Dear Galen Strawson:

I believe that you are on the right track in defending panpsychism. But understandably mistaken assumptions of your defense of it keep you from showing how it solves the problem of mind-body dualism, and I am writing because I would like you to consider my reasons for thinking so.

As you argue in your recent interview by Robert Lawrence Kuhn, materialism, or more generally, the assumption that what exists at bottom is the kind of substance discovered by physics, must invoke a form of "radical emergentism" to explain phenomenal experience, and that doesn't solve the mind-body problem because it is just another way of describing the dualism. But you point out that "structural" aspects are all that laws of physics can reveal about those substances, and as a panpsychist, you believe that experiencing, or experientiality, is intrinsic to its nature. You call this panpsychist physicalism, with the caveat that physicalists may not recognize it.

Where you go wrong, I believe, is when you insist that experientiality requires a subject. You assume that we know that experience has a phenomenal character because phenomenal properties, such as configurations of sensory qualia and feelings, are immediately present, and you deny that experientiality can be just an idea, as traditionally understood, because an idea cannot exist without a subject to which it is immediately present. As I would put it, you assume that ideas are objects given in a faculty of intuition. As a panpsychist, therefore, you assume that even the simplest material substances constituting the world must be a subject of experience. But as a physicalist, you expect science to explain how evolution gives matter the "structural" aspects found in brains, so you expect the mind-body problem to be solved when science shows how many subjects of phenomenal

experiences inherent in the simplest substances become the subject of the complex phenomenal experience in beings like us. Since we use our experience to know what is happening and to act in the world, this kind of panpsychism goes wrong in the same way as materialism. A form of radical emergentism is required to explain how conscious beings like us evolve.

To put this point constructively, this obstacle wouldn't arise, if experientiality were just an idea, without a subject, because the challenge would be to explain how the simple ideas become a complex idea. There is a way to explain that, and it would explain why it seems to us that there is a subject to which those complex ideas are immediately present. When evolution gives matter the kind of structure it has in the brain, the simple ideas intrinsic to the simplest material substances would merge into the complex ideas that are intrinsic to the brain, and the structure of those complex ideas would make it seem that their immediate presence is what causes our knowledge of them because their structure would depend on what happens in the brain as it guides our behavior. But since everything we know and do is caused by brains states, we would be mistaken in believing that there is a subject who uses what is immediately present to know about and act in the world, and since this mistake is caused by the structure of the complex ideas that are immediately present, it would be an illusion. I call this the illusion of intuitionism because the belief that knowledge depends on objects given by a faculty of intuition is what is false about it. Neural science is well on the way to explaining the powers by which the brain guides behavior, and if complex ideas could be explained by simple ideas, this would solve the mind-body problem. It would depend on seeing through this illusion and distinguishing consciousness, as the existence of ideas, from reflection, as the way we know about the brain states causing our behavior. But there would be no need to explain the existence of any subject for the ideas other than the brain that

guides behavior.

The defense of this kind of panpsychism depends on showing how the evolution of brains can turn simple ideas into complex ideas. That will not seem possible to materialists and physicalists because, as monists, they are atomists, and they cannot use panpsychism to explain how complex ideas are part of the natural world. But it will soon be possible to explain how the evolution of the brain turns simple ideas into complex ideas because physicists are the verge of discovering that the natural world is constituted by two opposite kinds of substances. That will make it possible to explain how ideas that are intrinsic to elementary substances become complex like the ideas we have, and what is more, it will trigger a scientific revolution that enables neural scientists to explain how a complex idea is intrinsic to the mammalian brain. This seems unlikely, but let me justify my prediction and sketch briefly how it will reduce the mind to the brain.

I predict that the problems of modern physics will be solved by the discovery that space is a substance that interacts with matter. This possibility has been hidden from physics by its assumption that laws of physics are the deepest possible knowledge about the natural world. The secret sauce that has made physics so successful for centuries is the use of mathematics to formulate its laws. But it has trapped physicists inside a box, and they will not solve the intractable problems in modern physics caused by it until they wonder about the “unreasonable effectiveness” of mathematics in discovering laws of physics and think outside that box by questioning whether it is known by a faculty of rational intuition. When they consider the possibility that the natural world is constituted by substances that endure through time, they will discover that mathematical truth can be explained by its correspondence to the world. Given that change is what happens

as substances interact with one another, they will infer that the natural world is constituted by space and matter because their interactions can generate only quantitatively precise regularities, because that is the best explanation of the "unreasonable effectiveness" of mathematics in discovering laws of physics. They will confirm that mathematical truth depends on its correspondence to the natural world when they discover specific powers by which interactions of space and matter generate the regularities described by laws of physics because that will solve all the problems of modern physics.

This ontological discovery will reveal that matter exists as many particular bits that coincide with parts of space, and the way that interactions of space and matter generate the regularities described by laws of physics will reveal a kind of efficient cause not recognized by physics. Recognition of this second kind of efficient cause will give biologists a more complete understanding of the cause of evolution that enables them to show that a series of inevitable of stages of evolution, caused by a series of levels of natural organization, brings beings like us into existence on suitable planets throughout the universe. The level of organization responsible for the stage at which the mammalian brain evolves will reveal that the function of its basic structure is to serve as a faculty of imagination, and that will enable neural scientists to use the homology between the anatomically distinct hindbrain, midbrain, and forebrain of the reptilian brain and three distinct thalamocortical circuits in the mammalian forebrain to determine how the mammalian brain serves as a faculty of imagination.

The mammalian faculty of imagination is responsible for the structure of our complex ideas, but explaining their existence depends on explaining the existence of simple ideas. Since matter is a substance, scientists can assume that what you call its experiential nature is just a phenomenal way of existing in itself

that is part of the essential nature of every bit of matter. That is, the existence of a qualitative property of some kind is what it is like to be a bit of matter in the world, though in the simplest bits of matter is presumably so simple that it might be called a proto-idea. But since bits of matter coincide with space, they have structural aspects that will enable neural scientists to explain how consciousness is part of the natural world. Species of bits of matter can be distinguished by the spatiotemporal structures of their coincidence with space, and a single bit of matter can have a kind of spatiotemporal structure that is complex enough to explain complex ideas, such as the configurations of sensory qualia in phenomenal space that are immediately present when we perceive the natural world. If the faculty of imagination is responsible for their structure, there is one and only one bit of matter helping constitute the mammalian brain that fills this bill. It is the species of field matter that mediates the electromagnetic interactions among ions accelerated in the firings of neurons. Their firings in serving as a faculty of imagination impose a spatiotemporal structure on this field matter (called the electromagnetic field in physics), and since matter has a phenomenal intrinsic property, what it is like to be that particular bit of matter helping constitute the mammalian brain can explain the immediate presence of configurations sensory qualia in phenomenal space, or what you would call complex ideas.

This might be called spatio-materialist panpsychism. But it explains how consciousness is part of the natural world in a way that entails epiphenomenalism. Since complex ideas are immediately present to mammals, it naturally seems to mammals that perception of the natural world depends on their immediate presence. That is, these complex ideas seem to require a subject to which they are immediately present. But ideas are just phenomenal intrinsic properties of matter, and since brain states, rather than the immediate presence of phenomenal properties,

cause whatever language-using mammals know or say, knowledge and action does not depend on objects of intuition. This is the illusion of intuitionism. Intuitionism presupposes a subject who uses their immediate presence to know and act in the world, and that is part of the illusion because the subject who knows and acts in the natural world is the brain. When mammals have a language that enables them to represent their psychological states as part of the process by which they cause behavior, they are still mammals, so they naturally assume that they are the subject to whom the ideas are immediately present.

It seems to me that the illusion of intuitionism leads you to define experientiality as entailing a subject who has ideas. You might insist that there is no alternative because spatio-materialist panpsychism cannot explain how we know that we are conscious. But that problem can be solved, though it may be surprising because it explains knowledge of consciousness as a discovery of Western philosophy.

Ontological scientists will use the illusion of intuitionism to explain the history of Western philosophy as an exchange of metaphysical arguments that leads to the discovery that we are conscious. But the discovery was made in the problematic form of mind-body dualism. When Descartes argued, I think, therefore I am, he was describing the illusion of intuitionism, and since the illusion is caused by the unity of consciousness, he concluded that unity was essential to the substance he called mind. He offered proofs of the existence of a world external to mind, and since he used the clear and distinct ideas of mathematics to describe its nature, he discovered that it has a divisibility that is just opposite to the unity of mind. The substance constituting mind had to be radically different from the substances constituting a world in which substances exist outside one another in space, and since their ontological incompatibility precluded explaining

how mind and body interact, it doomed modern metaphysics. But it was the discovery that we are conscious.

In other cultures, beings like us did not recognize that they are conscious because mammals are inside consciousness, and that does not change when the use of psychological sentences enables them to represent the beliefs and desires causing their behavior as part of the very process of causing it. Reflective subjects still naturally assume that knowledge depends on faculties of intuition. But they have no occasion to articulate this assumption until they argue about metaphysics. But in Western culture, the exchange of metaphysical arguments led to the discovery of consciousness, and this historical cause also explains why the problem of mind is so hard for physicalists. They start with the external world discovered by Descartes because scientists are naturalists who assume the existence of the natural world. Since a science based on physics is monistic, atomism precludes explaining how consciousness is part of the natural world, and they cannot explain knowledge of consciousness. So, when physicalists claim to know they are conscious, they are falling for the illusion of intuitionism, and the belief that knowledge is caused by the immediate presence of phenomenal properties is incompatible with the completeness of physical causes. That is, I believe, what leads you to define the phenomenal aspect of experience as ideas together with the subject who has them. And that is the obstacle that this explanation of consciousness overcomes by starting with the prediction of the discovery about space being a substance.

My prediction of this revolution in science is defended in detail in a trilogy, Naturalistic Reason, that I am self-publishing as I send you this message. The first volume, Unification of Physics, describes ontological mechanisms that explain all the laws of physics in quantitative detail. The second volume, the Unification

of Science, shows how the ontological reduction of physics reveals a kind of efficient cause, not recognized by physics, that works together with physical causes in a way that will enable all the specialized sciences to explain completely the regularities they study. That reveals that the overall course of evolution on suitable planets includes a series of inevitable stages that brings about the existence of beings like us, and the third volume, the Unification of Science and Philosophy, uses this ontological explanation of how consciousness as part of the natural world to explain Western civilization as a distinct stage in the evolution of life caused by the exchange of metaphysical arguments in which consciousness is discovered and science begins. It shows how this way of solving the mind-body problem turns ontological science into a cognitive power that knows Reality behind Appearance, so I call the trilogy Naturalistic Reason.

There may be incomplete or mistaken arguments in this trilogy. But I am confident that the discovery about space will cause a scientific revolution. And since I know this sounds too good to be true, let me say something about its origin and scope. I have been working on this argument, pretty much on my own, for over 45 years, including 30 years teaching philosophy at American University and more than 20 years since retiring from teaching. As a philosopher, I have written the detailed argument with a rigor that justifies expecting it to stand up to scrutiny in the rational pursuit of truth. I am writing to you and a few others because I want to make what I have discovered public. I am about to turn 83, so you needn't worry that I'm just trying to advance my career. But since I have been given the leisure to enjoy a life spent in this exceptionally fulfilling way, I believe that making it public is my duty, and I am hoping that as someone who also believes in the rational pursuit of truth, you will help give this argument a public hearing.

Even those who believe in the rational pursuit of truth will be reluctant to take up a detailed all-inclusive explanation of the natural world in three volumes, so I am offering a simpler way of learning more about it. An executive summary of the argument is presented in a short (150 page) book titled Sapere Aude that I am also self-publishing now. I am including a free Amazon link to an eBook version of it. (See below.) And there is more information about this argument at natReason.com, including an introduction to the trilogy, a Table of Contents for it, a bookstore, and more information about me. I would be happy to answer any questions you may have and very grateful to learn about any problems that you think casts doubt on it. You can reach me personally at phillphscribner@yahoo.com.

Strawson, Galen

I think this is extremely interesting—and also that we are probably not nearly as far apart as you may think. I was converted to the view that the electromagnetic field of consciousness is the most plausible some years ago, but haven't yet mentioned it much. I will attach some papers. Obviously no obligation to read a single word. I might say I am also a spatio-materialist panpsychist … but not in quite your way I think. Also some extremely interesting papers by Morton Prince. I think the subject is nothing over and above the experientiality … \ I always give the same advice to anyone publishing a book, self-published or not. Do not expect anything at all to happen! That way, if something does happen, it's all to the good. yours Galen Strawson PS I can't access your book—although I thank you. Whatever country I'm in (either US or UK, currently UK) amazon always tells me I'm in the wrong country ….

Phillip Scribner

Thank you for your generous response to my email. The papers you sent are intriguing. Give me a little time to read them, and I think I may have something to say about where we stand on panpsychism, physicalist and spatio-materialist, that you will find interesting.

Phillip Scribner

What you call the content of experience, I call phenomenal properties (both simple, like sensory qualia, and complex, like the configurations of sensory qualia in perception). What you call the subject of experience, I call the immediate presence of phenomenal properties. I agree with you that they are identical in the sense of describing the single puzzling property that is at the heart of consciousness. But you say that the content and subject are also identical to experience, which you treat as an aspect of that property that enables them to be part of a single world along with other experiences. (I believe that is what you mean by power being). That enables you to defend panpsychism as the belief that nothing exists but entities with this nature: experiences may have different contents, and they follow one another temporally in ways that constitute what we ordinarily describe as change. And you call this panpsychism as physicalist because you believe that it can be what constitutes all the change described by laws of physics.

This interpretation of physicalism is defensible because physicists assume that laws of physics are the deepest possible empirical knowledge of what is found in the natural world, and since they describe regularities about change, these laws could correspond

to a world constituted by experiences coming into and going out of existence as time passes. But that is not how physicalists interpret their laws. Physical laws describe how particles move and interact, and they assume, if only implicitly, that particles exist independently of one another. The ways they move and interact are dispositional properties, and since dispositional properties depend on categorical properties, particles must have ways of existing in themselves that enable them to move and exert forces on one another. Since these intrinsic properties are powers, physicists explain what happens to particles as expressions of their powers.

This view about the nature of (efficient) causes is incompatible with physicalist panpsychism because panpsychism assumes that physical particles are wholly constituted by experiences.
What happens to a particle without intrinsic properties cannot be expressions of its powers. Thus, while physicalism is a kind of atomism that would explain everything by what atoms do, physicalist panpsychism reduces everything to experiences in which change seems to be holistic. Their coming into existence and going out existence may constitute change as you describe, but how they come into existence and go out of existence must depend on the entire world of which they are parts, like a cosmic movie. Experiences as merely the existence of subjects and the contents of their experience lack the kind of intrinsic properties that would enable them to act on one another in ways that help determine what happens like physical particles.

This would not be an objection to physicalist psychism because as you define psychism, it holds that subjects and the content of their experience (or phenomenal properties that are immediately present, as I call them) can have non-phenomenal intrinsic properties that are categorical bases of powers. What happens in such a world could depend on physical causes. And this way of

explaining how consciousness is part of the world would not be a form of what you call radical emergentism because elementary physical particles would already have phenomena intrinsic properties along with their powers of move and interact. To be sure, the challenge of solving the combination (or binding) problem would requires a weaker form of emergentism. Since physical particles (or if you will, excitations in gauge fields) are like atoms, physicalist psychists would have to postulate some form of emergentism to explain how their simple phenomenal properties become parts of the complex phenomenal properties, such as the configurations of sensory qualia we call consciousness. No such power is entailed by laws of physics.

When you read in my previous email, you must have assumed that what I called spatio-materialist panpsychism was just another name for physicalist panpsychism because you said that you did not expect me to claim that space interacts with matter. I am now in a position to explain how it is different.

My argument predicts that the problems confronting modern physics will be solved when physicists recognize that mathematics is true, not because it is known by a faculty of rational intuition, but, rather, because it corresponds to an aspect of all regularities generated by interactions of substances in a world constituted by space and matter. It can be shown that all regularities in a spatio-material world are quantitatively precise, so when physicists discover the more specific powers of space and matter that enable them to generate the regularities described by laws of physics, they will be able to understand what corresponds to them in the same way that mammals like us understand how our animal bodies are part of a world of objects in space that can move and interact. Indeed, those specific powers will reveal a kind of efficient cause not recognized by physics that makes it possible to explain all the physically inexplicable regularities

studied in the life sciences. That is the gist of the argument that I was asking you to consider, and it provides a foundation for explaining how consciousness is part of the natural world.

First, in your terms, it would be more accurately called spatio-materialist psychism because it assumes that bits of matter have not only (proto-) phenomenal intrinsic properties but also intrinsic properties that are categorical bases of powers by which they interact with space and other bits of matter. So, this explanation of consciousness is not a form of radical emergentism. Second, it does not require emergentism of any sort. Spatio-materialism defines species of bits of matter by the kinds of spatiotemporal structures of their coincidence with space and interactions with other substances, and the reduction of the life sciences to spatio-materialism will reveal that a single bit of matter helping constitute the mammalian brain has a spatiotemporal structure that is necessarily complex enough in just the right ways to explain the spatial configurations of sensory qualia that are immediately present to mammals perceiving the natural world. As you suspect, this bit of matter is what physicists call the electromagnetic field caused by brain activity. Since consciousness is just what it is like to be a mammal, spatio-materialist psychism reduces consciousness to a property that comes to exist in the spatio-material world when mammals evolve.

This does not quite solve the hard problem of mind because it poses a problem about how we know that we are conscious. Since spatio-materialism is a form of psychism, in your sense, it is an epiphenomenalist form of psychism. The immediate presence of phenomenal properties has no effect on what happens in the world. It merely helps constitute the effects of efficient causes in the mammalian brain. Though mammals are conscious, they are, in effect, inside consciousness, so they don't know that they are conscious. For example, like a "five-year old-Lucy realist about

experience," they assume that the immediate presence of perceptual phenomenal properties is knowledge of the natural world. Thus, direct realists about perception must correct two mistakes to know that they are conscious. One correction is made by recognizing that the natural world exists outside consciousness, as Descartes did when he concluded that the world external to mind has a divisibility that is essentially different from the unity of consciousness (that is, complex phenomenal properties). A Cartesian external world is what physicists assume corresponds to their laws of nature. The other mistake is corrected when physicists explain laws of physics by interactions of space and matter and discover that every aspect of their experience, reflection as well as perception, is determined by efficient causes in their brains. That contradicts what language-using mammals naturally assume. They assume, to paraphrase you, that having an experience is knowing something. So, to understand the causes of what they say and do, language-using mammals must discount what I call the intuitionist illusion inherent in the unity of consciousness. But according to physicalist panpsychism, there is no such mistake to be corrected because change that is ultimately nothing but experiences coming into existence and going out of existence is not really caused by the motion and interaction of physical particles expressing their powers.

I believe that you are on the right track in arguing that the only way that science will ever be able to explain consciousness is by showing that what you call experientiality is already part of the world described by physics. But physicalist panpsychism is a form absolute idealism, and though idealism may be justified by a coherence theory of truth, no such theory about what exists has ever been able to explain the undeniable advances in science as well as forms of ontological naturalism, like materialism and physicalism, in which truth is correspondence to reality. What you

rightly insist that science must do to explain consciousness is done by spatiomaterialist psychism because it is a reductionistic form of ontological naturalism, and it seems to be a superior explanation of what science has discovered because physicalist panpsychism implies that laws of physics are just descriptions of regularities about change, not descriptions of how change is caused by the motion and interaction of particles that exist independently of one another.

If I am mistaken about this, I would like to know what the mistake is because that would take a burden off my shoulders. That's why I'm writing you again. Sapere Aude is an executive summary of a trilogy in which I defend this argument in detail. I am sorry that the link I sent offering you a free eBook version of Sapere Aude did not work. But if you are interested in spatiomaterialist psychism, I would be happy to mail you a copy at any address you give (for safety sake, presumably an academic address rather than your home).

In any case, thank you for the papers you sent. Since physicalist panpsychism is a possible explanation of how consciousness is part of the natural world with a forgotten ancestry, it ought to be defended by someone these days, and I can't imagine how anyone could defend it more beautifully than you have.

Strawson, Galen

Many thanks [I've put in comments as I read, as briefly as possible, so they sound a bit peremptory, but they're not in spirit. All v interesting! This is partial reply. I will attach another paper but certainly no need to read it.]

Thank you for the papers you sent. In *Experience, Content, and*

Subject, you offer a clear description of something inherently puzzling. I know because I have also struggled to make sense of it for many years. But your vividly concrete way of formulating your abstract argument has a beauty that makes reading your paper a great pleasure. I can only admire your talent.

The papers defend an explanation of how consciousness is part of the world that you call *physicalist panpsychism*. To say something about it that you may find interesting, I will make clear where I believe we agree and disagree.

What you call the *content of experience*, I call *phenomenal properties* (both simple, like sensory qualia, and complex, like the configurations of sensory qualia in perception). What you call the *subject of experience*, I call the *immediate presence of phenomenal properties*. [OK good] I agree with you that they are identical in the sense of describing the single puzzling property that is at the heart of consciousness. But you say that the *content* and *subject* are also identical to *experience*, which you treat as an aspect of that property that enables them to be part of a single world along with other experiences [not sure what this comes to]. (I believe that is what you mean by *power being*) [not sure—I would have to send another paper! I think all being is power being]. That enables you to defend *panpsychism* as the belief that nothing exists but entities with this nature: experiences may have different contents, and they follow one another temporally in ways that constitute what we ordinarily describe as *change*. And you call this panpsychism as *physicalist* because you believe that it can be what constitutes all the change described by laws of physics.

This interpretation of physicalism is defensible because physicists assume that laws of physics are the deepest possible empirical knowledge [not deeper than knowledge of experience that we have because the having is the knowing] of what is found in the

natural world, and since they describe regularities about change, these laws could correspond to a world constituted by experiences coming into and going out of existence as time passes. But that is not how physicalists interpret their laws. Physical laws describe how particles move and interact, and they assume, if only implicitly, that particles exist independently of one another [not obvious given field theory + many physicists clear on the point that they don't know the non-structural intrinsic nature of the physical]. The ways they move and interact **are** dispositional properties [this bit doesn't make sense as I understand things … at best they move as they do in virtue of having the dispositional properties they have], and since dispositional properties depend on [not ontologically distinct] categorical properties, particles must have ways of existing in themselves that enable them to move and exert forces on one another. Since these intrinsic properties are *powers*, physicists explain what happens to particles as expressions of their powers.

This view about the nature of (efficient) causes is incompatible with physicalist panpsychism because panpsychism assumes that physical particles are wholly constituted by experiences. [all categorical properties entail power properties, and indeed just are power properties in being categorical properties … and since all categorical properties entail power properties, experiential properties do, because experiential properties are categorical properties]

What happens to a particle without intrinsic properties [I take it that this is incoherent—nothing can exist without having intrinsic properties … to exist is to be a certain way, i.e. to have intrinsic categorical properties … I think we have here a terminological misunderstanding …] cannot be expressions of its powers. Thus, while physicalism is a kind of *atomism* [well … relativistic quantum field theory …] that would explain everything by what atoms do,

physicalist panpsychism reduces everything to experiences in which change seems to be holistic [materialist= physicalist panpsychism can be atomistic in your sense—C. A. Strong is an example, also Durant Drake]. Their coming into existence and going out of existence may constitute change as you describe, but how they come into existence and go out of existence must depend on the entire world of which they are parts, like a cosmic movie [this is cosmopsychist panpsychism I think, but there are also physicists who endorse such a radically holist theory of the universe]. Experiences as merely the existence of subjects and the contents of their experience lack the kind of intrinsic properties that would enable them to *act* on one another in ways that help *determine* what happens like physical particles. [this is just a misunderstanding between us— I think that such subjects are the best candidates there are for true substance(s), as concrete, solid, and intrinsically propertied as one can get …]

[I don't understand why you think that these 'e=s=c' subjects aren't concrete entities]

This would not be an objection to *physicalist psychism* because as you define *psychism*, it holds that subjects and the content of their experience (or phenomenal properties that are immediately present, as I call them) can have non-phenomenal intrinsic properties that are categorical bases of powers. [same worry: why do you think that you need non-phenomenal properties to be intrinsic categorical properties?] What happens in such a world could depend on physical causes. And this way of explaining how consciousness is part of the world would not be a form of what you call *radical emergentism* because elementary physical particles would already have phenomena intrinsic properties along with their powers of move and interact. To be sure, the challenge of solving the combination (or binding) problem would requires a weaker form of emergentism. Since physical particles

(or if you will, excitations in gauge fields) are like atoms, physicalist psychists would have to postulate some form of emergentism to explain how their simple phenomenal properties become parts of the complex phenomenal properties, such as the configurations of sensory qualia we call consciousness. No such power is entailed by laws of physics.

[I'll stop here because this is such a basic misunderstanding. Don't feel any need to reply! I'll try to look further]