upon which any model of the mind must be judged, is how well it holds up under empirical testing, then you are using the physicalist approach. If your approach relies on any other criteria to decide whether a model is correct or not, then you are not doing science.

By Death Monkey (Kevin Dolan)

geoff,

Quote:

On this point I very much disagree. You can toss metaphysical philosophy into the mixture, and call it part of cognitive science, if you want. But metaphysical speculation is never going to actually tell us anything about how the mind works....

But can't you see that by taking this attitude you are closing off several areas of academic knowledge directly related to cognitive science?

No, I can not. I can not think of a single piece of verifiably true information that metaphysical speculation has *ever* provided about *anything*.

Quote:

It is precisely this attitude which has been attacked (successfully IMO). You use the term "Metaphysical speculation" in such a way as to minimise its relevance (even though you are no metaphysician and know little or nothing about its history or achievements - even Churchland admits he can't dismiss a tradition "so rich and influential" in a mere paragraph, and that is an understatement). You then tell us it is NEVER going to tell us ANYTHING about how the mind works! You are presumably rejecting the whole of ontology, the whole of metaphysics and the whole of phenomenology, and that's just for starters. And you are rejecting them totally and completely as utterly useless : "These things will NEVER tell us ANYTHING".

Yeah, pretty much. The evidence is on my side, too. In the thousands of years people have been engaging in metaphysical speculation, it has never told us anything. Nothing which can be verified as being true, anyway.

Quote:

I know that is what you believe. But you have no right to speak for the majority of people working in this field. I think that the view you have expressed was a majority view 20 years ago. I think it is now a minority view within cognitive science (though not AI).

Well, it is certainly the predominant *scientific* view among the people working in the field who I know. That is not to say that many of them do not engage in metaphysical speculation, or have metaphysical beliefs themselves, but they all seem to agree that such things have no place in a scientific investigation.

Quote:

Let me put it like this. Cognitive Science is currently re-defining itself. People like David Chalmers (and many others) have seriously undermined materialist philosophies of mind which were in the ascendancy during the 50s and 60s. But as yet there is little or no agreement as to what is the way forward. Very recently a book was published called "naturalizing phenomenology : contemporary issues in phenomenology and cognitive science" which was a first attempt at a bridge between phenomenology and COGS (or at least an examination of the problems inherent in building one without alterations to both ends). People like Hameroff and Penrose have been offering suggestions from the QM world - controversial I know, but the point is that they have recognised the limitations of the current approach and are suggesting new ways to think about the problem. It is their motivation and vision which matters here, not the specifics of the microtubules theory. The point I am trying to make is that the old position you are defending has now been so seriously undermined that a new consensus **MUST** be sought. If some people choose to continue to trot out the same old "metaphysics is bunk, phenomenology is bunk, only hard science gives answers" attitudes then all they are doing is excluding themselves from participating in the generation of the new consensus. There **WILL** be a new consensus. It is your choice as to whether you wish to join in that debate and help to find a new way forward, or remain on the sidelines trying to defend a position which is slowly and inevitably sliding into history.

This is completely your opinion. I have certainly seen no sign of such a scientific revolution in the field. The only place I even see any discussion of such issues is between philosophers, not scientists. I suspect that you may be having some difficulty distinguishing between the two.

Quote:

One more word on phenomenology. Husserl provided a metaphysical position which tried to tackle consciousness "scientifically" from a 1st-person perspective. This was an admirable thing to try to do, but I think the mistake is to believe that ANY single foundation of knowledge can provide all the answers. Husserl was trying to build a phenomenological foundation to all knowledge (I think). The materialist agenda is to build a material foundation where a "matured neuroscience" can explain all these phenomenal properties that are the guts of the hard problem. I think both projects are doomed to failure. I think that the "new consensus" is going to have to be anti-foundationalist. In other words, any view which tries to defend an exclusive foundation will be rejected. The problem with foundationalism is that it always seems to end up defending its foundations (instead of answering the questions). Furthermore, because other people are trying to build on other foundations any foundationalist system also ends up spending much of its time attacking those other foundations (instead of trying to answer the questions). So you feel the necessity to label metaphysics as "NEVER going to tell us ANYTHING". You aren't willing to co-operate. Same is true of Husserlian phenomenology.

You are entitled to your opinion. I just think your opinion is dead wrong. Please explain to me how metaphysical speculation could *possibly* ever tell us anything about the real world? The very idea that it could seems to be nothing more than a fundamental failure to understand the distinction between metaphysics and epistemology.

Quote:

The way forward is co-operation, dialogue and cross-fertilisation. Continually defending a single foundation and continually attacking the other approaches is exactly what needs to be eliminated if we are going to move forward on this issue. So long as certain parties go on insisting that their way is the only way, we are at an impasse and that is where we will stay.

Seems to me that I am not the one attacking approaches other than his own. I am in this thread defending the approach that I and my colleagues are using, not attacking others. I don't think these other approaches are going to work, just as you don't think mine will, but if you or other people want to try them anyway, be my guest.

Quote:

Again, that is your point of view. Some questions elude any empirical answer. Consciousness may well be one of them. The mind-body problem is arguably the most difficult intellectual challenge, bar none.

It may elude any empirical answer. If it does, then it is outside of the domain of scientific inquiry. What does this have to do with the question of whether metaphysical speculation should be considered scientific knowledge?

Quote:

People who insist on pretending that metaphysical speculation can ever be more than speculation, are missing the whole point of science.

Philosophy doesn't work like science, DM. There are no "right answers". At the end of the day, you have to take your own opinion away with you and make your own judgements.

Exactly. And what is being discussed here is what science can and cannot do, and what types of claims should be considered scientific knowledge. Go right ahead and use metaphysics in your "method". Just recognize that your method is *not* science.

Quote:

In most areas of science this doesn't matter because there is no clash with philosophy. But in areas of science which border philosophy, and especially in cognitive science which openly INCLUDES philosophy, the distinction is very important. Cognitive science isn't really a "science" like the subject you study are. For example, new students of COGS will all be introduced to Husserl, even if it is just to understand what he was trying to do and how it relates both to philosophy and to the history of cognitive science. You are trying to defend a position where knowledge of Husserl is completely and utterly irrelevant to a person studying cognitive science. That is history, DM. Husserl is already on the curriculum.

I am a scientist. Neuroscience is a science. If your point is that there are people who are also interested in philosophy of the mind, I agree. There are. So what? A scientific explanation of consciousness may not answer all of the philosophical questions about the mind people have. In fact, I am sure it will not. Nobody is claiming that everything other than science is meaningless and useless. I am just saying that this other stuff is not science. As you just said, it isn't.

Quote:

Computationalism and functionalism are two very specific ways of looking at specific aspects of the problem. Neither tells the whole story. Neither is synonymous with physicalism. If your approach to understanding the mind recognizes that the criteria upon which any model of the mind must be judged, is how well it holds up under empirical testing, then you are using the physicalist approach. If your approach relies on any other criteria to decide whether a model is correct or not, then you are not doing science.

Strictly, I'm not. What I have been saying is that cognitive science is not merely a science. It is cross-disciplinary. It is part science, part humanities.

Then it would appear we are in agreement, at least about this. The point of the discussion I was having with Metacristi, which you were addressing when you entered this discussion, is whether these things which you are saying are (at least strictly speaking) not part of science, should be considered to be scientific knowledge. I already told him that my position is not that all of these things are completely useless. Merely that claims which are not supported by empirical evidence should not be considered to be scientific knowledge. Would you agree with that statement? Do you agree that only claims which are supported by empirical evidence should be considered to be scientific knowledge?

Quote:

If some of the materialist-inspired theories of people like Dennett and Blackmore are correct, then it is theoretically possible to build a conscious machine based upon a computer which behaves like a human - say a perfect software simulation of a human brain (Dennett's latest position specifically requires this to be true, because he has used such an argument as an objection to the knowledge argument). But if we acknowledge the Hard Problem, then we have to say that virtual models of brains are processing information at a different level of abstraction of physical brains and it looks far more likely that virtual models of brains can never be conscious. Instead we would have to build a physical simulation of a brain in order to for it to stand any chance of being conscious. Here, ontological considerations have a direct affect on the approach taken by a person with a real-world problem to solve. By dismissing metaphysics without having any real knowledge of it, the researcher could spend his entire life barking up the wrong tree. And it all could be avoided by a slightly more tolerant approach to other peoples views.

It seems to me that this entire argument boils down to your choice of how to define what it means to be conscious. For example, if I simulate a brain on a computer, assuming that physicalism is correct, would the computer be conscious? I would say no. The computer is not conscious, any more than it is a brain. The computer is simulating consciousness.

Ontology only enters into it if you define the terms you use to describe what you are studying or simulating in terms of ontological concepts. The entire crux of the problem you outline above is the idea of what it means to actually *have* consciousness. If you start out by defining that term in a metaphysical way, then the rest of the work is going to have metaphysical considerations mixed into it. If, however, you throw out poorly defined terms like "consciousness", and misleading or vague terminology like "having consciousness", all of this can be avoided. Does the simulation accurately simulate all of the behavior of the brain? Does it act like a person? If the answers to these questions are yes, then that is good enough. Questions about whether that implies that it "really has consciousness like we do?", are metaphysical questions to begin with, and cannot possibly be answered scientifically, any more than the question "do you really have consciousness like I do?" can.

The most challenging aspect of scientific research is not answering questions that have been asked, but figuring out how to ask questions in such a way that they can be answered. This is, unfortunately, something which philosophy tends to be very bad at.

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

The only way a scientific explanation of the brain could possibly leave out consciousness, is if it leaves out some of the physical facts about the world.

yep.

So then we are in agreement? Am I to understand that your position is that there are physical facts about the world which cannot be scientifically explained? If this is the case, then it is nonsensical to say that a complete scientific explanation of the physical facts will leave out consciousness, because what you are really claiming is that a complete scientific explanation of the physical facts cannot be made.

Quote:

You cannot get around this problem by saying that zombies don't have knowledge, or beliefs. That is just semantic acrobatics. There is absolutely nothing about your first-person experiences which allows you to logically conclude that they are not brain processes. That is an inference you draw based on a metaphysical assumption. You do not know that it is true.

the assumption that they are reducible to brain processes is a stronger, or at least equally strong, metaphysical assumption

If you mean metaphysical reduction, then you are absolutely right. That is why I make no such assumption.

The claim that they can be scientifically explained in terms of brain activity, is an epistemological one, not a metaphysical one (though it certainly may be incompatible with some metaphysical positions). It is also a scientific theory, not an assumption.

Quote:

Terribly sorry if you think I am being unfair, but i am quite serious when i say that i have just as much trouble seeing how consciousness could be reducible to physical processes as i have seeing how any mental phenomenon like representation (e.g. thought, belief, knowledge, memory) could be reduced to physical processes. and your position that a mindless automaton wouldn't make sense is WRONG. they have the same behavior, and you cannot see anything different in their brains. our ascription of such things as belief-states to other people is not an observational conclusion, but a best-explanation type of move. even eliminativists have acknowledged this.

Again, you are just insisting on defining words like "thought", "belief", "knowledge", and "memory" in ways which presuppose that they are not behavior. If we define these terms to actually refer to things which we do, like thinking, remembering, believing, and knowing", then it is quite clear that these things are done by our brains. You may assert that there is some sort of "phenomenal component" to it, but the information processing and decision making aspects of these things are most definitely physical activities performed by the brain, and these terms cannot reasonably be defined without including those aspects as well. Those are things the p-zombie clearly has.

Quote:

What am I supposed to justify? If it is possible to provide a scientific theory which models all of the physical facts relevant to brain activity and behavior, then it follows that the question "how does the brain give rise to qualitative experience?" will be answered by it.

no. your model could simply make inductive generalizations about the brain and behavior without telling the true causes of it.

If that were the case, then it would not be a complete scientific model. It would also fail to be accurate the first time the actual causes did something different than our inductive generalization predicts, which always happens with such generalizations.

Remember that in order to be a complete scientific model, it must accurately predict how the system will respond in the future. It is not sufficient to simply say "this is what it has done in the past, and as long as it is only exposed to those exact conditions, it will continue to do that". What happens when we expose both our model and the real brain to new conditions, which have not been studied before? The inductive generalization would almost certainly fail.

Quote:

and it might even be able to give a purely physical causal explanation, whilst being a false explanation.

Sure. In this case, its explanation of consciousness is wrong, but it did not leave consciousness out.

Quote:

in short, you could have a false theory that still allows you to make the same predictions about the brain and behavior as a true one.

Absolutely. If this is the case, then my theory clearly does not leave consciousness out. It just gives an incorrect explanation of it.

Quote:

The justification for thinking that consciousness can be explained scientifically is exactly the same as the justification for thinking that any other feature of the world can be. It is the justification for scientific epistemology itself. It is the assumption of naturalism. That assumption is an axiom of scientific epistemology.

Maybe it's true, maybe it's not. My justification for thinking that it probably is, is simply that scientific epistemology works.

you seem to fail to recognize the special status of consciousness with respect to other features of the world, like our direct access to phenomenal experience, and the fact that qualia do not come up in most scientific investigations

You are right. I do fail to recognize it as having a special status. Nor do I see any reason why the examples you have given should in any way indicate that it does. Even in a p-zombie world, this would be true. What the zombie thinks of as its consciousness would be something which it has direct access to, and which does not come up in most scientific investigations. It would also be something which is purely a process happening in the zombie's brain.

The fact that we have direct access to our phenomenal experiences indicates only that there is something which we have direct access to. This is perfectly compatible with the hypothesis that our minds are brain processes. Of course a set of brain processes which perform complex information processing tasks are going to have some sort of access to themselves.

Think about it. Imagine we were to build an AI which is of the same level of complexity, and information processing capabilities, as our brains. In order to be able to perform the kinds of tasks we do, such an AI's cognitive processes would *have* to have access to themselves. This kind of feedback, where an information processing system thinks about its own thoughts, is a central component of any realistic AI. Our own "direct access" may be of a completely different nature, but the simple fact that we have direct access to our own mental states in no way implies that our consciousness is non-physical.

Geoff,

Quote:

Ontology only enters into it if you define the terms you use to describe what you are studying or simulating in terms of ontological concepts.

Yes, and indirectly you have.

You have justified it in terms of science requiring materialism and you requiring empirical verification, and I respect both those judgements.

Science does not require metaphysical materialism. Indeed, it is quite compatible with metaphysical dualism, and even idealism, so long as they do not claim, in addition to their metaphysical claims, that any of the axioms of science are false. And those axioms are all epistemological in nature. I can easily construct any number of non-materialistic metaphysics in which scientific epistemology is still valid.

Quote:

But regardless of your reasons you have framed the question exclusively within the remit of materialism.

You mean this question?

Quote:

For example, if I simulate a brain on a computer, assuming that physicalism is correct, would the computer be conscious? I would say no. The computer is not conscious, any more than it is a brain. The computer is simulating consciousness.

If so, then that is the whole point. The above question is not the type of question which, as a scientist, I would be asking or attempting to answer.

Quote:

But your necessity to do this does not necessarily correspond with the reality of the situation. Just because you epistemologically want it to be true, doesn't make it true. And what matters to the real-world machine-

consciousness-engineer is what is actually true, not what you want or need to be true. Materialism might not be true.

What are you talking about? I'm not a materialist. Not in the metaphysical sense anyway. I am not trying to use science to answer metaphysical questions. I already know that it cannot. I am not even trying to answer any metaphysical questions. My answer to any metaphysical question is always one of two things: Either "I don't know", or "I don't understand the question". That was the whole point of the above post. I was pointing out that the kinds of questions which you saying science cannot answer, are not questions which I am interested in trying to answer.

Quote:

By attempting to simulate a physical brain instead of a software brain, you are eliminating the potential ontological problem, even without finding a solution.

I have no idea what you mean by this, but it is certainly true that I am not trying to find solutions to any ontological problems. That is simply because I do not have any method for solving such problems.

Quote:

The entire crux of the problem you outline above is the idea of what it means to actually have consciousness. If you start out by defining that term in a metaphysical way, then the rest of the work is going to have metaphysical considerations mixed into it. If, however, you throw out poorly defined terms like "consciousness", and misleading or vague terminology like "having consciousness", all of this can be avoided. Does the simulation accurately simulate all of the behavior of the brain? Does it act like a person? If the answers to these questions are yes, then that is good enough.

Except that it isn't good enough!

It's good enough for science. If you want answers to metaphysical questions, you are just going to have to make them up, because science isn't going to give them to you.

Quote:

That is Turing Test and Behaviourism style "consciousness" i.e. not consciousness.

Exactly my point. What you want an explanation for is something which you have defined in a purely metaphysical way. That is not something which science can address.

Quote:

That is the whole problem with the current approach, DM. In reality, that approach isn't good enough to give us any answers either.

It can give us all sorts of answers, to very important questions. What it cannot do is provide answers to these metaphysical questions you are so concerned about. But those questions cannot be answered at all, so I hardly see how that constitutes a valid criticism of my methodology.

Quote:

All it does is side-step the real question. That is exactly why it has proved difficult to defend it. There is a fundamental question here about how science can investigate consciousness. It is fine to argue that there must be a line between metaphysics and science. It is not fine to argue that metaphysics is not relevant to cognitive science. It is simply not correct to argue that metaphysics is irrelevant to cognitive science. And I mean Cognitive Science as it is currently defined, not "science" as in "hard science".

The only questions I side-step are ones which are either not coherently asked in the first place, or which cannot be answered at all.

Quote:

Questions about whether that implies that it "really has consciousness like we do?", are metaphysical questions to begin with, and cannot possibly be answered scientifically, any more than the question "do you really have consciousness like I do?" can.

Well, the example I gave was of an engineer, not a scientist.

Normally engineers use science to answer their questions. But even if they do not, the question cannot be answered at all. Or at least, if you have a possible answer, there is no way to verify that it is the right one.

Quote:

In terms of the limits of normal science, I think we are in rough agreement.

Great.

Quote:

The most challenging aspect of scientific research is not answering questions that have been asked, but figuring out how to ask questions in such a way that they can be answered. This is, unfortunately, something which philosophy tends to be very bad at.

It finds novel ways of leading people to find answers for themselves, hopefully.

Finding answers is easy. Verifying that the answer you have found is correct, is not. Science is one method of finding and verifying answers to questions about the world. There are many other methods for finding answers to questions about the world, but I cannot think of a single one, other than science, for verifying whether those answers are correct. Can you?

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

So then we are in agreement? Am I to understand that your position is that there are physical facts about the world which cannot be scientifically explained? If this is the case, then it is nonsensical to say that a complete scientific explanation of the physical facts will leave out consciousness, because what you are really claiming is that a complete scientific explanation of the physical facts cannot be made.

stop equivocating. i said a complete description of the physical facts will leave out consciousness, and i hold that such a description is possible in principle. but among these facts there will be some unexplained by others, some because their proper explanation lies in mental facts, some because they are fundamental physical laws which cannot be given explanation because "that's just the way it is" is the only reason they're true.

I am not equivocating. I am pointing out that a scientific theory is not just a simple description of known physical facts. What you are asserting is that the brain itself cannot be scientifically understood. At some point we will find physical behavior which we cannot scientifically model.

Quote:

If you mean metaphysical reduction, then you are absolutely right. That is why I make no such assumption.

The claim that they can be scientifically explained in terms of brain activity, is an epistemological one, not a metaphysical one (though it certainly may be incompatible with some metaphysical positions). It is also a scientific theory, not an assumption.

ok then, what exactly is a "scientific explanation" in your book?

A scientific explanation is a theory which explains something in terms of other known scientific principles. For example, I could provide a scientific explanation for why the sky is blue, by explaining the phenomenon in terms of electromagnetic field theory, atomic physics, and optics.

This differs from a scientific description, which only models the phenomenon mathematically, without explaining it in terms of other simpler phenomena. For example, the standard model of QM is a scientific description. It does not explain why things work that way.

Likewise a scientific description differs from a simple description of the known facts, because it provides a model which can be used to make future predictions. That is why I said before that you cannot make a scientific description of planetary motion without making reference to the Sun. You could make a description of the planetary motion which has already occurred over some time interval, without making reference to anything other than those planets motion, but such a description would not allow you to make accurate future predictions of their motion.

Quote:

Again, you are just insisting on defining words like "thought", "belief", "knowledge", and "memory" in ways which presuppose that they are not behavior. If we define these terms to actually refer to things which we do, like thinking, remembering, believing, and knowing", then it is quite clear that these things are done by our brains. You may assert that there is some sort of "phenomenal component" to it, but the information processing and decision making aspects of these things are most definitely physical activities performed by the brain, and these terms cannot reasonably be defined without including those aspects as well. Those are things the p-zombie clearly has.

perhaps you could explain then how purely physical processes can be representational?

Nope. Not going to get into that discussion again. It went absolutely nowhere the last time we discussed it. It is also completely irrelevant. What matters is that there are abilities which the p-zombie clearly has, which are at least part of what we think of as our own mental abilities.

Quote:

(or to use terms common in this area of philosophy, how can they have content or "aboutness"?) this is a deep philosophical problem. this has been discussed on past threads, but take these points: (1) belief cannot merely be a type of behavior in relation to the thing believed since a brain in a vat would have no such behavior but would presumably still have the same beliefs.

This is false. Brain activity is behavior.

Quote:

(there are many other arguments for this) (2) if it just has to do with the brain, it is very unclear from a purely physical view why or how the brain has content that is about anything at all

That is because it is not just about the brain. The brain interacts with sensory input. Without sensory input, you would have no beliefs. You would not even be conscious, because without sensory input your brain would never develop any cognitive abilities. You would either be a vegetable or a corpse, depending on whether or not somebody decided to keep you alive with life support.

Quote:

Remember that in order to be a complete scientific model, it must accurately predict how the system will respond in the future. It is not sufficient to simply say "this is what it has done in the past, and as long as it is only exposed to those exact conditions, it will continue to do that". What happens when we expose both our model and the real brain to new conditions, which have not been studied before? The inductive generalization would almost certainly fail.

unless your model just happened to always predict accurately. this is theoretically possible, if unlikely (but not really more unlikely than finding a true model for anything). then you'd have a model that left out consciousness.

No, it's not possible, because without some explanation for why the brain responds to known inputs the way it does, there is not any way to predict how it will respond to inputs which we have never seen it receive before. Every set of conditions results in different behavior. If we are unable to come up with an explanation for why the conditions we have seen result in the behavior we have seen, then we have absolutely no way to predict what behavior we will see under conditions which have not been seen. Induction simply cannot be applied in such circumstances. Which of the billions of different responses to known inputs are you going to inductively predict will result from a particular previously unseen input?

At the very least we would need a model like QM, which provides a set of mathematical rules for making

predictions which can be applied to previously unseen conditions. Such a model would then constitute a scientific description of consciousness. This would occur, for example, if consciousness turned out not to be just brain processes, but instead some other physical thing interacting with the brain. Again, in such a case our scientific theory would not be leaving out consciousness. It would instead be providing a scientific description of it. In this case our scientific explanation of the brain would be explaining the brain activity in terms of both bio-chemistry and consciousness, where our model of consciousness is another fundamental scientific theory like QM and GR currently are. This possibility is still completely compatible with physicalism. It would just mean a falsification of the current scientific theory that consciousness is just brain processes.

Of course, if this other thing interacting with the brain is, as you suggest, supernatural, then we would be unable to construct such a scientific model for it. We would be able only to list the effects we have seen, but be unable to construct any scientific theory which allows for prediction of future effects. In such a case, as I have mentioned before, a scientific explanation of the brain would be impossible, because we would not have any scientific model of these effects to explain it in terms of.

Quote:

and it might even be able to give a purely physical causal explanation, whilst being an false explanation.

Sure. In this case, its explanation of consciousness is wrong, but it did not leave consciousness out.

yes it did. but whatever, you're just asserting your central thesis.

How can you simultaneously assert that it has provided an incorrect explanation for something, and that it has left that thing out? That makes no sense. It has clearly not left consciousness out in this case, because consciousness is what that false explanation was an explanation of!

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

I am not equivocating. I am pointing out that a scientific theory is not just a simple description of known physical facts. What you are asserting is that the brain itself cannot be scientifically understood. At some point we will find physical behavior which we cannot scientifically model.

well maybe you can have a theory of nonphysical things, i don't see why not

I don't see how this comment relates to what I said. I am talking about whether something physical can be scientifically modeled.

Quote:

A scientific explanation is a theory which explains something in terms of other known scientific principles. For example, I could provide a scientific explanation for why the sky is blue, by explaining the phenomenon in terms of electromagnetic field theory, atomic physics, and optics.

how is this different from a "metaphysical reduction"?

Because it is not metaphysical at all. It is epistemological reduction. This explanation does not require any metaphysical claims. It is not even attempting to address the ontological status of any of the factors involved. It concerns itself only with observable effects, and explains one set of observable effects in terms

of another.

This should be clear when you consider that it is possible to invent any number of completely different metaphysical hypotheses for which is "really" going on, all of which are compatible with the scientific explanation given.

Quote:

Likewise a scientific description differs from a simple description of the known facts, because it provides a model which can be used to make future predictions. That is why I said before that you cannot make a scientific description of planetary motion without making reference to the Sun. You could make a description of the planetary motion which has already occurred over some time interval, without making reference to anything other than those planets motion, but such a description would not allow you to make accurate future predictions of their motion.

why? why can't you have something like a set of equations describing the night sky, without any reference to what is causing those bright dots, that makes accurate predictions?

Because if those equations really accurately describe those motions, then they are taking into account the effects of the Sun, regardless of whether your theory explicitly refers to them as "effects of the Sun" or not. Indeed, it necessarily follows that the position, mass, and velocity of the Sun must all be included somewhere in those equations.

Incidentally, this effect is exactly how many heavenly bodies were first discovered. We look at the motion of the visible planets, and discover that the equations describing their motion also describe the motion of other massive bodies in the surrounding area. Sure enough, when we look more closely, there those massive bodies are. The equations provided a description of the motion of those bodies, even though the scientists constructing those equations had no idea they were there.

Quote:

That is because it is not just about the brain. The brain interacts with sensory input. Without sensory input, you would have no beliefs. You would not even be conscious, because without sensory input your brain would never develop any cognitive abilities. You would either be a vegetable or a corpse, depending on whether or not somebody decided to keep you alive with life support.

ever heard of dreams?

Yes. Ever heard of somebody who has never in their life been exposed to sensory input, having dreams?

Quote:

No, it's not possible, because without some explanation for why the brain responds to known inputs the way it does, there is not any way to predict how it will respond to inputs which we have never seen it receive before. Every set of conditions results in different behavior. If we are unable to come up with an explanation for why the conditions we have seen result in the behavior we have seen, then we have absolutely no way to predict what behavior we will see under conditions which have not been seen. Induction simply cannot be applied in such circumstances. Which of the billions of different responses to known inputs are you going to inductively predict will result from a particular previously unseen input?

you could just tell what would happen for each kind of input, exhausting all possible inputs, without giving reasons why.

On what basis would such a theory be constructed? Guessing? Are you really suggesting that blind guessing is going to have any real chance of consistently making accurate predictions? In any event, models which are simply based on guesses are **not** scientific models.

Quote:

it doesn't even have to be inductively formed completely-- you could make rather hasty generalizations that cover

millions of cases that happen to be right, without giving any kind of a priori reasons.

Right. And you would have almost zero chance of them happening to be right. This is not science.

Quote:

Such a model would then constitute a scientific description of consciousness.

no, it would be a description of bodily behavior and/or brain processes.

No, it would not. Look. If consciousness is not a brain process, then it is something else which interacts with the brain. This model would not just be describing how the brain reacts to inputs from this other source. It would be providing a model for that other source. A model for consciousness. It may be an incorrect model. It may be a model which leaves out many of the properties which actual consciousness has, but it would be a model which provides a scientific description of each and every one of the phenomena which we think of as being part of our consciousness, which we are capable of actually knowing we have.

Quote:

This would occur, for example, if consciousness turned out not to be just brain processes, but instead some other physical thing interacting with the brain. Again, in such a case our scientific theory would not be leaving out consciousness. It would instead be providing a scientific description of it. In this case our scientific explanation of the brain would be explaining the brain activity in terms of both bio-chemistry and consciousness, where our model of consciousness is another fundamental scientific theory like QM and GR currently are. This possibility is still completely compatible with physicalism. It would just mean a falsification of the current scientific theory that consciousness is just brain processes.

OK, i'm willing to go with this, but i'm not sure if the term 'physical' would still apply. which brings up an important point: what is the scope of said term?

The scope of the term "physical" is simply everything which has observable effects, including effects which are indirectly observable. Basically it refers to anything which can be empirically verified to exist, either directly, or indirectly by virtue of its interactions with things that can be directly observed. The metaphysical notion of "physical" or "matter" which was once very popular, and which is still a component of many forms of dualism, simply has not relevance to science. That is not what a scientist is talking about when he uses the term.

By Death Monkey (Kevin Dolan)

metacristi,

Quote:

This the core of the problem,we simply cannot award to falsificationism in general (including your type of realism,based on falsificationism or to my type of realism,also based on falsificationism) a perpetual epistemological privilege.

What do you mean "perpetual"? If you mean that, in principle, some new method of verifying claims could be found which is also demonstrably reliable, then I agree. If and when such a method is found, we can discuss whether or not science should incorporate it into the scientific method.

But the simple fact is that right now, empirical testing is the only known reliable method for establishing whether or not claims about the world are correct. As such it is not sensible to say that claims whose only justification comes from methods which are known to be unreliable, should be considered to be scientific knowledge.

I am arguing against the notion that claims which have not been justified in any reliable way, should be considered knowledge, and more specifically that claims which have not been justified by the scientific method of empirical testing, should be considered scientific knowledge. This is not dogmatic scientism. It is simply a recognition of what the terms "knowledge" and "scientific knowledge" mean. A belief which is not justified is *not* knowledge. A belief which is not scientifically justified is *not* scientific knowledge.

Incidentally, if any other demonstrably reliable method for justifying claims about the world were ever found, I would be all for including that method into scientific methodology. And even if we did not choose to do so, claims justified by that method would still be objective knowledge, if not scientific knowledge. But right now, no such methods are known.

By Death Monkey (Kevin Dolan)

metacristi,

Quote:

No offense I think you should read more on the philosophy of science. The fact is that currently all claims that we have sufficient reasons to think that a scientific method (inductive or not) leads us at least to approximative truth begs the question.

Of course it does. That is a metaphysical claim. I don't think it actually *matters* whether or not the scientific method leads us to some kind of "truth". What matters is that it provides us with reliable answers to practical questions.

Quote:

The realism you advocate is close to the brand of realism advocating that some of the entities we 'corroborate', directly or indirectly intersubjectively, are real (without specifications).

That depends on what you mean by "real". I can only gather from the context of your comments that you have some metaphysical definition of "real" in mind. If so, then this is not the brand of realism I am advocating.

Quote:

I back that stance, but in any case have we sufficient reasons to think that all such 'entities' are so, that all of them have the place assured inside science forever (whilst still accepting the fallibilist methodology).

I cannot begin to imagine where you got the idea that this is something which I believe, or am advocating.

Quote:

Why do I advocate that type of realism? Because there are more positive, logical, not empirical, arguments pro, not counting as sufficient reasons though.

I cannot make any sense of this sentence.

By Death Monkey (Kevin Dolan)

metacristi,

Quote:

Trying to muscle me with your usual overflow of words cannot change the essence of the problem. Overflow of words?

Quote:

I know and why you just cannot understand what I mean (apart from the differences of language). This is just because you have never tried to read something more above the 'naive empiricism' of Popper. Unfortunately there is no way currently to grant an absolute epistemological privilege to a fallibilistic scientific method, based on

empiricism alone, we can grant only a fallible epistemological privilege based also on nonempirical arguments. Secondly this fallibilistic method does not need the, not justified after all, assumption that 'verified' entities in your sense should remain forever in science. If you cannot such simple things, what can I say more? Please explain to me where you have gotten the idea that I am claiming that empiricism has an *absolute* epistemological privilege, or that I think that there are verified entities which should remain forever in science? I think that you are attacking a position which I simply do not hold. I have no doubt that a person who did hold such positions would have to be rather naive concerning the philosophy of science, but these are simply not positions which I am advocating. And I am truly at a loss as to why you think that I am.
By Death Monkey (Kevin Dolan)

metacristi,

Quote:

Secondly if you do not sustain that all 'verified' entities should remain forever inside science what good reasons have you against my proposal?

Do you mean the proposal that claims which have not been verified yet should be considered scientific knowledge? I have already specified my reasons for opposing that. And frankly, I don't see what the possibility that a claim which is currently considered scientific knowledge, could someday no longer be considered so, has to do with whether or not claims which have not been verified at all, should be.

Quote:

After all there is absolutely no reason to think that ad hoc hypotheses at a certain moment cannot finally arrive in a position of being indispensable constructs (that is either verified in your sense directly/indirectly or at least absolutely necessary nonobservables).

If and when that happens, they can be considered to be scientific knowledge. They would then no longer be unverified claims. Until that time, they are not scientific knowledge, just unverified possibilities.

Quote:

But I do not think it is a good idea to continue this discussion without prospects since it seems that you are not even aware of the basics of the Lakatosian view and think, without proper justification, that we should stick to the letter, blindly, to the objective knowledge offered by science (fallible after all, 'evidence' is not enough).

I have already clearly stated that I do not think that. As for your accusations of my ignorance, they are unjustified. I have not addressed these various philosophical positions concerning science because I am not trying to argue for or against them. You keep accusing me of holding a specific position which I do not hold, and cite all sorts of philosophical arguments for why that position is not reasonable. I do not need to respond to those philosophical arguments, because I do not hold the position that they are arguing against.

Let me state my position again, nice and clearly, so that there is no confusion.

I **do not** claim that what is currently considered scientific knowledge always will be.

I **do not** claim that hypotheses which are currently not verified, empirically or in some other demonstrably reliable way, never will be.

I **do not** claim that no other reliable methods for verifying hypotheses (other than empiricism) will ever be found.

I **do** claim that a hypothesis which has not been reliably verified, should not be considered to be objective knowledge until such time as it *is* reliably verified.

I **do** claim that, right now, empirical verification is the only known reliable method for verifying claims about the world.

I **do** claim that, right now, empirical verification is the method of verification used by the scientific method, and that therefore, right now, a hypothesis which has not been empirically verified cannot be considered to be scientific knowledge.

Is this clear enough? Do you disagree with any of the above? If so, why?

By Death Monkey (Kevin Dolan)

Quote:

Originally Posted by probeman

The willingness to incorporate new falsificationist methods has been demonstrated repeatedly in science. Just one example: when problems due to "placebo" and "experimenter" effects in clinical trials became clear, the concept of "blind", and then "double blind" procedures were developed and become accepted as standard methods in psychology and medical sciences.

Quote:

Originally Posted by **metacristi**

But certainly this do not justify perpetual preference for a falsificationist approach. You need much more than that.

I never said that of course. I just gave an example (above) which shows how science adapts to new methods that are found to be reliable means to gaining knowledge. If some newer method can be demonstrated that produces "results", scientists will gleefully incorporate it. After all, science is a competitive business.

The reason that scientists don't take ad hoc, untestable metaphysical ideas seriously is because they aren't useful and reliable methods to understand the nature of the universe. This doesn't exclude all speculation and intuitive ideas, just untestable explanations and/or unmotivatable intuitions. Danial Dennett is an example of a philosopher that makes a significant contribution to cognitive science by creating testable philosophical speculations that are consistant with at least some of what we already know. The reason most metaphysical speculation has marginalized itself, is because it has insulated itself from scientific testing. So long as these ideas (e.g., Geoff's non-materialistic sounding noises) remain protected from the methods of science, they can never contribute to science.

By Probeman (John Donovan)

metacristi,

Quote:

Even in this revised version is too rigid. Why? Because there is no 'reliable verification' (due to 'weak' underdetermination, this clearly we know that it exists, theory ladenness problem and possibility strong underdetermination). Nothing can be reliably verified.

If you believe this to be the case, then I am afraid I have no idea what you mean by "reliable". What *I* mean by "reliable" is that when the method provides us with an answer, not only is the answer much more likely to be correct than a guess, but the method also provides us with a mechanism for correcting the mistake when mistakes are made.

Note that reliable does not mean perfect.

That said, if I were to accept your position that the scientific method is not reliable, my conclusion would be that scientific knowledge is a contradiction in terms, and that none of what we consider to be scientific knowledge should be considered to be knowledge at all. As I mentioned earlier, if the justification for a belief is based on methods which are *known* to be unreliable, then the belief simply is not justified.

As to the issue of underdetermination, this only presents a problem if, as you seem to be advocating, we allow metaphysics into our scientific theories.

For example, consider our two current fundamental theories, QM and GR. These are both purely descriptive theories, that is, they each only present a set of mathematical equations for making predictions. In such a form, underdetermination is simply not possible. Two theories of this type which make exactly the same empirical predictions, are necessarily the same theory. Even if they are mathematically formulated differently, such as the least action principle vs Newton's laws in classical mechanics, they are still mathematically identical, because each formalism can be derived from the other.

Likewise, when all higher level theories are constructed in terms of these low-level theories, this will still be the case. Two theories which make the same empirical predictions will be the same in actual content, even though they may be formulated in very different ways. This is one reason why it is important to keep a clear distinction between the actual content of a scientific theory, and the various metaphysical interpretations there are for it. Those interpretations are often times very useful both in their capacity as teaching tools, and in their ability to provide an intuitive way of understanding the theory. But they are not part of the actual scientific theory. They are not anything which can be logically supported by empirical testing of the theory. Indeed, for any given scientific theory, and infinite number of such interpretations can be constructed.

It is the actual content of the scientific theory, meaning the empirical predictions that the theory makes, which can be reliably verified through empirical testing. Since this is the only part for which there is currently a demonstrably reliable verification method, it is the only part which can be considered to be knowledge.

If, as you have advocated in the past, we were to pick some specific interpretation of QM, such as the Copenhagen interpretation, and say that it is part of the scientific theory of QM, then you would be absolutely correct in saying that there is an underdetermination problem, and that therefore the theory cannot be reliably verified by empirical means. That is exactly why *we should not do it*.

Quote:

If one read carefully what I wrote in this thread that one would observe that I never claimed that other (still possible however more successful in the future) conjectures explaining consciousness should be considered science now.

The reason is simple, the actual conjecture (well, at least some in the cluster of actual conjectures involving the 'brain only' hypothesis) is evolving and the only one which make clear novel predictions. But certainly the mere fact that other conjectures are inferior, theoretically and empirically stagnant now, is by no means a sufficient reason to think that some of them cannot be the 'normal science' of tomorrow.

And if you will read our posts carefully, you will see that neither myself nor Probeman have claimed that ideas which are currently "empirically stagnant" could not become the "normal science" of tomorrow. They just need to cease to be empirically stagnant first.

Quote:

Or that scientists should stick with all costs with the actual scientific methodology (at least when we refer at its non empirical assumptions) if further facts will prove it at least stagnant if not degenerative.

A good scientist is never dogmatic about anything. If something better than the current scientific method is found ever found, I will be the first in line to embrace it.

By Death Monkey (Kevin Dolan)

metacristi,

Quote:

Even in this revised version is too rigid. Why? Because there is no 'reliable verification' (due to 'weak' underdetermination, this clearly we know that it exists, theory ladenness problem and possibility strong underdetermination). Nothing can be reliably verified.

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By Death Monkey (Kevin Dolan)

Monroe,

Quote:

The scope of the term "physical" is simply everything which has observable effects, including effects which are indirectly observable. basically it refers to anything which can be empirically verified to exist, either directly, or indirectly by virtue of its interactions with things that can be directly observed. The metaphysical notion of "physical" or "matter" which was once very popular, and which is still a component of many forms of dualism, simply has not relevance to science. That is not what a scientist is talking about when he uses the term.

so then i am by definition a materialist simply by believing in interactionism?

Not necessarily. The definition I gave is an epistemological one. It says nothing about the ontological status of things. It could very well be that stuff which is all "physical" by the definition I gave, is divided into any number of ontologically distinct substances. Also this definition of physical says absolutely nothing about whether or not the physical world functions naturalistically.

Basically there are two very different positions typically referred to as "materialism". There is ontological materialism, which is a form of monism, and is what most people are talking about when they contrast materialism with dualism and idealism. And there is scientific materialism, also often called physicalism, which is an epistemological position whose axioms are the assumptions of the scientific method.

The latter is compatible with the former, as well as with any other metaphysical position which does not contradict the epistemological assumptions of science.

So, as an interactionist, you can be both a scientific materialist, and an ontological dualist.

Quote:

this makes the whole issue rather uninteresting...

I don't see why, unless the only aspect of it that you find interesting is semantics.

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

but wait, you don't have to say the mind "is" brain processes to be a "materialist", now do you?

Of course not. It could be some other physical thing or process, which is somehow interacting with the brain. I have mentioned this possibility several times already in this discussion.

Quote:

Yes. Ever heard of somebody who has never in their life been exposed to sensory input, having dreams?

bad question; there would be no way to know since they couldn't talk to you

First of all, the whole point is that your example of dreams being a type of cognitive ability that can exist without your brain ever being exposed to sensory input, is not a good one, since you have no evidence that somebody who has never been exposed to sensory input would be capable of dreaming.

Second, there is extensive scientific evidence indicating that such a person would not be capable of dreaming. There is no question that, at the very least, several parts of the brain are directly involved in the process of dreaming, and these parts of the brain simply do not develop without sensory input.
By Death Monkey (Kevin Dolan)

Monroe,

Quote:

so what are you? it seems from earlier comments on science and relevance that you would be a scientific materialist and indifferent to the metaphysical issue. so maybe this whole time i have been misunderstanding you or you were being a sneaky equivocator!

Scientific materialist who is indifferent to the metaphysical issues would be an excellent way to describe my position. I have tried to make it clear throughout this discussion that I am not advocating any metaphysical position. Indeed I have, on at least two separate occasions, given examples of how my position could be consistent with dualistic, or even idealistic, metaphysical positions. The ontological status of the various things which make up the world around us, does not interest or concern me in the slightest bit. Understanding how the world works, does.

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

no, i think we were still in disagreement. i take unexplainability of one thing in terms of another as the mark that one is not ontologically reducible to the other.

I think that such a position is a category mistake. Epistemological reducibility (the ability to explain one thing in terms of another) and ontological reducibility, need not have anything to do with each other.

For example. It is possible for A to be ontologically reducible to B, but because of our not having access to the necessary information, impossible to explain the knowable aspects of A in terms of those of B. Likewise, it may very well be that we can explain all knowable aspects of A in terms of those of B, but due to metaphysical differences lying solely in unknowable aspects of them, A may not be ontologically reducible to B.

The two concepts, for all of their apparent similarity, really don't have very much to do with each other.

Quote:

you have stated that you think we can explain why consciousness exists in much the same way that we can explain why the sky is blue. i really fail to see the distinction you are trying to make, it looks like you're just trying to find a way to feel superior to philosophy

The distinction that I am trying to make is that when I explain the existence of the *knowable* aspects of

consciousness in terms of brain processes, that is epistemological reduction. Such a reduction does not require that consciousness actually be ontologically reducible to matter. Indeed, the opposite could actually be the case (matter being ontologically reducible to consciousness), or they could be ontologically irreducible. Their ontological status simply has no relevance to question of epistemological reducibility.
By Death Monkey (Kevin Dolan)

Monroe,

Quote:

well i fail to find the distinction relevant. give an example of when you explain the existence of a knowable aspect of consciousness in terms of brain processes

OK. Learning. Learning from our experiences has always been considered to be an important part of consciousness, and is now understood in terms of neural networks.

Of course, some dualists choose to say that learning isn't "really" an aspect of consciousness, but this is nothing more than moving the goal post. It is clearly an aspect of our mental lives. Simply defining the word "consciousness" to mean only those aspects of our mental lives that *can't* be explained in terms of brain processes, is not very useful, since it begs the question that once every aspect of our mental lives that *can* be explained in terms of brain processes is taken into account, there will actually be anything left.

There are, of course, many other aspects of consciousness which we already have a pretty good understanding of in terms of brain processes. People like Chalmers like to say that they are not aspects of consciousness, but instead just the neural correlates of consciousness. This is nothing more than playing word games, though. No matter how you choose to define the word "consciousness", these things are clearly aspects of our mental lives. They are clearly things which *I* think of as being aspects of *my* consciousness.

By Death Monkey (Kevin Dolan)

TecnoTut,

Quote:

Scientific theories are philosophical, technically speaking. Specifically, they are epistemological. They are not metaphysical.

No. Scientific theories are scientific theories and philosophical theories are philosophical theories. Also, metaphysics simply is the study of ultimate reality. Philosophy is the study of wisdom, which presupposes that wisdom informs us what ultimate reality is.

Well, suffice it to say that I disagree. The scientific method is a method for justifying claims, so that they can be considered knowledge. It is an epistemological method. The term "science", in the context that we are using it, refers to both that method, and the epistemological framework that it is defined in. Science is a branch of philosophy, specifically natural philosophy. Scientific theories are therefore a specific type of philosophical theory.

Quote:

Certainly you can call it a type of knowledge, if you like, but it is not the type of knowledge which physicalism claims that science can provide. Nor is it the type of knowledge which is referred to by epistemology. Knowledge, in that sense of the term, is a justified true belief. It is a fact about the world, which you believe, and which you are justified in believing. Knowing what it is like to be a bat, simply does not fit this definition of knowledge. Simply labeling it as knowledge does not magically cause physicalism to fail.

I'm sorry, but I don't know what you mean by "not the type of knowledge which physicalism claims that science can provide" or "type of knowledge which is referred to by epistemology." Also, not all knowledge is propositional knowledge (i.e. justified true beliefs).

Well, then you have just answered your own question. Not all knowledge is propositional knowledge, but propositional knowledge is the only type of knowledge which science can provide, and the only type of knowledge which physicalism claims that science can provide.

Quote:

The fact that knowing a full scientific description of a car is not going to cause a real car to appear in front of me, does not imply that cars cannot be scientifically studied. By the same token, the fact that knowing a complete scientific explanation of an experience is not going to cause those brain processes to occur in my brain, does not mean that consciousness cannot be studied. What you are essentially saying is both true, and trivial. Science cannot study consciousness in the sense you have described. Nor does it claim to be able to. Nothing can be studied in that sense. Knowledge of facts about the world does not cause objects to appear, or processes to occur.

Cars don't undergo experiences, so I fail to see your point.

Then you need to read my argument again, because my point in no way depends on cars being able to undergo experiences. The point is that experiences are not facts about the world, they are features of the world about which there are facts. Knowing what it is like to be a bat is not an example of knowing a fact about the world. It is an example of having, or remembering having had, the experiences of a bat.

Science can provide us with facts about the experience of what it is like to be a bat, just as it can provide us with facts about cars. It cannot provide us with the actual experience of what it is like to be a bat, any more than it could provide us with an actual car. Now do you see my point?

Monroe,

Quote:

sorry to be like Chalmers, but I think the way "learning" is defined in these contexts is behavioral. even if not, I think all they would be doing is correlating neural changes with mental ability changes, not explaining why a certain kind of awareness exists

Like I said above, this is nothing more than moving the goalpost. We now understand, at least in part, how human beings learn. This is quite clearly something which, at least until it *was* explained by science, was considered by pretty much everybody to be an aspect of consciousness. And regardless of whether you choose to call it that now, it is quite clearly an aspect of what I consider to be my mind.

By the same token, I am sure that any aspect of the mind which dualists *currently* consider to be part of consciousness, will likewise be shifted to the category of neural correlates when they are understood neurologically. This type of shifting of the goal post accomplishes nothing. While armchair philosophers are playing word-games to try to justify their continued belief that consciousness is not something the brain does, scientists are out there explaining how the brain does it.

By Death Monkey (Kevin Dolan)

Private Message from Death Monkey to Probeman:

Re: dualism

I usually do not even bother with the "consciousness of the gaps" argument, even though it is a pretty damning one, simply because dualists rarely allow their own position to be nailed down firmly enough that they can't wiggle out of it.

In this case, Monroe has completely painted himself into a corner. By essentially stating that the only flaw he can find with my position is the lack of any aspects of consciousness ever being explained in terms of neuroscience, he has no real option but to resort to moving the goal post. But the current state of the discussion makes it painfully obvious that this is all he is doing. Nobody can reasonably argue that things like learning, thinking, and memory, all of which are now known to be, at least partially, explainable in terms of neuroscience, are not aspects of consciousness. But that is exactly what property dualism requires.
DM

Monroe,

Quote:

maintaining the experience--neural correlate distinction is not moving the goalpost. once science has discovered something neural that correlates with a certain mental thing, they have neither explained nor explained away the mental thing. they have merely established an empirical correlation.

Once again, your argument here is inherently referring to the ontological status of consciousness. The same argument could be made for anything. Science can tell us nothing about the ontological status of the various features of the world.

But you did not ask me to give an example of an aspect of consciousness which has been proven to be ontologically reducible to brain processes. You asked me to give an example of a knowable aspect of consciousness which has been scientifically explained in terms of neural processes. And that is exactly what I have done.

Quote:

but i'd be careful about what exactly you're referring to by "learning". in some contexts like computer programming it doesn't have to do with minds but algorithms. i would like to know what def they are using in the studies you mention.

In the studies I mention, they are referring to how human being learn things. For example, how muscle memory is formed, how the ability to recognize certain types of shapes is developed in the visual cortex, how memories are stored, how information is extracted from those memories, and so on.

Quote:

still another problem with the example might be that it assumes the brain to be representational, or takes as given certain correlations between neural and belief states , and then it studies how those states evolve with certain inputs.

No such assumptions are needed. What this research does is explain the process of learning in terms of neural activity. Again, this stuff about assuming correlations between neural and belief states, is metaphysics, and simply does not enter into it. What science has provided is a partial explanation for how human beings learn, in terms of neural processes. That is an epistemological statement, not a metaphysical one. The question of whether or not consciousness and those brain processes are ontologically distinct, is not even addressed by it.

Quote:

then it wouldn't really be showing how neural states explain mind-states, just how when you assume a bunch of them do, then we can explain how they evolve over time

Like I said, you're talking metaphysics, and I'm talking epistemology. You're asking for proof of ontological reducibility, but I am not claiming to have that, or even that such reducibility exists. I am claiming to have a scientific description of a set of things which are clearly aspects of consciousness, in

terms neural processes. Nothing more, and nothing less.
By Death Monkey (Kevin Dolan)

TecnoTut,

Quote:

The underlying difference between philosophical statements and scientific statements are that the former are not subject to experimental scrutiny.

This is simply not true. The fact that a statement is subject to experimental scrutiny does not mean that it is not philosophical. It is just not the case that *all* philosophical statements are subject to experimental scrutiny.

Quote:

Both, I believe, attempt to describe or do actually describe how the world really is. But again, the main difference is that philosophical and metaphysical theories are not subject to tests that verify (or falsify).

I disagree. Not all philosophy is about attempting to describe how the world really is. Furthermore, I would say that metaphysical theories are not subject to tests that verify or falsify, but that is not true for philosophy in general. If that were the case, there would be no such thing as epistemology.

Quote:

With respect to the mind-body problem, scientific experiments can only show us the correlations between the mental and the physical.

Which mind-body problem? The metaphysical one, which science does not even attempt to address, or the epistemological problem, which it does attempt to address?

Quote:

In order to establish physical-mental identity (or non-identity), one uses philosophical or metaphysical theories.

In order to establish physical-mental identity in an ontological sense, which seems to be what you are referring, one uses metaphysical theories, because ontological identity is a metaphysical issue. You seem to be trying to equate metaphysics with philosophy, in order to toss epistemology out of philosophy entirely.

It is certainly true that scientific theories are not metaphysical theories, but not all philosophical theories are metaphysical theories. There are also epistemological theories, of which scientific theories are one type.

Quote:

Science can provide us with facts about the experience of what it is like to be a bat, just as it can provide us with facts about cars. It cannot provide us with the actual experience of what it is like to be a bat, any more than it could provide us with an actual car. Now do you see my point?

But I beg to differ. Experiences certainly occur within the world, so knowledge of experiences (i.e. what it is like to have an experience) must be knowledge of the world.

Knowledge of experiences is knowledge of the world. But that is not what you mean when you say "knowing what it is like to be a bat". You are simply playing word games based on the informality of the English language. Knowing what it is like to be a bat does not refer to knowing all of the facts about the experience of being a bat. It refers to actually having had the experiences of being a bat, or at the very least, remembering having had those experiences. As I said before, neither experiences nor memories are facts about the world, they are features of the world about which there are facts.

Put another way, if by "know what it is like to be a bat" you mean "know all the facts about a bat's experiences", then according to physicalism, that is in principle possible. If you mean "remember having

experienced a bat's experiences", then that is not. You cannot simply jump back and forth between these two very different meanings, whenever it is convenient for your argument.

Quote:

The fact that knowing a full scientific description of a car is not going to cause a real car to appear in front of me, does not imply that cars cannot be scientifically studied. By the same token, the fact that knowing a complete scientific explanation of an experience is not going to cause those brain processes to occur in my brain, does not mean that consciousness cannot be studied.

But if experiences are nothing over and above brain processes, knowledge of a particular brain process should entail knowledge of a particular experience.

As you already said, not all knowledge is propositional knowledge. Having all the propositional knowledge of a particular brain process, does not logically entail having any sort of non-propositional knowledge at all.

Quote:

Similarly, knowledge of a full description of a car entails knowledge of what a car is. That's the difference between the physical and the mental. One could have a scientific description of a physical object and know all that there is to know about that object. Whereas a scientific description of the physical processes correlated with, e.g. bat experiences, does not inform us anything about bat experiences. Unlike physical object, one must undergo a subjective, mental experience in order to know what it is like to have that experience.

Again, you are just attacking the strawman that physicalism, or any scientific theory, claims that propositional knowledge should be able to provide us with non-propositional knowledge. You can define anything you want to be a type of knowledge. Simply doing so does not magically render physicalism false.

Science does not need provide non-propositional knowledge about experiences, because science, as an epistemological methodology, only provides propositional knowledge. What it can do, is provide propositional knowledge about the various processes and states which you are referring to as "non-propositional knowledge".

Quote:

Now, even if you had a bat-like nervous system, and you were indeed able to experience what a bat experiences, that would not by default show brain-mind identity. Again, at most (and at least) it would show correlation.

Brain-mind identity, as you are referring to it, is a metaphysical claim, not an epistemological claim. Science does not even attempt to show it, nor claim that it is true. What science can do is explain the *knowable facts* about consciousness in terms of *knowable facts* about brain processes. Correlations are all that are required to do this.

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

In the studies I mention, they are referring to how human being learn things. For example, how muscle memory is formed, how the ability to recognize certain types of shapes is developed in the visual cortex, how memories are stored, how information is extracted from those memories, and so on.

well, these are all unconscious processes anyway.

What does that mean? Dreaming is an unconscious process too. Does that mean it's not a part of consciousness? And besides, only some of the learning processes I listed are at the "unconscious level". That does not mean that they are not a part of consciousness.

Quote:

-forming muscle memory is unquestionably an unconscious process.

I gave that as an example of human learning, but not the only one. One could argue that all learning is at the unconscious level.

Quote:

-shape recognition, the kind where you instantly identify something without analyzing it, is also an unconscious process; consciousness only enters in with the production of the conscious belief, "oh, there's an X".

Shape recognition is an integral part of visual perception. It also plays an integral role in dreaming and hallucination. How you can claim that this is not an aspect of consciousness, is beyond me.

Quote:

-the method of storage of memories is not something we consciously control or are aware of

Again, not having conscious control of something does not mean that it is not part of consciousness. Being unconscious does not mean that my consciousness does not exist. The word conscious in the sense of conscious control, and conscious in the sense of consciousness, have different meanings.

Quote:

so its not even something where we have discovered a neural correlate of a kind of conscious experience

It is something where we have provided a neural explanation for very important *aspects* of our conscious experiences. Your arguments do not refute that. There is simply no question that learning, at the neural level, plays an important and integral role in conscious experience. How can you argue that the storage and retrieval of memories is not an integral part of consciousness?

And what about thought itself? We don't understand that at the neural level any where nearly as well as learning, but even the property dualists acknowledge that the information processing component of thought is performed by the brain, and can be scientifically explained in terms of neural activity. Are you going to claim that this is not an aspect of consciousness either?

I am not sure what it is you want here. What would you accept as an example of a scientific explanation of some aspect of consciousness? It seems to me that any aspect of consciousness which is explained could simply be rejected by saying that it is not a part of consciousness at all, but instead something that consciousness is aware of. But when you take that to its logical limit, all you are doing is *assuming* that consciousness cannot be scientifically explained, by defining it to be only the awareness of things, and simultaneously assuming that awareness cannot be broken down and explained in terms of other simpler processes.

If we want to try to understand consciousness then we need to first decide *what* it is we are attempting to understand, and then begin breaking it down and understanding its components. Once we have understood the components, we can begin trying to figure out how they all work together to produce the mind. Simply declaring that each of these components, is not a component of consciousness because it is not, when taken in isolation, consciousness itself, is not only fallacious, but completely counter-productive.

In one sense, I guess it is a question of organization. You appear to think of consciousness as being composed of phenomenal experiences, with those experiences being somehow fundamental components of it. Therefore you expect an explanation of consciousness to work by explaining how each of those individual experiences work. Scientists, however, do not think that these phenomenal experiences are the fundamental components of consciousness, but rather that they, themselves, are composed of other more fundamental processes.

None of these more fundamental processes are going to be complete phenomenal experiences, but as I said before, I do not see how one can possibly claim that things like memory storage and retrieval, information processing, and learning, are not components of our experiences. Simply redefining the word "experience" to be something like "the awareness itself, distinct from any of the other mental processes", does nothing but beg the question that awareness *is* somehow distinct from the other mental processes. If, as the

scientists think, awareness itself is composed of other simpler processes, none of which individually can be considered to be awareness, then an explanation of awareness is going to involve explaining the simpler components which make it up first, followed by an explanation of how those components work together.

Maybe you think that this strategy is impossible, but to claim as your reason for believing it is impossible, the fact that no *complete* phenomenal experience has yet been described in terms of neural activity, is to simply misunderstand the scientific model which you are declaring to be wrong.

Quote:

Which mind-body problem? The metaphysical one, which science does not even attempt to address, or the epistemological problem, which it does attempt to address?

what epistemological problem? how is this a problem of epistemology?

The epistemological problem of how to understand human behavior and our own subjective experiences, in terms of the natural laws which seem to govern all of the other features of the world. That is what science seeks to do, and there is absolutely nothing metaphysical about it.

Quote:

Brain-mind identity, as you are referring to it, is a metaphysical claim, not an epistemological claim. Science does not even attempt to show it, nor claim that it is true. What science can do is explain the knowable facts about consciousness in terms of knowable facts about brain processes. Correlations are all that are required to do this.

then scientists shouldn't say things like "Neuroscience shows that the 'soul' is the activity of the brain"

Such a statement appears absolutely nowhere in any scientific theory. What you've got there is an example of scientists trying to paraphrase what their theories are saying, in terms which people who are familiar with neither the scientific nor philosophical issues involved, can understand. Essentially the above is nothing more than an informal way of thinking that neuroscience is explaining many of the things which many people think are functions or properties of the soul, in terms of brain activity.

Quote:

About the issue of "knowing what it's like", you claim that having such knowledge simply means having a certain type of experience, or calling up a memory of one. No, these are two ways to know what it's like, the two easiest ways, but there are other theoretically possible ways.

For example, could describe what vision is like for humans to a certain extent, e.g. the consciousness of vision occurs in the form of a two dimensional field, and each point in the field can have some values on it: a color value, a brightness value, and a distance value (owing to binocular vision). We are not conscious of the input from each eye separately, but the data is instead fused into this single field. I can also tell that while scientifically, yellow light is red light plus green light, and the cones in our eyes consist in red-receptors, green-receptors, and blue ones, each activated by a certain range of frequency, our conscious experience of yellow is not red and green being in the same place but rather a separate qualia which we call yellow.

Thus "knowing what it's like" does not have the meaning you say it has, since the scope of the phrase is wider than your proposed definition. Also my, example of vision shows that it can be expressed propositionally.

But all of the aspects you just described are things which can be described scientifically.

In effect, you are saying the same thing I did. There is propositional knowledge *about* experiences, and non-propositional knowledge *of* experiences. The non-propositional knowledge is what a scientific explanation cannot provide us with, because the non-propositional knowledge is not a list of facts. It is, in fact, part of what the scientific explanation is *explaining*.

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

About the learning examples, i don't disagree that those things are highly relevant to our conscious experiences, its just that they are unconscious aspects of processes that also involve conscious experiences. for example, memory involves consciousness: the act of remembering is conscious. an explanation for how memories are stored describes a mechanism used in this process, but it does not explain the conscious act of remembering itself.

This is exactly what I was referring to in my last post. The scientific methodology that is being used is to break down the mind into simpler parts, and attempt to explain those parts first. Then once those individual parts are understood, we can try to understand how they work together. We currently understand many of the simpler parts that make up the mind. Now you can assert that there are parts which cannot be scientifically understood, but what is your justification for such a position? You stated before that the flaw you see with my position is that there is no aspect of consciousness which is scientifically understood. I have shown that there most definitely are aspects of the mind which have been scientifically understood, and that at least prior to their being explained as neural processes, they were considered to be part of consciousness.

As long as dualists decide that something they used to consider a part of consciousness, is not part of consciousness, every time scientists figure out how it works, we will never have any examples of science having an explanation for some aspect of consciousness. But that is just meaningless word games. The fact remains that many aspects of what people think of as their minds, have been explained neurologically. You can insist all you want that they cannot all be explained that way, but without something more than arguments from intuition, such a claim is not very compelling.

Quote:

it is like explaining how an oven works, which is part of the process of making a cake. the cake isn't explained by the oven.

I don't see the analogy at all. Indeed, it seems to me that for the analogy to work, you would have to start with the assumption that there is something more to the mind than brain processes. Note that no assumption of the opposite is necessary. As long as the scientific theory of the mind being a set of brain processes continues to successfully explain more and more aspects of the mind, we will keep using it. If and when evidence is found showing this theory to be insufficient, we will abandon it in favor of a new one. Until such evidence is found, we have no evidence we could even attempt to base a new theory on. Even if I was absolutely certain that the mind-brain theory was false, I would have no alternative but to continue using it until it fails, simply because until evidence is found which contradicts it, we have nothing to base a new theory on.

Quote:

what i was trying to show is that "knowing what it's like" does not simply mean having an experience, and that it can be stated in propositional form. therefore, if by knowing all physical (material) facts about a brain you still don't know what its subjective experiences are like, then there is real knowledge you are missing

What you have shown is that the phrase "knowing what is experience x is like" can have multiple meanings, some of which are propositional in nature, and others of which are not. Using the propositional meanings of the phrase, science can allow us to know what the experience is like. Using non-propositional meanings of the phrase, it cannot.

It's really not very complicated. Science can, in principle, tell us all the facts about a bat's experiences. If that is what you mean by "knowing what it is like to be a bat", then science can give you that knowledge. If, on the other hand, what you mean by "knowing what it is like to be a bat", you mean being able to remember having had bat experiences, then science cannot provide you with that knowledge, because that is not propositional knowledge.

By Death Monkey (Kevin Dolan)

Monroe,

Quote:

OK let me state it like this. Having memories is kind of like putting things in boxes. First there is the experience, then we put the experience in a box, then later the box is opened and we have conscious experience of remembering something. You have said that there is a good neurological theory for how we put the things in boxes and store the boxes. This does not provide an account of the conscious experience of opening the boxes.

Actually, that isn't how human memory works at all. The popular analogy to computer memory is not a very good one. Human beings do not have memory banks where information is stored and then retrieved for future use. This is one of the points I was getting at with respect to our understanding of how learning works. Memories are not distinct from the cognitive processes which act on them. Indeed, a more accurate statement would be that what we think of as memories are actually just aspects of how we have learned to think.

In any event, my previous point applies equally well to your above argument. How memory works is clearly an important aspect of understanding how the mind works. Simply dismissing this, and all other understood components, as neural correlates, and redefining consciousness to refer only to what hasn't been explained yet, is not a very good argument.

At this point you are essentially saying that actual consciousness is not what we once thought it was, but instead just the things which we haven't figured out yet. Obviously if you define it that way, then I will not be able to present any examples of aspects of consciousness which are currently understood. But my point still stands. We do understand many aspects of the mind in terms of neural processes, and there is absolutely no evidence to indicate that our research will not continue to provide us with even more understanding of it.

Quote:

Science can tell us what I said above about human visual experiences only by analyzing the brain?

I don't recall ever saying that. But certainly science cannot explain how human visual experiences work without analyzing the brain, since the brain is, at the very least, clearly involved in the process.

Let me put it another way. The question at hand is whether the mind can be completely understood in terms of neural processes, or only partially understood. The possibility that it cannot even be partially understood in terms of brain processes, went out the window a very long time ago. We *do* understand parts of it in terms of brain processes.

At this point, the burden is on those who, for whatever reason, believe that a complete explanation in terms of neural processes is not possible, to present their justification for holding that belief. Justification based on arguments from intuition are not sufficient. Arguments which take as a premise that even a partial understanding is somehow fundamentally impossible, are not only circular reasoning, but just plain inconsistent with the facts.

By Death Monkey (Kevin Dolan)