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Bruce Hood on the Supernatural

David Edmonds: *You may think that you are immune to supernatural attitudes or beliefs: they're for others, for more primitive, more superstitious types. But Bruce Hood a developmental psychologist at Bristol University says supernatural beliefs are much more common than you think. You've probably got some*

Nigel Warburton: *Bruce Hood, welcome to [Social Science Bites](#).*

Bruce Hood: Hi, great to meet you.

Nigel Warburton: *The topic we're going to focus on is the supernatural. Now that seems a very strange subject for a reputable scientist to be investigating. Could you say something about that?*

Bruce Hood: Yes. Well I have to confess, I got into psychology under false pretences because I'm of an era that remembers Uri Geller. And when I was a young boy I'd watch Uri Geller doing these amazing things and I really did believe there must be something to this because everyone was saying he has all these abilities. So I wanted to go to do psychology to learn how to use my mind to control the physical world and all that sort of nonsense. I very soon discovered that actually there's no credible evidence for the supernatural, 'paranormal' as it was called at the time. Instead I discovered actually there's a much more fascinating area of empirical work on the mind and I particularly got focused on child development.

Many decades passed, and then when I arrived in Bristol about 15 years ago I set up a lab to study child development and I never really had abandoned this kind of interest or fascination with the supernatural. Rather than actually believing it as a plausible phenomenon, I became more interested in why do people believe in it. And in my studies on children I noticed that there were many misconceptions that they came up with. And along with other psychologists, this is not entirely my idea, I recognized that you could see the basis of adult supernatural thinking emerging naturally in the way that children reason about the world. So I became fascinated studying the natural way of understanding the world and how that could lay down the foundations of what are supernatural thinking.

Nigel Warburton: *That's really interesting. So you're saying that young children are already forming patterns of behaviour and belief that tend them towards a kind of supernatural explanation in later life.*

Bruce Hood: Yes, effectively. The premise is the brain is a sophisticated pattern-recognizing system. We generate explanations to make sense of the patterns that we discover in the world. So when we see two events happening close in time the tendency is to think that once causes the other. You have a thought about someone that you haven't thought about for a long time, then you get a phone call out of the blue, the immediate assumption is that you somehow have some psychic connection, when in fact you've probably forgotten every instance where you've been thinking about someone and no one has contacted you. So we pick up on what we perceive as being significant events and we interpret them in some sort of causal effect. Or take for example pareidolia, which is this tendency to see faces and

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Bruce Hood 2014

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structure. We know that the brain has systems for recognizing face-like structures and in fact that's wired into the newborn brain - there are studies of newborns showing that they will prefer to look at configuration of patterns which look like faces. Or it might be something to do about energies and forces. The assumption that there's a hidden property.

My particular interest, research interest, is a field known as essentialism. This is the attribution of a hidden dimension to things giving them their true identity. It's almost as if there's a sort of spiritual component. When you start to think about essentialism you can see it operating everywhere, not only in supernatural thinking, but also in the way that we think about what makes things irreplaceable. So I'm fascinated by this sort of crossover between natural reasoning and then this sort of emergence of supernatural assumptions.

Nigel Warburton: *Well let's take that concept of essentialism. When I have an object with sentimental value, like I own a baton that my grandfather used to conduct an orchestra with, now that's got sentimental value. It's not replaceable by another baton that looks just the same: it seems to have some essential almost magical quality because it was his baton. Is that the kind of thing you were talking about?*

Bruce Hood: Yes, that's absolutely true. The example I usually give is a wedding ring. I say to people 'This is your wedding ring, would you be happy to swap it for an identical wedding ring?' And most people if they're enjoying a happy marriage will say 'No.' Then you say 'Why not?' and they say 'Well because it's not the original.' But the trouble with things being original is that there are some metaphysical issues about what constitutes an original item.

For example, from philosophy, we know the problem of Ship of Theseus. I'll give a brief summary of it. This is a story of a ship which was put into storage which was owned by the King Theseus. Over the years the shipwrights would come back and they noted that they had to replace some of the planks. And eventually they replaced all the planks. The question is, is this still the original Ship of Theseus? You might say well yes, it's a gradual replacement. But then if you kind of reassemble all the planks that you had put into storage you now have two ships. Which is the original Ship of Theseus?

Our intuition is that gradual transformations retain identity. Sudden rapid transformations, the object becomes something completely different. It also means that we think there's something over and beyond the material composition which gives objects their identity, and this is what I call the essence of the object. The research on children's essentialism is really to do with living things. But now I think we're beginning to recognize that this also applies to objects to which you have an emotional connection. So this is the origin of essentialism.

Nigel Warburton: *Could it be that the fundamental starting point for essentialism is actually other people? Because they obviously change over time significantly.*

Bruce Hood: Absolutely, and I think that's my hunch. When we form emotional attachments to significant others then we essentialise them. We think there's a property which makes them irreplaceable. For example, we don't form these attachments to polystyrene cups or things which are clearly duplicated. It also explains why I think that we find identical twins rather alarming, or the notion of genetic modification is almost an assault on the essence of what gives something its true identity. So we hold deep-seated beliefs about retaining true

authenticity and true identity. Same with works of art. The value of a work of art. As soon as you discover it's not by who you thought it was it loses some of it's, not only financial value, but emotional attachment.

Nigel Warburton: *Now are you saying that this is magical thinking? Because it seems quite normal thinking. So we are all engaging in magical thinking?*

Bruce Hood: Absolutely. And it becomes manifest in daily practices, the way that we buy certain products which we feel are irreplaceable. There's a whole industry of special foods that we eat which we think will imbue us with special powers. You have Chinese medicine which is the assumption that if you eat certain animal parts you will retain or gain some of the power that is stored in it. There's a lot of this going on all the time. Now it sounds like it's irrational, but it's not necessarily irrational. There's a whole line of research which explains why we might be essentialists, which is that we try to avoid contamination. This comes from the field of disgust. But yes, what I'm saying is that this way of inferring a deeper dimension and visible properties of things is very commonplace and it manifests sometimes as supernatural thinking, but also manifests in our evaluation of what makes something unique.

Nigel Warburton: *Well how can you tease apart the bits which are magical and the bits which just happen to make people unique or other things unique?*

Bruce Hood: Sometimes they will say there's an essence in there or they'll say that this has got a certain vibe. So they might articulate a belief which actually there's no evidence for scientifically. But more often than not what we do in our studies is we look for behaviours which seem to suggest that they are relying on this assumption. So for example, I did a study some years ago asking people if they'd be willing to wear a cardigan. I offered them incentive of £20. Most people would. And then you say 'Actually, would you still wear it if you knew it belonged to Fred West?' Most people would put their hands down when you say 'Well why wouldn't you wear it?' Some people say 'Well I don't want to be seen to be as someone who's willing to wear Fred West's cardigan.' But that just restates the problem. What's wrong with wearing a killer's cardigan? Others will say well it feels disgusting. It feels dirty. It's almost as if they're applying a biological explanation.

We're now actually doing work where we get people to put on or touch clothing and then we inform them that it belongs to someone very good or someone very evil and then we watch what happens afterwards. Do they wash their hands? Do they start doing all these implicit measures? And they all suggest that they are acting irrationally. But there's a good reason why they might do so. We don't know why people are crazed killers. There might be a biological contamination. So in that sense it's not an entirely irrational response. But when you explain it explicitly people say 'Well I know it's a bit strange, but it just makes me feel yucky.' So that's what I mean by supernatural thinking because if these things were really real, if these dimensions and forces and energies were real, they wouldn't be supernatural they'd be natural. So these are things which go beyond our current understanding.

Nigel Warburton: *So there's no significant molecular change brought about by Fred West wearing a cardigan - presumably it's been washed anyway. It wasn't really Fred West's*

cardigan, but just the thought that it was his is enough to make people feel kind of a revulsion.

Bruce Hood: Yes, that's exactly it. It's the belief of what you think something is which will affect your behaviour. So for example, we did a study asking people to cut up photographs of sentimental objects or their wives. And we found that even though they knew it's just a photograph and they didn't think there'd be any problem you could measure significant increases of undue stress. So in other words I think what's going on is you have systems in the brain which are triggered by irrational supernatural intuitions if you like, but you can suppress them or control them by top down logical analysis. But they're always in conflict. And there are no atheists in the foxhole, or at 30,000 feet when the plane hits turbulence. We can revert right back to this magical thinking.

Nigel Warburton: *You moved quite quickly from talking about magical thinking to talking about religious belief. For a lot of people those are quite distinct areas.*

Bruce Hood: Yes. It's funny isn't it? That they should draw that distinction. But of course religion is just organized supernatural thinking. Every religion has to have entities who have supernatural powers. And I think part of that works because of the pool of the supernatural. There's something which transcends the mundane and so it has to have supernatural qualities. But religions are just organized structures. They're narratives about the beginnings of the universe, the ends of the universe, and why we're on this planet, where we go when we're dead. They're just stories to some extent, but are punctuated with and require these belief systems; whereas people who can be non-religious and yet still believe in a whole variety of supernatural things. So I think the difference is only one is organized supernatural thinking, the other is just spontaneous belief systems.

Nigel Warburton: *To what degree do you think that these sorts of patterns of thinking are learned through a process of conditioning? We learn about causes and effects, disgust and so on. Or perhaps they are due to sort of innate patterns due to things that have happened in the Pleistocene?*

Bruce Hood: So this is the tension, is it all learned, or is it indoctrination? If you're Richard Dawkins then you'll argue it's indoctrination. Or is there a natural inclination? I think as many things in psychology it's a combination of the two. There are predispositions that actually explain why one brother will become very religious and the other one might become an ardent atheist. There's always variation. And the studies which have looked for the shared likelihood of these, for example twin studies, do support the idea that there's some genetic basis for it. So my suggestion is that we're trip-wired to seeing structured order and inferring causes and then really whether or not they become full blown supernatural religious ideas really depends on the culture in which you're raised.

Nigel Warburton: *What's quite surprising is the extent to which you've uncovered this. It's not hard to see that there are people who visit physics and clairvoyants and really sincerely believe what they're told. But there are a lot of people who think of themselves as really quite rational, perhaps are scientist themselves, it's hard to believe that they're caught up in this.*

Bruce Hood: Well that's true, but then often people have beliefs which are supernatural and they don't even know that they're supernatural. So the common one I point to is the belief that you can tell when you're being watched from behind. Nine out of ten people think they can do that. So there are many common assumptions that we never challenge because they seem intuitively correct. You can learn to avoid this or you can be educated scientifically and this can challenge these beliefs. But if you're facing a time of threat then people will often clutch at anything which gives them some sort of sense of control. A lot of magical things, superstitious behaviours or rituals, are to do with controlling uncontrollable events. So this is why you see them at major transitions in life: birth, death, financial, marriages, all the major ceremonies which mark the important times in our lives have rituals associated with them. And these rituals are to try and control events which are not necessarily controllable.

Nigel Warburton: *And of course gambling.*

Bruce Hood: And of course gambling, that's right. And it's well established that gamblers are very superstitious as are many sports people. This is the irony. Because it turns out actually these superstitious rituals are actually quite beneficial because if you thwart a sportsman in doing their ritual then they don't perform as well. So this habitual way of behaving is actually beneficial.

Nigel Warburton: *So is there any practical impact of the research you've been doing on the supernatural?*

Bruce Hood: Well, I think it's always important to recognize that a lot of practices are potentially very dangerous. In Africa it's a widespread belief that if you have sex with a virgin you can cure Aids. Now I think that's a manifestation of essentialism of youth. People believe that by having intimacy with the young they can absorb their vitality. In fact, if you look through the literature you'll find many examples of this: I think Dracula is another example of this sort of notion of absorbing the essence of individuals. In cultures where magical thinking is very prevalent people are definitely suffering.

Nigel Warburton: *I was interested in the case about original works of art. You mention that as a case of essentialism where people feel that the original work by the great artist is the one which carries all the value. But then you discover it's a brilliant copy and you lose interest in the image. Is that purely magical thinking or is there something else going on?*

Bruce Hood: No, it's not purely magical thinking because clearly there's an issue about supply and demand. If you could reproduce everything then there's no limit and so part of the value that we place on objects is that if everybody wants it and there's a limited supply then you can ask more for it. That's just basic economics. But there's something about owning stuff which belongs to celebrities which conveys or I think triggers essentialist notions. This is why it's not just the owning of it, it's the touching of it, it's the coveting of it, it's the intimacy with the object which makes it so important. So, for example, there was a company in Hollywood who was doing a roaring trade and reselling celebrity clothing and they offered a cleaning service but nobody wanted the cleaning service. I think it speaks to this idea that you literally have part of George Clooney in your clothing or whoever it might be that you fancy.

One of the common criticisms I hear about this notion of essentialism is that is it any different to pure association. In other words, if you feel repulsed by Fred West's cardigan isn't that simply the fact that when you think about Fred West you have all this associated negative thoughts. Why do you need to evoke this belief in some underlying energy or spiritual dimension?

And I think one of the best counterexamples to that is to imagine a hypothetical situation where you have two books that you can hold. One book has vast amounts of detail associated with say Adolf Hitler. That book should trigger lots of negative thoughts about Adolf Hitler, and that should be a book you wouldn't particularly want to hold. But I bet my bottom dollar that if the other book was a cookery book which has no information about Adolf Hitler, and yet you discover that he used to use that and work from that and held that intimately that's the book you would find repugnant. It's the notion that there's a physical connection that somehow their negativity, their essence can transform or almost contaminate the physical world, and that of course is a completely supernatural belief. It's not an association.

Nigel Warburton: *And do you think all of these cases of essentialism are kind of misplaced theory of contagion?*

Bruce Hood: That's exactly my hypothesis. It's because we're not sure why people may be evil or why they're repugnant. So we adopt this biological model of contagion which is a very useful adaptation I think.

Nigel Warburton: *Now you're a psychologist and that subject is usually seen as falling within the social sciences. Do you self identify as a social scientist?*

Bruce Hood: Well, I think psychology has an identity crisis because I think it's misrepresented in the media, and the general public have preconceptions of what they think psychology is about. But actually when you discover more about the different areas of research that go on you soon discover actually it's got wide application beyond the social sciences. A lot of what I'm interested in sounds like brain science or neuroscience. I'm also interested in artificial intelligence. And in fact, this notion of the mind goes beyond simple social sciences, I feel. I'm greatly reassured by Darwin, because if you look at *On the Origin of Species* in the last few pages he talks about how if you really want to understand mankind it's not enough just to understand evolution in a physical sense you have to understand evolution of the mind. So I find that gratifying, especially when some of my colleagues from the harder sciences such as physics and chemistry call us a non-science.

Nigel Warburton: *Bruce Hood, thank you very much.*

Bruce Hood: Thank you.

[ends]