

Against the Supernatural as a Profound Idea

By Paul Almond, 1 November 2008

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Abstract

This article will show that the term “supernatural”, and similar terms, cannot have any of the profound meanings that people normally think they imply. This leaves a choice of discarding the word as incoherent or accepting its use but only with less profound meanings. This has implications for the frequent theistic claim that a “supernatural” god exists who is profoundly different to anything else.

Introduction

The existence of the supernatural is a common religious claim. This is often because it provides a convenient place in which God can exist. When asked to define the word “supernatural”, theists typically say that it is anything that is not “natural”. When it is pointed out that this does not tell us anything they are likely to explain that “natural” means “in reality” and “supernatural” means “outside reality”, or that “natural” means “material” and “supernatural” means “immaterial”. This does not help, because if we ask what the meaning of “outside reality” is we are quite likely to be told that things that are “outside reality” are “supernatural”: the definitions are circular. The common idea is that the “supernatural” somehow involves “higher things”. Terms like this make no sense unless defined properly. The definitions cannot make sense if they all rely on each other.

The Problem of Boundaries

The supernatural is rarely defined in terms of what it is, but more usually in terms of what it is *not*. For example, supernatural things are said to be not in reality, not physical, not scientifically understandable, not made of matter, not explainable by science, not describable by science, not scientific, not subject to human understanding, not subject to logic, etc. The “supernatural” claim, expressed in these terms, is based on the idea that everything can be divided into two categories: those things in the “supernatural” category and those in the “natural” category.

I want to establish first that if you are going to say that there are two classifications of things, “natural” and “supernatural”, you are declaring a boundary – a dividing line separating those things. Your concept of “supernatural” only makes sense if you can define that boundary in some meaningful, useful way.

Here is a simple example. If I draw a circle on a piece of paper and place a coin inside the circle I can say, “The coin is in the circle.” If I place the coin outside the circle I can say, “The coin is outside the circle.” When making these statements I am splitting the sheet of paper up into two parts: inside the circle and outside the circle. This only makes sense because I have declared a boundary between these two parts of the piece of paper, and

that boundary is the circle's perimeter. It is clear what "inside the circle" and "outside the circle" mean. Now, suppose that I place the object on the paper but do not draw a circle. I place a coin on the blank piece of paper and say, "It is outside the circle." Suppose also that nobody had ever said the word "circle" to you before. You would be justified in saying that I had not provided enough information to make my claims that things are inside or outside the circle mean anything at all. In fact, my very ideas about "inside the circle" or "outside the circle" mean nothing. If I wanted to ensure that my ideas of "inside the circle" and "outside the circle" meant something, there are a number of things that I could do. I could draw the circle and point out which part of the paper is the inside and which is the outside, or I could describe the circle using mathematics: there is an equation that exactly describes a circle, which is the sort of thing you might use if you wanted to program a computer to draw a circle.

The point here is that it is meaningless to divide everything into parts unless you can describe what makes one part different to the other. This makes it meaningless for a theist to divide things up into "inside reality" and "outside reality", "physical" and "non-physical", etc unless he/she can describe what form the boundary between these two parts of existence takes.

An advocate of the supernatural could make the objection that I naively think that, if the supernatural exists, it should be a region of space, separated from natural things by a boundary in space, like the circle on the piece of paper. I do not claim this. I simply claim that what makes the "natural" and "supernatural" different, the boundary separating them, must be described if the idea is to have any meaning. The boundary need not be spatial, or take any other particular form, as long as it is *defined*.

Humans tend to group things into sets. We have, for example, a set of living things and a set of non-living things. The terms "living" and "non-living" split the world into two parts, just as the terms "supernatural" and "natural" attempt to do. However, for the terms "living" and "non-living" we have a proper definition of what we are talking about. If we encounter something we can apply various rules to decide if it is living or non-living and these rules act as the circle does on the piece of paper. They define the boundary between living and non-living things. How is the boundary between "supernatural" and "natural" things defined?

Trivial Boundaries

Even if an advocate of the "supernatural" manages to define the boundary between "supernatural" and "natural" things he/she would still have the problem of persuading us that the definition is not *trivial*. Anyone can define the "supernatural" to be where they wish. As an example, there is a main road near where I am writing now. Suppose I define the "natural" world as ending at that road and everything beyond the road as "supernatural". Why should my way of defining the supernatural, the place where I draw my line, be any better than anyone else's? Why should their boundary be any better than mine? Given that it is difficult for anyone to show that where they draw *their* line between the natural and supernatural is valid, why bother with the word at all?

Definition Jumping

People who claim that the supernatural exists claim it can be defined meaningfully. If it means anything at all, this can only be interpreted as a claim that the boundary that I just discussed can be meaningfully described. People who do this typically indulge in what I will call *definition jumping*. They claim to define the boundary in one way that is hopelessly vague, to the point of being meaningless, and when challenged they merely offer a different, similarly vague, definition of the boundary. If challenged again they may offer a further, vague definition.

For example, someone might claim that supernatural things are “non-physical”, which amounts to an attempt to say that the boundary has physical things on one side and non-physical things on the other. If you ask what this means you do not get a proper definition of “non-physical”. Instead you are told that non-physical things are “immaterial”, which amounts to a claim that the boundary has “material” things on one side and “immaterial” things on the other. You may then be told that this means that natural things are “scientific” and supernatural things are “beyond science”. None of these definitions say anything, because they do not describe the boundary completely and attempts to define them merely result in a new definition that does not describe the boundary either. Just one of them would be enough if it described the boundary.

The Supernatural as a Semantic Island

Suppose we replaced the word “dog” with a nonsense word like “znud”. We would still be able to explain what a “znud” is and make people realize that it means the same as “dog”. We could tell them that znuds are mammals, that a greyhound is a type of znud, that znuds are related to wolves, that some znuds are trained for police work, and so on. Even if we replaced a number of other words that we might use to explain what “znud” means we could still explain “znud” because it is part of our meaningful language and has a rich set of connections with other concepts that we can exploit. Unless a huge number of words were turned into nonsense words we would always be able to explain “znud”.

People may think that terms such as “supernatural”, “natural”, “physical” and “non-physical” mean something, but we could see how much they mean by replacing them with nonsense words too. Suppose a relatively small number of words used to describe the boundary between the “natural” and the “supernatural” were replaced with nonsense words. For example, “natural” could become “vuf”, “supernatural” could become “super-vuf”, “physical” could become “zlup”, “non-physical” could become “non-zlup”, “material” could become “znurgibop”, “immaterial” could become “non-znurgibop” and so on. I suggest that by replacing words in this way, it would be practically impossible to explain what the new words mean using the remaining language. Someone trying to explain “super-vuf” might try telling people that it is “non-zlup”, for example, but that would hardly help. Because all these supernatural definitions are only defined with reference to each other there would be nothing to use to define the nonsense words apart

from more nonsense words. You may argue that I could make anything impossible to explain by turning enough words in human language into nonsense words – if nothing else, I could change every word in the language into a nonsense word and prohibit any communication – but what is important here is that I am suggesting that you could make the concept of the “supernatural” impossible to communicate in this way by changing a relatively *small* group of words. This should be seen as a serious problem, because if it is correct it means that the words relating to the “supernatural” form a “semantic island”, cut off from all the meanings in the rest of human language. This suggests that the words are meaningless.

If people want to be pedantic, there is one way in which someone might try to define the supernatural if we replaced all the words associated with it by nonsense words like this. They might reference someone’s knowledge about people and institutions that believe, or promote belief, in the supernatural, or they might reference the previous making of claims for the supernatural, or people known to have discussed it. For example, they could say:

“Paul Almond placed an article saying that *vuf* is an incoherent idea on his website in November 2008.”

“Religions tend to promote belief in *vuf*, but *vuf* is not the same as God. *Vuf* means an entirely different sort of thing”.

To make it impossible to express these statements I would have to replace even my own name and words like “religion” with nonsense words. Does this invalidate what I just said? I think that the idea still stands. These sorts of explanations would be a kind of cheating because they would not really explain the “supernatural” to you: they would merely associate the nonsense word “*vuf*” with some previous memory you had of someone discussing the word “supernatural”. You would not be finding anything out. This is in contrast with the example of replacing “dog” with “znud”. The concept of “dog” has a rich relationship with lots of things that allows us to use many ways of explaining what “znud” means without having to depend on descriptions of people who have various beliefs about dogs, or people who have written books about dogs, etc. The “supernatural” and related terms may not be on a *perfect* “semantic island”, but the only bridge between them and the mainland of the rest of human language is a very tenuous one of references to people’s prior memories of beliefs and statements about it, which is worthless for meaningfully linking the concept to the rest of our language.

Some readers, of course, will insist that terminology associated with the “supernatural” is meaningful. They only think this because they have become so used to labelling things as “supernatural” and “natural” that they have become unable to see they are using a vague, incoherent boundary. To show this I will now discuss some of these ways of trying to define the boundary in more detail.

Attempts to Define the Boundary

“Natural” things are possible and “supernatural” things are impossible.

This must be one of the most absurd ways of trying to define the boundary. If this definition applies then supernatural things cannot happen as they are *impossible*. The definition would therefore uselessly describe a type of event that never happens.

An event may have seemed impossible before it happened, and could have been classified, at this stage, as being supernatural, but when it happens we have to accept the event as possible and re-classify it as natural, according to this definition of the “supernatural”.

Some people might say that I misunderstand here – that what they really mean by the word “supernatural” is that it is the cause of any event that *would* be impossible, if it were not for the supernatural. As an example, the alleged resurrection of Jesus might be supernatural because it could not happen without the supernatural. This is a meaningless definition, as it still does not tell us what the supernatural *is*, or what a supernaturally caused event is. It does not tell us why supernatural events are *special*.

Some people might explain that they do not mean *really* impossible: they just mean that it seems impossible, it is usually regarded as impossible, or it is “scientifically” impossible. It is their fault for using vague language which makes their statements sound absurd. Even when they explain what they mean it does not get any better, as we will now see.

“Natural” things are *considered* possible and “supernatural” things are *considered* impossible.

This definition, if made a bit less vague, might define the boundary reasonably. We might need to explain who is supposed to be doing the considering. This would be useless, however, if we want any profound idea of the “supernatural” because the boundary definition would be trivial.

If an event happens then it cannot really be impossible. It must have been possible all along: anyone who considered it impossible was wrong. This boundary is trivial because it says nothing about the supposedly supernatural things themselves, but about what people think. People might consider many things impossible now, but if any of them happened it would be trivial to say that these things are supernatural merely due to human psychology or lack of knowledge.

As an example, the idea of humans travelling to the moon may have once been the sort of idea that most people would regard as impossible, yet it has happened now (unless you are a lunar landing conspiracy theorist). Does this make the moon landings supernatural? If it does then it should be clear that this is not a “profound” sort of supernatural.

Natural things are *scientifically* possible and supernatural things are *scientifically* impossible.

“Scientifically possible” only means anything with reference to the current laws of science. If something happened outside these laws then it would mean that these laws would not be describing everything that exists and would not be ultimate laws. A thing would not be “supernatural” in any sense by being outside the scope of the known laws of science as this would be more about limitations in human knowledge than the thing itself. None of this would make the “supernatural” a profound thing: it would be all about limitations in the current state of human knowledge.

If scientists observed something that was clearly “scientifically impossible” they would recognize the currently known laws of science to be limited and modify them to allow it to be possible. They might not be able to find out how to do this in any detail immediately, so for a while they may need to just to declare that there is an exception to the known scientific laws. One way of looking at this, however, is that a statement of the existing scientific laws with a statement of the exception included actually forms a new, valid set of scientific laws which are, for the time being, merely vaguer than desired, most obviously with how they deal with the exception.

As an example:

Our current understanding of science is that no object moves through space faster than the speed of light.

Suppose something – let us call it X – was found to be moving through space faster than the speed of light – and if you are familiar with the theory of relativity try to ignore the implausibility of this. This would mean that our idea that nothing moves faster than the speed of light is incorrect. It would not mean that it was useless: it would still tell us what to expect in many situations, but not this one. We could make a new law, including the exception, that stated “No object moves through space faster than the speed of light except X.” That law might be vague, with regard to how it describes X, but our knowledge is always limited in some way. It may hint at a new layer of reality beyond our current understanding, but our current statement would correctly describe what we knew at that time. There would be no sense in declaring X “scientifically impossible”. Science is merely a methodology used to describe reality. Saying that something is “scientifically impossible” is effectively saying that it is impossible to describe it, which should make it difficult to express the claim that it exists.

Natural things are within nature and supernatural things are outside nature.

There is a clear boundary issue here that some people seem unable to grasp. Where is nature supposed to end and “outside nature” start? How is the boundary between “inside nature” and “outside nature” defined? Simply describing the boundary in terms of “inside nature” and “outside nature” does nothing to describe the boundary, but just gives it a name.

Some people believe that “nature” is a small part of reality that is apparent to us, and that it is not even the “true” reality – that instead there is a more expansive, true reality, possibly with higher laws of which “our” laws are merely a shadow. You may be surprised to know that I am not going to argue with this main idea: *it is actually true*. What I do disagree with is the semantics of calling it “supernatural”. This idea of there being a “true reality”, beyond this one, of which our world is merely a shadow has been around for a long time. It was discussed by Plato, without supernatural terminology, and it is apparent in modern science, again without the supernatural terminology.

Plato gave the well-known cave allegory [1]. In this thought experiment, people are chained to the wall in a cave and can only view the world through a screen. They see people walking past the opening of the cave only as shadows on the screen and this is all they know of reality. They think these shadows are the “true” reality while there is really a “true” world beyond the cave, of “real” people and other objects that generate these shadows. It may be tempting to use this as an analogy for the “supernatural” in which the “natural” world is what someone knows inside the cave and the “supernatural” is the world that everyone knows outside the cave. This, however, would be saying nothing profound about the world as it appears to someone in the cave and someone outside. It would merely be saying something about the state of knowledge of someone in the cave. There would be nothing special about the boundary between the two parts of world as seen in either situation. A modern expression of Plato’s cave analogy is in the film *The Matrix* [2].

Some readers may still think of Plato’s cave as an allegory for what people call “the supernatural”, but we should already realize that we live in this sort of situation in ways that New Agers and theists do not seem to be rushing to describe as supernatural. Here is one example:

We experience the world as solid objects, yet examined closely it ceases to exist. Viewed closely, solid objects are particles connected by field interactions. Viewed closer, these particles themselves become still other particles connected by field interactions, and so on. Properties such as “wet” and “dry” vanish at such levels, as we merely experience them due to the effect of many particles, in the aggregate, on us. Properties such as “colour” also cease to exist once we look closely enough at things, below the sizes of the wavelengths of visible light. Gas pressure vanishes: it is merely due to the behaviour of large numbers of gas molecules, moving around randomly.

There is every reason for thinking of the everyday world we experience as merely a shadow of the true world of chemistry or, looking closer, particle physics, with things like cats and fire engines being merely our limited perception of the interactions of large numbers of particles, but I am not aware of anyone calling particle physics “supernatural”. It would be a trivial definition of the boundary between the “natural” and the “supernatural”. People cannot have it both ways. If people want to insist that there is “supernatural” world, which is supernatural because it is “beyond our perception” then they should label most of modern physics as “supernatural”.

Natural things are inside reality and supernatural things are outside reality.

We could argue that reality should mean everything, but even if we accept different semantics, in which “reality” means part of everything, we are left with a definition of the “supernatural” which is effectively the same as saying that natural things are inside nature and supernatural things are outside nature, with which I just dealt. Only the semantics are slightly different: “nature” is changed to “reality” and “outside nature” is changed to “outside reality”. The arguments that I just made would also apply to it.

Natural things can be observed directly by humans and supernatural things cannot be observed directly.

People advocating the “supernatural” often say that it is beyond human perception. We might ask how they claim to know that the supernatural things exist in the first place if they cannot be perceived by humans. This could only be by making some observations of the outside world which allow the presence of the supernatural thing to be inferred indirectly. For example, someone may say that God is beyond human perception, but that observations of the natural world, or of ancient texts, allow us to infer the existence of God. In other words, when someone is claiming that some “supernatural” entity exists that is “beyond human perception” they must really be saying that it is only beyond *direct* human perception if they are supposed to know it exists at all. This perception might be very indirect indeed. For example, some people think that a supernatural god *beyond human perception* exists and that the mere existence of the universe is evidence for this. In this case, however the existence of the god would be supported by human perception – perception of the existence of the universe: it would just be indirect.

No claim that you are supposed to believe for the existence or something can be for something that is *totally* beyond human perception. If you are persuaded by someone, for example, making a claim for God, at the very least you have perceived the person making the claim and then subjected this perception to whatever reasoning leads you to believe that the claim is correct. This would mean that, to be persuaded by any claim at all, there must be at least some degree of indirect perception. Nobody can rationally make a claim for something that is supposed to be totally beyond human perception and expect you to believe it when the act of persuading you requires you to perceive *something* that is supposed to persuade you that the thing exists.

Advocates of the supernatural may say that the important point is that the “supernatural” cannot be perceived directly – that we can only infer its existence from what limited part of reality we do perceive. The problem with all this is that science routinely involves humans perceiving things very indirectly. Humans make observations and often have to go through a lot of abstract reasoning to infer the underlying theory. For example, in particle experiments like those at CERNE, measurements by sensors are used to infer information about particle collisions, which is used in turn to infer information about the underlying physics. There is no sense in which physicists “directly” perceive microscopic particles or laws of physics. In fact, there is no such thing as direct human perception. Your eyes, for example, do not see “things”: your eyes detect light colours and intensities. The information is passed from your eyes to the brain where sophisticated

neurological computing processes infer the existence of various objects in front of you. When you “see” a tree you are not directly seeing a tree. Information about the light received by your eyes is sent to your brain where complex processes *infer* the existence of the tree. You perceive the tree indirectly. It therefore makes no sense to say that the supernatural is profoundly different than everything else on account of being perceivable only indirectly – and if we cannot perceive it at all then we cannot even infer that it exists.

Natural things are made of matter and supernatural things are not made of matter.

The meaning of the word “matter” in science is unclear. Matter tends to be regarded as the substance from which physical objects are made, but the force fields involved in making up physical objects are not usually regarded as matter. Photons, which are particles of light or other types of electromagnetic radiation, are not usually regarded as being matter, though some people would disagree.

There is enough difference of opinion about the meaning of the word “matter” to make it ill-advised to try to base a profound definition of anything on it. Even if we decided to use the most widely accepted view of matter, science already accepts many things which are not matter. For example, gravity is not currently regarded as being matter. If scientists ever find that gravity’s underlying cause is some kind of particle (some people have suggested “graviton” theories) then we might discuss whether it is semantically correct to classify “gravity” as matter: some people would say that those particles are not matter, or that the *effect* of gravity is not matter. If supernatural things are not matter then a lot of things would have to be viewed as not being matter.

When people talk about the “supernatural” being things that are not matter they might really mean “solid” things, yet the idea of “solid matter” is nothing more than an abstraction in modern science, with underlying physics being used to explain it. The idea of solid matter is certainly not a cornerstone of science.

Some people might mean “particles”, yet particles are also just another abstraction used to explain observations. Any “effect” which is observed at a particular point in space, particularly if it seems to be associated with mass, is likely to be called a particle. As an example, returning to gravity again, suppose we found that gravity is caused by a type of “something” which appears to be localized at a point in space at any time and gets transmitted between objects: that “something” would probably be considered a particle. This would not be because particles are a special kind of stuff, but because “particle” is a particular kind of abstract concept. Any “supernatural” thing which manifested itself in the world in the same way as particles could only be sensibly considered in terms of particles. It would not make sense to say that “it is not particles but only looks like particles” when “particle” is just an abstract concept anyway.

It may be a bit unclear what I mean here, so I will give an example:

Suppose that ghosts exist, as classically imagined by many people, and are “supernatural” (whatever that means). Ghosts are typically supposed to be observed at some place in space, so we can clearly think of a ghost observation in terms of location. Ghosts are clearly supposed to interact with the physical world. People typically claim to detect ghosts by seeing them, which means that they are supposed to have an effect on light. This effect clearly appears to be localized in some way and would be understandable as a particle interaction because that is what we are seeing. In fact, if ghosts really did exist like this the strange thing is that their interaction with the world be very conventional in one way: A ghost would be existing at some place in space and interacting with the world around it, just as most other things seem to do. If ghosts want to be weird they should try harder.

You might ask how we can know that particles are involved if we cannot see what is underlying the phenomena, but we do not need to know. By behaving in this sort of way – involving localized interactions with the rest of the world – whatever ghosts are doing to be detectable by us would probably fall under the semantic umbrella of particle interactions.

If you think that the “natural” world is “particles” and the “supernatural” world is something that is “not particles” then you also have the problem that science is in no way dependent on the idea of the particle. The idea of the particle is used just because it is convenient: in particular it appears to match well with how we perceive reality in everyday life. Strange experimental results in quantum mechanics are explained in terms of wave-particle duality, the idea that all particles have a wave nature. This is outside the realm of what many people would think “sensible” particles should be doing, but is still describable by science. Some people think that the need to combine two models – a particle model and a wave model – in what seems such an ad hoc way is evidence that neither model is the complete picture. Some models are proposed in which the idea of the “particle” is abandoned as a fundamental idea and in which the appearance of particles is merely due to other things that are less obvious to us. For example, in Everett’s many-worlds interpretation of quantum mechanics [3], all that exists is the quantum wavefunctions, with decoherence giving the appearance of particles. The many-worlds interpretation may or may not be true – many people think it is nonsense – but that is not the point. It can be stated as a scientific model in which the basic “essence” of reality is far more abstract than things encountered in our everyday experience and in which there are not “things” existing at discrete locations.

Why did I say this? I wanted to show that science is not dependent on the idea of a particular “type of stuff”. Science does not rely on “matter” or “particles”, but will use whatever abstractions seem to be needed to represent reality. The idea of “particles” is just one of these abstractions and descriptions of reality which involve other things can, and are, dealt with in science and in some views of science, the idea of the “particle” is not even a fundamental idea. Claiming that “natural” things are made of a particular type of stuff, such as “particles”, and that “supernatural” things are not, would be a trivial way of defining the boundary between “natural” and “supernatural” things.

When people say that “natural” things are made of matter and “supernatural” things are made of something else, they are being vague, but they may really be trying to say that “supernatural” things are non-physical, an idea which we will now consider.

Natural things are physical and supernatural things are non-physical.

Many people claim that supernatural things are “non-physical”, often in response to questions when claiming that “supernatural” things are not made of matter. There is a problem of defining the boundary here: what is supposed to be the difference between a “physical” thing and a “non-physical” thing? Such a boundary has no meaning. Imagine replacing the term “physical” by “zok” and the term non-physical by “non-zok” and having to explain what these terms mean. You would have difficulty and might be pushed into definition jumping by using one of the other types of boundaries that I have discussed – for example by saying that non-zok things are not made of matter.

Some people think that science assumes that “everything is physical” and that it assumes that non-physical things exist, but it does not really do this. Rather, it does not consider any idea of a boundary between physical things and non-physical things. Science involves making observations and then generating, and testing, abstract models to predict future observations. There is nothing in these models that needs to be assumed to be “physical” as opposed to “non-physical”: what seem to be the most effective predictive models are used and the things in those models are merely abstractions which it is incoherent to classify as physical or non-physical.

Whatever “non-physical” is supposed to mean, the concept becomes most ridiculous when “non-physical” things are supposed to affect, or interact with, physical things. For example, a non-physical god is alleged to have made a physical universe or to cause miracles in a physical universe, or non-physical ghosts are alleged to haunt physical people. Whatever “non-physical” is supposed to mean, our experience of these things *is* physical and we can describe it in terms of what the physical things are doing. When discussing particles, earlier, I used the example of ghosts. I will use it again, here. Suppose you see a ghost. You are seeing light. Whatever is happening, what you are experiencing is clearly physical. What is happening, therefore, is that light is behaving in a certain way. It makes no sense to say that the light is behaving in a “non-physical” way because there is no way of making that distinction. All you have is a new, interesting type of behaviour of light that needs an abstract model.

Natural things are scientific and supernatural things are non-scientific.

The problem with this is that there is no such thing as a “scientific” thing. Science is not a type of object: it is a methodology. We could consider whether or not scientific methodology can deal with everything, but the idea of “scientific things” is incoherent.

Natural things are scientifically observable and supernatural things are not scientifically observable.

There is an ideal for scientific observations. Scientific observations tend to be made by scientists because they are the people getting paid to make them. They are preferably made in laboratories because that is where scientists are likely to have most control over the conditions. They are made, as often as possible, to various standards, such as repeatability. None of these defines what a “scientific observation” is though. Scientific observations are just normal observations, made as reliably as possible, done for the purpose of making and testing scientific models. It does not mean that standards such as “repeatability” are unimportant.

Some people claim that science insists on things being demonstrated in a laboratory. We could discuss what “laboratory” is supposed to mean, but some classic experiments have been done away from what would normally be considered a laboratory. When Eratosthenes measured the circumference of the Earth he used an outdoor observation of the length of a shadow cast by a stick while the sun was known to be directly above another location. Charles Darwin’s theory of evolution followed from years of work, much of it based on observations made wherever he could make them.

Some people claim that science insists on repeatability. This is not true. Science does tend to demand that where a theory can be tested by repeatable experiments that the theory is to be tested in that way and when things can be done in laboratories that is where they are done. The cold fusion experiment of Fleischmann and Pons [4] is an example. This experiment was claimed to demonstrate nuclear fusion reactions occurring at much lower temperatures than generally thought possible. If valid, the claim could mean a new energy source for humanity. The claim was considered invalid after other scientists tried the experiment in their laboratories and could not get the same result [5]. Does this mean that observations must be repeatable? Not really. It is merely an idea. Scientists demanded that the results of Fleischmann and Pons were repeatable because it was the kind of experiment that should be repeatable. It was a claim that a particular experimental setup, in a laboratory, would behave in a certain way.

There is also an issue of semantics when we talk about “repeating” an experiment or observation. Sometimes the “experiment” is not so much set up by scientists as relying on scientists making observations of something that is already happening. Edwin Hubble’s simple equation says that the speed with which galaxies are moving away from us, on average, is proportional to their distance from us, which suggests that the observable universe is expanding. This has been confirmed by measuring the red shifts in the spectra of light from distant galaxies which indicates their velocities relative to us. What would “repeating” this mean? We could take it as measuring the red shifts of some more galaxies but that is a limited kind of repetition which merely expands the data set of the first set of observations. It is the same sky that is being looked at every time and the same expansion of galaxies that is being studied. A parody of the kind of scientist implied by some definitions of the “supernatural” would not accept the Hubble equation unless the

entire universe could be placed in a laboratory under controlled conditions, multiple times, for the relevant measurements to be made.

None of this means that some of the ideals in scientific observations, such as repeatability, controlled conditions and accuracy are unimportant. The better that observations are at meeting these kinds of standards then the more seriously are they taken, because they give more statistical weight. That is reasonable and people who do not like this tend to want poor quality observations to be given the same weight as high quality observations. This makes no sense. It is like saying that a flash of yellow and black through some blades of grass is as much evidence for tigers as a tiger sitting in front of you in a laboratory. Observations are merely a way of extending our experience and it is a simple fact that some experiences tell us more than other experiences.

Natural things can be analyzed and measured and supernatural things cannot be analyzed and measured.

What does it mean to say that something can be “analyzed” or “measured”? As has already been stated, we do not really observe *anything* directly. Anything that scientists claim to exist is being claimed to exist because its existence has been inferred indirectly from observations and measurements. Nothing can be analyzed or measured directly.

If something is apparent in the real world and has the appearance of being subject to analysis or measurement, then some measurement or “analysis” of the world can be made from which its existence can be inferred. This must be true for anything that manifests itself in the world and, almost by definition, if something is evident, it is causing something in the world that can be analyzed or measured. It is pointless to try to say that some things can be evident, but somehow “beyond measurement” or “beyond analysis” when everything needs to be inferred indirectly anyway and is therefore, in a way, “beyond measurement” or “beyond analysis”.

As an example, let us consider gravity. Almost everyone would consider gravity to be “natural”. Can we “measure” or “analyze” gravity? We could not even start trying to do this directly. We can only measure or analyze the behaviour of objects which gravity affects and infer the existence of gravity. Gravity itself is “beyond measurement” or “beyond analysis”. You could say this about anything, making it pointless to say that “supernatural things are beyond measurement or analysis”.

Natural things are scientifically explainable and supernatural things are not scientifically explainable.

This idea of the “supernatural” is based on the idea that science claims to have a “scientific explanation” for everything, or that science maintains that there is a scientific explanation for everything if only we look closely enough. Some advocates of the supernatural claim that some things are “just not scientifically explainable”.

The problem with this is that science does not claim to offer an ultimate explanation for everything, or even that there is an ultimate explanation for everything. This idea arises because what is meant by “scientific explanation” is poorly understood.

A scientific explanation is not an ultimate explanation. It is a model which appears to predict a number of things that are known to exist or to occur. Because it does this, people tend to have some confidence in it when it makes predictions about unknown things. A “good” model is as simple as possible and predicts a number of things. This means that things previously considered separate are now linked by being predicted by the same scientific model: they have been *explained*.

A classic example of scientific explanation is Isaac Newton’s theory of gravity. [6] Newton went beyond just saying that there is a force called “gravity”. Newton’s gravity is a mathematical model of how objects with mass interact with each other. The model says that any two objects with mass exert an attractive force on each other which is inversely proportional to the square of the distance between them. Multiplying the distance by 2 divides the force by 2^2 , which is 4, and multiplying the distance by 8 divides it by 8^2 , which is 64.

Before Newton’s theory of gravity there were two unexplained phenomena:

1. the falling of objects – When you drop an object it accelerates towards the ground, gaining about 10 metres per second of speed every second if we ignore air resistance.
2. the orbits of the planets – The planets of the solar system move around the Sun in elliptical orbits. These orbits had been mathematically described by Kepler prior to Newton, but no cause was known.

Newton’s theory of gravity gives the same explanation for both – that there is an attractive force between objects. Newton described this force mathematically, giving an equation for it. This means that when we look at falling objects or orbiting planets we now have an “explanation” – gravity. What does that mean, though? Does it mean we know *why* objects fall? Newton’s theory of gravity does not actually give an explanation for gravity itself, so it cannot be considered an *ultimate* explanation, in the sense of leaving no unanswered questions. For falling objects there is still the unknown of why gravity makes them fall and for orbiting objects there is still the unknown of why gravity makes them orbit. In each case the basic mystery of why things behave as they do is unresolved. Looking at each of these cases individually, it is hard to see how the theory of gravity even provides much, if any, improvement, in the “explanation” sense. You might consider Einstein’s theory of general relativity [7] to be an “explanation” of Newtonian gravity. General relativity “explains” gravity as variation in the geometry of space-time, but there is still the same problem: there is no explanation of why general relativity applies.

This seems lost on people who think that science should explain everything. Any scientific explanation of a phenomenon must involve a theory and then you will have the

mystery of why that theory applies. That theory may be “explained” by another theory, but then you will have the question of why the new theory applies. No matter how many times you do this, there must always be some point at which your knowledge ends with your most recently attained, deepest theory.

This may suggest that attempting explanations is futile, but this is not the case. Newton’s explanation of falling objects may seem futile because it introduces the unexplained concept of gravity and Newton’s explanation of planetary orbits may *seem* futile for the same reason, but what makes these valuable as “explanations” is that the same underlying idea of gravity is used for both of them. Gravity “explains” both falling objects and planetary orbits in the same, unified way and, even though we do not know why gravity occurs, we just have one unknown – gravity – instead of the previous two unknowns of falling objects and planetary orbits. That is what “scientific explanation” really means – the replacement of a number of unknowns by an underlying model containing fewer unknowns. (This is actually a bit of a simplification, and a rather crude way of putting it. What a scientific explanation really achieves is to reduce the amount of *information* that has to be implicitly assumed to describe reality.)

Why did I mention all that? The idea we were discussing is that supernatural things lack a scientific explanation. It will be obvious from what I said that *everything* lacks an *ultimate* scientific explanation, so if we were to use this idea then we would have to view *everything* as supernatural, making the word useless. Some people might say that at least science gives some kind of explanation, even if it is not an ultimate one – for example, explaining both falling objects and planetary orbits in terms of gravity – and that this cannot be done with “supernatural” things. The problem with this is that, because the scientific explanation is never an ultimate explanation, there must always be some point at which there is no explanation for some scientific theory. For example, we use gravity to explain things, but we do not know why the theory of gravity applies, or we explain gravity in terms of some theory X and we do not know why X applies. The “bottom level” of our current scientific knowledge, that underpins all of our other explanations, must always be unexplained. This means that if we define supernatural things as “not scientifically explainable” then we would have to regard the most fundamental scientific theories that we have as supernatural, as they are *just there* with no explanation and our only reason for thinking them true is not any deeper knowledge, but merely observation of reality. This would suggest that this kind of definition of the “supernatural” is trivial as it implies that the basis of everything we know must be supernatural.

Someone might argue that there is a difference between fundamental scientific theories and truly supernatural things, in that there is always the possibility of finding a deeper explanation for a scientific theory later, while you could never do this with a truly “supernatural” phenomenon. However, if you accepted a definition like this you would never be able to tell when looking at different phenomena which category they fall into. For example, is there an “explanation” of gravity or do we just have to accept it as “supernatural”? If we see ghosts is there an explanation or do we have to accept them as “supernatural”? This also starts to become a trivial definition of the supernatural because it suggests that all kinds of things that are generally thought to be “scientific” are

supernatural. If we adopt this kind of idea then when we try to explain anything, sooner or later we would have to reach something that is “supernatural” because we cannot proceed further, unless there is an infinite chain of explanations for everything.

The idea is also dubious because whether or not some phenomenon is explained can depend on how you structure the description of it. For example, we could have two phenomena, A and B:

A is explained by C.
B has no explanation.

Someone accepting the dubious ideas we have been considering here might claim that A is “natural” and B is “supernatural”. However, we might invent some other type of phenomena, D, which is superficially similar to B and which is explained by some theory E, so that D and E are together just a different way of expressing B. We could then say:

D is explained by E.

We would then have something like B which could be considered “natural”. Insisting that natural things are “explainable” and supernatural things cannot be explained is trivial because nothing can be ultimately explained, while an intermediate explanation can be given for anything.

Natural things are scientifically understandable and supernatural things are not scientifically understandable.

Some people think that some things are “supernatural” because they are beyond the “understanding” of science. The incorrect idea here is that science somehow tries to limit the sorts of understanding that could be valid. In fact, science attempts to understand in the most general way possible. Science is a methodology for using our limited observation of reality to work out what reality is like. If scientists tend not to accept that something exists then it means either that the evidence really does not justify thinking that it exists or that the scientists are wrong.

It might seem that science has a limited kind of understanding because of the language that science uses. Scientific understanding is generally described in terms of rules and equations. This gives some people the idea that science demands that everything can be expressed in mathematical terms and that some things might exist that are not understandable in terms of mathematics, and therefore not scientifically understandable.

There is nothing built into scientific methodology that demands that mathematical equations are used. Equations tend to be used because they tend to be useful for describing reality. Some people have speculated that, at a more basic level, equations may not even be best for describing reality and simple rules may be more appropriate, the equations only becoming relevant for higher level processes that are statistically derived from those rules.

When people regard scientific understanding as “limited” though what they probably object to is the idea that everything can be “reduced” to formal language. There is clearly a difference in style between the sorts of things that scientists say and the sorts of things that people making “supernatural” claims say. Here is an example of each to show the difference:

$F = -GMm/r^2$ (Newton’s inverse square law of gravity) [6]

and

“The spirits of dead people wander the earth as supernatural ghosts” (a typical supernatural claim).

The sort of person who regards the second claim as meaningful is likely to have issues with the sort of person who thinks reality is best described in ways similar to that of the first claim: scientists tend to like things formally expressed. Does it make sense to say that some things are beyond formal description? This might seem tempting, but formal description is merely an attempt to reduce vagueness – to remove as much doubt as possible about what the description means. Conventional, everyday language has a lot of vagueness and is natural to want to reduce it as much as possible for the purpose of describing nature. Saying that a particular thing is beyond scientific understanding or description is effectively saying that it is *beyond formal description* and therefore that *it cannot be described without some vagueness*. I think it makes no sense to demand that things must be described vaguely, if they are described at all. We might describe things vaguely because we do not know enough about them to describe them better, but to suggest that there are some things in reality which can only be described vaguely, because we are “limiting our view of reality” if we try to describe them without vagueness seems to me what someone would suggest if proposing incoherent concepts.

Nevertheless, should we entertain the idea that maybe formal description cannot encompass everything and that things might exist which can only be described in everyday, vague human language? Suppose someone made such a claim, in everyday human language and insisted that the claim must be expressed vaguely. We could ask a series of yes/no questions about the claim and gradually learn more about it. Doing this would be equivalent to expressing the claim formally in the first place, so when someone claims that some “supernatural” thing cannot be described formally they are effectively saying that it is not even possible to answer yes/no questions about it. This is not the same as saying that someone making a “supernatural” claim should always know the answer to yes/no questions. We might have incomplete knowledge of the thing and, likewise, the person claiming that it exists might lack the knowledge needed to answer all yes/no questions, but it should be possible in principle to answer yes/no questions: an answer should be possible assuming someone has complete knowledge. If that is not the case, what are we supposed to even think it means when a properly constructed yes/no question about some “supernatural” thing *does not even have an answer in principle*? All

things should be describable by using the answers to a series of yes/no questions and that means that all things, at least in principle, should be formally describable.

Someone who claims that things exist that are not “scientifically understandable” should say exactly what they think the unreasonable limitation in the scientific method is and why it will always exclude some things that can be known to exist by other means. When asked to do this people are likely to jump to one of the other definitions I have mentioned here. For example, they may say the scientific method only considers the “physical”, while the supernatural is “non-physical” or they may say that the scientific method only considers things that can be analyzed, or that the scientific method only considers things inside reality, and so on.

The supernatural is a *higher* part of reality or is higher than reality.

This is attempting to take a commonly used, and understood, word like “higher” and use it in a way in which it loses all meaning.

When we properly use the word “higher” there is some well well-defined *index*. Different things are at different points on this index. Going in one direction along the index corresponds to getting “higher” and whether or not one thing is higher than another depends on the relative positions of the two things on this index. All that might seem a lot to say about such a simple concept as “higher”, but there is an important point here: the word is meaningless without the well-defined index – without some way of saying how high one thing is relative to another. Where things are in space is often used as the index. The height of a thing above sea level might, for example, be the index, so one thing would be “higher” than another if it was at a greater distance above sea level. The index does not have to be based on space though. It can be more abstract. We could say, for example, that one person has a higher IQ than another, or that one person is higher than another based on their levels of seniority in some organization.

When the word “higher” is used to define the “supernatural”, however, the word “higher” itself is not explained. No index is given. People seem to think they can just declare the supernatural to be “higher” and leave it at that. Imagine if people tried do this in any context other than the “supernatural”. Suppose someone said to you, “Fred is higher than Bill.” You ask “In what sense is Fred higher than Bill? Is he taller?” and the person replies, “No, I don’t mean taller. He is just higher.” You ask, “Do you mean he is an ethically better person, or that he has been promoted to a higher level in some company, or has more power in society?” The reply is “No! You don’t get it. He is just *higher*.” You would assume you were talking to someone who was rambling incoherently. I have explained why now: no index would be given.

That is what people are usually doing when they are claiming the supernatural to be “higher”.

People who do this usually fail to see that they are being incoherent by not stating what index they are talking about. This may be because in everyday life the index is obvious to

both people in a conversation, and so does not need explicitly stating, leading some people to fail to see that it is needed.

Some people would argue with this by saying that there is a well-defined index when we are talking of the supernatural as “higher” things. Well, what is it supposed be then?

If “higher” things are supposed to be things to which our everyday world is subject then we know about lots of things like that already which I do not see people labelling as supernatural.

As an example, particle physics is now known to underpin our everyday world. When things happen in the everyday world it is really because of things happening with particle physics that we do not directly see. Our everyday experiences are subject to particle physics. When you see a car crash, a thunderstorm, or a man selling apples at a market stall, particle physics is producing all of these everyday experiences for you. Why then, does nobody label particle physics as “supernatural” on account of our everyday experience being subject to particle physics? The answer should be obvious: if this kind of “ontological superiority to everyday life” were adequate for making something supernatural then much of science would be supernatural. Some readers may object to this by saying that this is not what “higher” means, but I am not claiming it is: I am merely showing one example which is of little use. If you do not want this meaning for “higher” then just declaring the supernatural as “higher” but in a different way is meaningless: what index do you want?

The supernatural is outside space and/or time.

Some advocates of the supernatural claim that things are supernatural because they are outside space, outside time, or outside both. The assumption here is that science assumes that anything that exists must exist within space and time. Not all scientists think this is the case however. Max Tegmark, a cosmologist, has suggested a possible cosmology in which our observable universe, with its space-time, is merely one object in a set of all mathematically describable objects. Space and time are not important in Tegmark’s cosmology. Instead, the concepts of space and time are provincial concepts, relevant only to anyone who happens to inhabit one of the small proportion of objects structured in ways describable in these terms. Objects space and/or time can still be formally described – just not in spatial and temporal language. Tegmark’s is not the only attempt to consider things beyond space and time scientifically.

An advocate of the supernatural could reply that most scientists think that space and time are fundamental parts of reality and that nothing exists beyond them. Rather than get involved in arguing about that I would merely point out that if that were true, and if something happened to exist beyond space and/or time, it would merely mean that most scientists were wrong. Why, however should this make things beyond space or time really all that special, particularly when someone like Tegmark is capable of scientifically considering them?

Should anything be found to exist beyond space and/or time we would have to change our views about reality, but this would just be a paradigm shift – one of many that has happened. It would be a limitation in our worldview that was the issue here – not any profound nature of the thing that is supposed to be “supernatural” and, once science had made such an adjustment, there is no reason why some sort of cosmological model like that proposed by Tegmark could not emerge, reality could still be scientifically considered and formally described, and science could just carry on.

For these reasons, I suggest that this type of “supernatural” lacks the profound nature that some people think it has. It is a trivial definition of the “supernatural”.

By the way, some readers may think that I have invented a game that is easy to win here: all I have to do is consider whatever “supernatural” is supposed to mean, state that if it turned out to exist science would just incorporate it anyway, and then declare the definition of the supernatural to be trivial. There is some limited truth in this. When faced with some of these definitions my obvious answer is to say that science could go there too, but I do not think that is just playing a game. The point is that science could “go there” by functioning in much the same way that it does now and if someone thinks that it could not then they are essentially making a claim for things beyond scientific inquiry – a different idea of the supernatural which I have already dealt with. If anyone really thinks that being “outside time” would qualify something as supernatural I suggest reading one of Tegmark’s [8,9] papers and then asking yourself if somewhere in this set of mathematical objects would be a satisfying place for something like spirits or God to exist.

Are you saying that this is all there is?

I am not taking a position on specific phenomena in this article. This article is not about whether or not such things as spirits, ghosts, telepathy, precognition or God exist or do not exist. The existence or non-existence of these things does not cause any problem with the argument. I happen to think that these kinds of things are not very plausible, but for other reasons. Whether or not they are real is nothing to do with what we are discussing here.

This is about the semantics of the word “supernatural” and about other concepts such as “immaterial”. What I have argued here is that concepts like this are meaningless as a way of profoundly categorising things in reality. This does not mean that things like ghosts do not exist, but rather if they did exist it would be meaningless to label them as “supernatural” in any profound sense of the word – as there is no such profound sense.

Can the term “supernatural” mean *anything*?

I have argued that the term “supernatural” cannot mean anything profound, yet it has to be accepted that there is a class of phenomena that, if real, are different in some sense to other things. It would be naïve to suggest that the idea of ghosts, for example, is something that would be absolutely normal if they existed. The idea of ghosts is different

in *some* sense to the ideas in everyday science. The word “supernatural” often gets its meaning from the sort of things it is associated with rather than from any proper definition of the word, which probably causes a lot of people to miss the problem that it is hard even to make a definition. We might decide to throw away the word “supernatural” or we may try to fit some sort of use to it. Whichever approach we selected would be nothing more than semantic convenience. Is there any way in which we might accept some concept of “supernatural”?

Looking at the sorts of things with which the word is associated, we might attempt some definition of “supernatural”. One obvious idea is that things described as “supernatural” tend to be things which are not part of the ordinary experience of scientists. They are often supposed to be things that happen very rarely, so we might use the word “supernatural” for events that are particularly rare – so rare that scientists might dispute that they happen. This would be a very weak concept of “supernatural” for someone wanting their ghosts or god to be really special though. Things described as “supernatural” would only differ from “natural” things by a matter of *degree* rather than in any qualitatively profound way,

Regardless of what I have said about why it would be incoherent to say that things like ghosts would be profoundly different, I would have to accept that in some obvious sense they do not seem like other things. If mainstream scientists suddenly started saying that ghosts were real it would be big news. There is clearly *some* kind of difference. This difference could be that, for most of the things to be called “supernatural” to be accommodated by science, a big shift in our scientific description of the universe would be required, much greater than that required to accept a new type of particle. As in the other case this would not be a profound idea of “supernatural”. Such a “supernatural” is only defined relative to existing scientific knowledge and, if it were ever confirmed to exist, would actually become natural. This kind of “supernatural”, as with the previous kind, only differs from the “natural” by a matter of degree rather than in any qualitatively profound way.

Why isn't gravity supernatural?

I will try to make the issue that I have been discussing clearer by using the example of gravity. I mentioned gravity earlier in this article, but we will now focus on it more.

Imagine you were born on a space station, in weightlessness, and have never been on the surface of a planet. Nor have you ever become aware of anything like “orbits”: maybe you have never looked out of a window, or maybe the space station is far from any planet or star. You have never known of gravity. Experiments done with objects inside the space station could actually show the small gravitational attraction that occurs between them, but you never did such an experiment, nor read about one.

Imagine now that you land on the surface of a planet. You are now experiencing gravity for the first time.

You may find this somewhat spooky. When you hold out an object and let go something makes it move. It accelerates to the ground, as if in the grip of some force. Let us suppose that you call this phenomenon “gravity”, although you do not know what it is. You may find this very disturbing. You are seeing objects move for no reason.

Now, this is the question: why should you not label “gravity” as supernatural? It is weird. It seems to be just “happening”. It is spooky. We are just seeing objects moving for no good reason. Gravity should seem to fulfil lots of criteria we might use for declaring things supernatural.

Some people might say that gravity is not supernatural because it can be “analyzed”, but can we actually “analyze” it? All we can do is analyze the motion of objects under its influence. If being able to do that means that gravity is natural then surely it makes a poltergeist natural if we can analyze the trajectories of the objects that it is throwing.

Some people might say that gravity is not supernatural because “we can explain it”, but can we really explain it? Newton [6] did not really explain gravity. Rather, he proposed an equation to describe how objects move under the influence of gravity. Some people regard Einstein’s later theory of general relativity [7] as an explanation of gravity in terms of mass distorting space-time, but is this really an explanation? The theory describes, but does not *explain*, how mass distorts space-time. Whatever serves as the deepest explanation that we have must by definition be unexplained, so any scientific “explanation” like this must ultimately rest on something that is unexplained.

Some people might say that gravity is not supernatural because it is “physical” but what does this even mean? All we see is that when we hold things in the air and let go of them they mysteriously accelerate towards the ground. We do not even know what the ultimate cause *is*, even though we can describe what it *does* with great accuracy, so if there were such things as physical causes and non-physical causes, how would we even be able to say whether gravity was physical or non-physical? I am not trying to make a case here that gravity might be “non-physical”: I am trying to show that the whole idea of differentiating between physical and non-physical things is incoherent. Some people might declare gravity “beyond scientific enquiry” but this is clearly a pointless claim. We are seeing objects being affected by gravity and those objects are not beyond science, nor is the idea of describing what is happening.

Does this mean that there is a plausible case for declaring gravity “supernatural”? When we try to formulate profound ideas of the supernatural we can justify applying them to something like gravity. If we do this, however, we may as well declare anything else supernatural, because we could say all this about anything else, or about the physics that underlies it. Whatever idea of the “supernatural” we could apply to gravity would be trivial.

This should suggest that, even if we could define these profound ideas of the “supernatural” well enough to apply them to things, they would be so trivial that they could be applied to *anything* – and therefore useless.

What this Means for Religion

Many theists claim that God is “supernatural”. I have shown that the concept of any profound kind of “supernatural” is incoherent. If theists mean that God is “supernatural” in any profound kind of way, their claims should be viewed as similarly incoherent.

This has implications for the existence of God in general. Theists typically claim that God is “supernatural” as a way of dealing with various arguments against the existence of God. If God cannot be profoundly supernatural then this defence loses some of its usefulness and some arguments against the existence of God become stronger.

Conclusion

People who claim that the “supernatural” is real are dividing reality into “natural” and “supernatural” things, but this definition is incoherent unless the boundary between “natural” and “supernatural” things is properly defined. Those who claim that the supernatural exists tend to try to explain what “supernatural” means, not by giving any proper definition of this boundary, but merely by mentioning another boundary which is also undefined, such as the boundary between “physical” and “non-physical” things. This article has shown that any profound idea of a boundary between “natural” and “supernatural” things, or the other boundaries which people introduce to try to explain it, are incoherent. This means that the “supernatural” is incoherent as a profound idea.

Although the idea of a profound “supernatural” is incoherent, we might still try to find some meaning for the word by considering the sort of alleged phenomena to which it is applied. We might, for example, describe things as “supernatural” if they occur extremely rarely or if a sufficiently great paradigm shift in science would be required to admit them. Ideas like this, however, are not about a profound “supernatural” and the sort of “supernatural” described by them differs from the “natural” only by a matter of degree. In my view the word “supernatural” is applied so vaguely and incoherently, and is in so much disrepute, that it would probably be better just to regard the word as useless.

The incoherence of a profound “supernatural” has implications for some religious claims, which involve a profoundly “supernatural” god. It suggests that such religious claims are incoherent.

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