

William Dembski on Information and the Mind-Body Relationship

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Mike Egnor:

Welcome to Mind Matters News. This is Mike Egnor from the Walter Bradley Center for Natural and Artificial Intelligence. I have the great pleasure and privilege today to interview Bill Dembski. Bill is a senior fellow at the Discovery Institute at the Center for Science and Culture and a distinguished fellow with the Walter Bradley Center for Natural and Artificial Intelligence. Bill has a doctorate in philosophy from the University of Chicago, as well as a doctorate in mathematics and a Master of Divinity degree from Princeton Theological Seminary. He's the author of more than 25 books, author or editor of more than 25 books. His book, *The Design Inference*, is really a seminal book in the intelligent design movement. He has a new edition out of that book, which I highly recommend you get. Bill is one of the most thoughtful and insightful people in the intelligent design movement. So Bill, welcome, and thank you for joining us today.

Bill Dembski:

It's so good to be with you, Mike. Thank you for the wonderful foreword that you wrote for that second edition, so it's much enriched it. So thank you.

Mike Egnor:

It was a real privilege. Thank you. The book we're talking about today is a book called *Minding the Brain*, and the subtitle is *Models of Mind Information and Empirical Science* edited by Angus Menuge, Brian Kraus and Bob Marks. It's a wonderful book and not just because I had a chapter in it, but it's a really great book about the mind-body relationship and looks at that relationship from all different perspectives. Bill's chapter is the final chapter in the book, and I think in many ways, the most interesting. Bill's chapter is entitled *How Informational Realism Dissolves the Mind Body Problem*. I've been wanting for years to talk with Bill about information because I think he's probably the leading information theorist in the world, particularly as regards natural science. I wanted first to ask Bill, what is information?

Bill Dembski:

Right, I think it helps to think of information more as a verb than as a noun. It's something that happens and it happens when possibilities are narrowed. So if I tell you that I'm on planet Earth, I haven't really given you any information because you already knew I had to be on planet Earth. We assume that Elon Musk has yet to send people to the moon or Mars, but if I narrow it further and say I'm in the United States, that gives you information. If I say I'm in Texas, that further narrows it. If I further narrow it that I'm just outside of Denton, Texas, that gives you still more information. So that's how information works. It's a narrowing of possibilities. In the paper in question, I describe it as a constraint of contingency. You need possibilities and then you need to constrain those possibilities, and it's a very, very general notion. Often when people think of information, they think of it somatically that something has meaning, but you can think of meanings as themselves residing in a space of meaning so that you've got different possibilities of meaning, and then you have to narrow those possibilities. The most widely known mathematical theory of information is Shannon information. What you have there are alphanumeric strings of characters and the mathematical properties of those. But again, you have this narrowing. When you have one sequence that's being transmitted, let's say as an email message or whatnot, you've

ruled out all these other ways that the message might've been sent. So Shannon information likewise exemplifies this notion of narrowing possibilities or constraining contingency. So that's the fundamental conception about information. I think it's useful then to understand also how it arises.

So in different contexts, the information can mean different things. So if I'm looking at, for instance, the meaningful claim, it's raining outside or it is not raining outside, that doesn't convey any information somatically because it includes everything. You knew that it had to be true already. It hasn't narrowed down anything. On the other hand, if I say it's raining outside, that has narrowed down the weather from the other possibility that it's not raining. But if you look at, for instance, those claims it's raining outside or it's not raining outside versus it's raining outside as written texts, the one it's raining outside or it's not raining outside actually has more information because it's a longer sequence, it rules out more possibilities. So you have to always be clear what is the space, as it were, the reference class of possibilities in which the information is happening.

Mike Egnor:

What strikes me about that, and I've been fascinated for years about what information actually is, because it's obviously a matter of deep importance in the natural world. What I noticed is that the idea of constrained contingency is very similar to Aristotle's concept of potency and act, that contingency is potency, the range of possibilities and what makes something real, what makes something exist is its reduction to act, which is the constraint. Do you feel the parallel is valid?

Bill Dembski:

Oh, yeah. I think Aristotle was a smart guy. So I think these ideas have a long history, and so they can be expressed in different ways, and that does seem to me a perfectly valid way of thinking about it.

Mike Egnor:

Werner Heisenberg also pointed out that the collapse of the quantum waveform is a manifestation of that same idea of potency and act or of contingency and constraint that subatomic particles can exist in a superposition of multiple possible states, and that becomes real, at least in one theory by observation. So yeah, it does seem that this concept of information permeates the natural world.

Bill Dembski:

Yep, it's very true, and it permeates the intellectual and the cognitive world. I think it makes for deep resonances provides a unity, which I don't think you get from materialism.

Mike Egnor:

You discuss in your chapter, in fact, really the essence of the chapter is the metaphysical perspective of informational realism. So taking this definition of information, what is informational realism?

Bill Dembski:

Informational realism says that information is the most real stuff that we deal with in science, really, across the board in our endeavors. So I wrote that piece with really materialism as the foil, because I think for the materialists, everything is ultimately matter and then things have to be built up out of matter, including mind as some complex organization of matter that works in certain ways. So what I was arguing is that information is the most real stuff and that really even materialism in a sense, insofar as you can know what material entities are doing, it's that these material entities are disclosing

themselves informationally. So in a sense, the information is more fundamental than the matter. One illustration that I give of that is perhaps the most fundamental matter that we have discovered at this point, I think our physical theories will let us go further.

But in terms of the sorts of energies we have in physics to examine fundamental matter, it's this Higgs boson that was discovered in the last decade or so. What allowed us to say we've discovered that Higgs boson, it's not that we've somehow in some sort of democracy and style we've picked out something indivisible and are able to hold it and look at it. It's that we've hit some physical stuff with a lot of energy and we've seen a characteristic scatter plot, which would be emblematic of that Higgs boson. So again, it's this contingency and constraint, this sequence of scattering not another, and this one, though, tells us that we're dealing with this fundamental particle. In a sense, what I guess I would say is that epistemologically, information goes much deeper than matter because matter itself is disclosed to us in some informational way, this and not that. So that's the viewpoint.

One thing I also say is that information is, in a sense, ontologically minimalist. There's a sense in which this could be a material world that discloses itself informationally, but an informational realism doesn't require that nuts and bolts metaphysics be material, could be other things. I think your predilection in your article is a Aristotelian polymorphism, if I'm understanding it correctly. I tend more in a platonic direction, so for me, it's I'm just fine with it being as it were, information all the way down. But it's that information is the most fundamental stuff and that anything that discloses itself to us does it informationally, and I think that's exactly right. Even physical theories can, in some sense, be an entirely recast informationally.

When we think of a golf club hitting a golf ball, you can think of that entirely in terms of some sort of Newtonian mechanics, but you can also think of it as the golfer imparting information to that ball trying to send it. So now we even get some teleology into the hole as opposed to elsewhere. Then a random golf shot would also impart information, but it would not be this intentional information that would try to achieve that end. So it's a way of thinking about it. I think it has resonances with certainly Aristotelian in many ways in that I think potency and act is very much in that vein. I think the ultimate expression of potency and act is God's creation of the world. There were all these worlds God could have created and he picks one.

Mike Egnor:

Right. Right.

Bill Dembski:

So it's, in a sense, the vastest ensemble of possibilities and then the most narrowing of those possibilities into this actual world. It's interesting also how this notion seems to be resisted these days with quantum many worlds, this whole approach of inflating the possibilities of what the world might be and giving them reality, whereas, it seems that Christian teaching would be, there is only one world. It's this world-

Mike Egnor:

Sure.

Bill Dembski:

... and this world may be a lot bigger than we suspect, but it's this creation. So there's not a parallel you, Mike, who is instead of being a neurosurgeon, is doing something else. There's just-

Mike Egnor:

I may be a Darwinist, right? Right? That would be a very evil world, but-

Bill Dembski:

There you go.

Mike Egnor:

Which brings up a slightly tangential question, but it does fit in. Do you believe that God knows counterfactuals?

Bill Dembski:

It's funny that you raised that because I had written a doctoral dissertation on the logic of conditionals, which basically I had submitted it, but I had a series of advisors who started falling off the map. One left the program, another fell ill with depression, and finally the person who took over it left, did not get on board with it, but-

Mike Egnor:

Presumably nothing to do with your dissertation, I would hope.

Bill Dembski:

This is a dissertation I had to scotch and then I ended up writing the design inference. But all that to say, I've had some experience with that, and these counterfactual conditionals, you certainly have examples of that in, for instance, the Old Testament. David is holed up in a city and Saul is on his way, yes, if I stay, will the people of this town of, is it Keilah? Will they hand me over to Saul? Yes, they will. So it seems-

Mike Egnor:

Right.

Bill Dembski:

... that God does know counterfactuals, but I think there's got to be a kind of legitimacy or the possibilities being considered in the antecedent of the counterfactual need to, in some sense, be alive. Contrast that with if John F. Kennedy Jr had not been assassinated in 1963 and then decided to go to an ashram in India and started levitating, he would've been elected president in 1964. Who's to say?

Mike Egnor:

Right. Right.

Bill Dembski:

It's like it's-

Mike Egnor:

Right. Right.

Bill Dembski:

... so far out there, so I think it's certainly God seems as suggesting that He knows certain counterfactuals. I wonder, though, to the degree that God knows counterfactuals, it's also because if David were to stay in Keilah, then God would arrange it that he would be killed because he wasn't following... He asked God's advice what would happen? So-

Mike Egnor:

Sure.

Bill Dembski:

... in a sense, God can guarantee actualizing or making the counterfactual true if antecedent condition is satisfied. So I would say yes, but their truth status, I think you have to be careful there. I think the example I gave with JFK and joining an ashram and levitating, that's just way out there.

Mike Egnor:

It might be a little too far out even for God. But at one point in your chapter you point out in comparing informational realism to Berkeley and idealism.

Bill Dembski:

Right.

Mike Egnor:

Berkeley said that, "To be is to be perceived," and you formulated informational realism is to inform and to be informed.

Bill Dembski:

Right.

Mike Egnor:

I think that's a fascinating perspective on it, but could you elaborate on that?

Bill Dembski:

Yeah, I've got deep respect for Berkeley and idealism. I think he comes at an interesting time in the history of modern philosophy where he is responding to Locke. He doesn't go to the full-blown skepticism of a David Hume. I think a lot of the conundrums with idealism, if a tree falls in the woods, well, does it still make a sound? Well, if you've got God in the picture, God is omniscient, so I think you can keep a lot of the common sense ideas within idealism. So I think you can make it work. I think what for me, it's that the problems I have with this is that it puts all the reality into minds it seems. An example I give, and it was funny because I was watching presumably with my kids the animated version of the 3D version of Beauty and the Beast, and I'm looking at Belle and I see her lock of hair. Every time that lock of hair moves, it's not that it's moving naturally, it's not that it has any autonomy, it's that the animators had to consciously adjust it each time.

It seems, to me, that's the artificiality that, in my view, infects idealism that because it's all in the mind, the mind has to make all these adjustments. There's not this sense of when God creates, God sets the world free. There's an autonomy that comes with it and that's, I think... This is perhaps more of a temperamental matter. I know that one of my favorite philosophers is William James, and he has said

that a lot of the views philosophers take it's more temperamental. So I think with a different temperament I may have may embrace idealism and perhaps even put informational realism under idealism. Yet, it seems that informational realism is carving out something a bit different. I think, for instance, one of the things I consider is just how our words can create realities. You know what I mean?

It's interesting that the mode of creation in Genesis is God speaking the world into existence and organizing it with His Words, but we do this as well where we create realities. We declare that something is money. Well, when I say we, it has to be people in authority, the government, but it really is money. It is objectively money. It's also subjective because it lives in this subjective world, but it's really money. I pronounce you man and wife, you really are married now. So in terms of what the physicality is doing, that as it were rides separately of it. I resign, okay, now I'm out of a job. So these realities change. Again, I think that's something that it's harder to reconcile, maybe not so hard in those cases with idealism, but still there's this sense that we create realities. We can't create realities with our words. This is Austin's notion of performative utterances, but it strikes me as resonating very nicely with this informational realism and perhaps less so some of the other philosophical streams that I'm familiar with.

Mike Egnor:

My affection for the Aristotelian perspective, for the hylomorphic perspective is partly just based on Thomism, which is how I came to Aristotelianism. The fact I think that the hylomorphic way of looking at metaphysics dovetails so beautifully with what we know in neuroscience about the difference between the intellect and the senses. But I really feel that Aristotle was very much an idealist in a lot of ways. I think sometimes the distinction between the Aristotelian and the platonic way of understanding metaphysics is overdrawn, that the reality is Aristotle isn't that far from Plato. For example, his concept of matter is really potency, which in potency itself is more of an idea than it is a physical thing. So I see Aristotle as taking idealism and forming it in a way that might be better applied to the natural world, but I still think of him an idealist. So idealism is really my perspective with some qualifications.

Bill Dembski:

Interesting.

Mike Egnor:

What completely fascinates me that Bruce Gordon has talked about a lot, and I've heard it from other sources as well, is that when you look at the quantum world, there is really nothing that corresponds to matter as we know it. The Higgs boson seems to give mass to things, but the quantum world is very, very much an idealistic world that, for example, electrons are not distinguishable. It's not as if one electron is a few micrograms different than another electron. It's more like their ideas that are happening rather than particles that are flying around.

Bill Dembski:

Yeah, it sounds good to me. I'm not an Aristotle scholar. I've taught his ethics and I agree, he's a super genius. I think perhaps some of my reaction to materialism and perhaps also to some degree I'm conflating Aristotle with more democracy and/or more conventional current materialism. That would not be fair to Aristotle, certainly.

Mike Egnor:

Right.

Bill Dembski:

So I think to your point again about the potency and actualizing that, I think its matter has a very different feel within Aristotelianism than it does in-

Mike Egnor:

Yeah, for example, the qualities of matter such as extension in space, I think Aristotle would see as part of the accidental form of a substance, but not part of the substantial form, that what we think of as solid matter is kind of an accident for Aristotle, not necessarily inherent to the substance. The substance is potency and act, which is conceptual as opposed to physical, so fascinating stuff.

Bill Dembski:

It is.

Mike Egnor:

You had noted that John Archibald Wheeler, who was a physicist, had described an evolution of his metaphysical perspectives as he advanced in his career. He started out with thinking a lot about particles, and then he thought that well, maybe nature is fields. Finally, he came to the conclusion that nature is information. Could you describe that way of thinking a little bit and comment on it?

Bill Dembski:

Yeah, he describes himself as having gone through these three phases. Everything is met, everything is fields, and then everything is information. Now, I think one way he characterized that is it from bits, but I think he didn't really take these ideas as far as he might have. I think part of that arose from his study of quantum mechanics where you had had these contingencies where things were then getting actualized. In those things being actualized, you were also then measuring them. In the act of measuring it could be this size or that size, so there was this yes and no. Then you can characterize really any measurement as a sequence of bits, because these bits could represent numbers, and the numbers then could give you to varying degrees of accuracy, measurements connected with something. So when I've looked at Wheeler, I always thought that this was more of an operationalist notion of information where it's, well, this is basically what we do as scientists when we measure things is we measure information. Okay?

Mike Egnor:

Okay.

Bill Dembski:

In some ways that's true, but I don't think it really gets at the heart of things, in what sense is fundamental reality really informational? We measure it informationally. So his views didn't seem, to me, to go as far or be as radical as it might be suggested from when he says, "I have these three phases," and I think I also cite Paul Davies in that part of my chapter. Again, it seems that Davies is also pulling back a bit. Information is our best metaphor. It's for this current age. We live in an informational age, but I don't get the sense that he's going to be as radical as I'd like him to be about information. His information, really the fundamental stuff is that what we're studying as scientists, does it do things as they display themselves, as they present themselves to us?

Is that fundamentally an informational act? I would say yes. I'm not quite getting that from Wheeler and Davies, and yet, they use this sort of flamboyant informational language, which I think is helpful. It got me thinking about these ideas more radically, so we'll see where this all ends. But these ideas of information being fundamental, they've been out there for a while. I remember there was also a fellow named Keith Devlin who was at Stanford. I've lost track of him, but I know in, I think it was in late '80s, early '90s, he wrote a book in which he was just musing whether information is fundamental in the same way as energy. But then-

Mike Egnor:

Right. Right.

Bill Dembski:

... some years later, he pulled back on that. He got involved in some Stanford media thing, and then he was no longer going to go there. I remember seeing him at a conference in 2003 at Stanford. So some people have caught the information bug and stayed with it, I'm one of those, and others it seems have backpedaled.

Mike Egnor:

Well, I think certainly from my own perspective, the analogy between contingency and constraint with potency and act in Aristotelian philosophy suggests to me that there really is something fundamental about information, that it's a very profound topic. Well, let's wrap up this session and let's talk some more, Bill, but I want to thank you. To our listeners, I've had the privilege of talking with Bill Dembski at Mind Matters News. This is Mike Egnor, and thank you so much for listening.

Announcer:

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