

Neuroscience, Free Will, and the Soul

<https://mindmatters.ai/podcast/ep347>

Robert J. Marks:

Greetings and welcome to Mind Matters News. I'm your host, Robert J. Marks. We've been talking with Dr. Michael Egnor. He is a world-class neurosurgeon from New York and he is the author, along with Denyse O'Leary, of a great book, which I recommend, *The Immortal Mind: A Neurosurgeon's Case for the Existence of the Soul*. Again, that's *The Immortal Mind*, so if you're looking for it, that's what you Google, and we're going to put a link to that in the podcast notes, of course. It is an engaging read.

In today's conversation, we'll tackle three profound questions. Number one, do I have free will? Number two, can consciousness be duplicated? And number three, and what separates a human from a machine? Dr. Michael Egnor brings a neurosurgeon's precision and a philosopher's clarity to some of these issues. Michael, welcome back.

Michael Egnor:

Thank you, Bob. Appreciate it.

Robert J. Marks:

Okay, now you're a big proponent of free will. What's your reasons for believing in free will?

Michael Egnor:

Well, free will is a hot topic. There've been a bunch of books out there on it, some pro and some con. Many atheists and materialists utterly deny the existence of free will. There are some that accept free will. They're called compatibilists who believe in determinism, that everything is determined, but we still have free will, which I don't think is true.

My belief is that we have libertarian free will. Libertarian free will means that everything is not determined and we have free will, full stop. We just have free will. Now, that doesn't mean that our will is not influenced by things. Of course it is. I mean, everybody knows that. Everybody knows that your will can be influenced by being tired or hungry or whatever, but we do have the free ability to choose based on reason.

The very first question, which is in some ways the toughest question on the free will issue, is what is free will? What do we mean by free will? As Bob and I had talked about in a previous podcast, you can't really intelligently talk about anything like this unless you define what you mean. So I take free will, and this is sort of a Thomistic look at free will, as to be rational appetite. Appetite means a tendency to want to do something, and rational means that based on reason, based on abstract thought.

They're also what Thomas Aquinas called sensitive appetites. Sensitive appetites are appetites based on urges, like you're hungry, you're cold, you want to get warm. Those kind of appetites, which are very real, those aren't necessarily free, meaning I don't choose to be hungry, it just kind of happens to me. But rational appetite is a desire to do something based on reason, based on I think this is morally right, I think this is a good thing or a bad thing. That's what free will means.

Free will is characterized by two things. One is that that agency comes entirely from me, that is that I am not forced to have a certain reason. That is that my reasoning is not dictated by anything or anyone, it's my reason. The second thing is that I have choices, meaning that as a function of being able to reason, I can reason one way or the other, like I may reason that it is better to respect the moral law, not to steal

from someone. I reason that that's the right thing to do and I intend to do it. So that choice comes from me, that I've decided not to steal from anyone. I do have a choice to steal. I could steal if I wanted to, I've just chosen not to. So, that's kind of how I see free will. I think that is sort of a Thomistic way of looking at free will.

The reason I think it's real, there really are four reasons, and they're I think very good reasons, very strong reasons. The first reason, which you might actually say is the most compelling reason, is that every human being who is alive today or has ever lived believes in free will, no one actually doesn't believe in free will. I say that even though there are millions people out there who will say, no, free will doesn't exist, I don't believe in it. But they're not telling the truth. The reason I say that is that when you want to know what someone believes, you don't simply pay attention to what they say, you pay attention to what they do.

For example, a good example of that is say Bernie Madoff who ripped off \$50 billion worth of money from people. He's passed away, bless his soul, but if you had been able to speak with Bernie before he passed away and you asked Bernie, do you believe in being honest? He'd probably tell you yeah. He'd say, yeah, yeah, sure, I believe in that. But do you believe that he was telling the truth? Of course not. Of course he didn't believe in being honest. No matter what he said, the way he behaved told you what he believed.

So, what a person believes is proven by their behavior and what they say is only a small part of their behavior. So if you look at an atheist, if you want to know if an atheist or a materialist who denies free will, if you want to know what he believes about free will, just walk over to him and pour coffee on his laptop. Of course he'll say, "What are you doing? What a horrible thing to do." You could say, "Hey, I had no choice. I don't have free will, I didn't choose to pour coffee on your laptop. You have no more business accusing me of pouring coffee than you have at the coffee cup. Neither of us has free will, so why are you so upset?"

There was a funny time when Jerry Coyne, the guy I've debated a lot online who denies free will emphatically, writes multiple blog posts denying free will, he posted a picture of his car with a dent in the fender, and he was complaining that some jerk dented his car in a parking lot and then drove off. So, I replied to his post and I said, "But he had no free will. If you don't believe in free will, how can you complain about the guy? The guy had no choice."

Robert J. Marks:

Yeah.

Michael Egnor:

"You might as well blame his car." So, every human being that has ever lived lives his life like free will exists. If you ruin his laptop or you dent his car, or you punch his nose, he'll blame you for it and he'll get very moral about it. He's very like, how could you do that to me? Which means he believes in free will. So if you're going to make the argument, try to make the argument credibly that free will doesn't exist. The very first thing you have to do is stop living your life like it does exist. If you live your life like it does exist, then I don't believe you when you tell me you don't believe in free will. So, obviously free will exists. We all know that, we all live like that. So that's the first reason, and I think the most compelling.

The second reason is that the denial of free will is self-refuting. It's self-refuting, because if you say you have no free will, then what you're saying is that you haven't freely chosen your opinions, like that opinion, for example, and your opinion is then driven by brain chemistry, like my belief that there's no free will is caused by a certain dopamine level in my basal ganglia. But if that's true, then there's no

reason to believe you to be saying something true. Your dopamine levels have nothing to do with truth, they're just dopamine levels.

It would be like, let's say that you spill a bottle of ink on the floor and the pattern of the ink, just by coincidence, looks like it says it's going to snow today. Would you believe that it's going to snow today? Of course not. It's just a stupid bottle of ink that spilled that coincidentally happens to look like words. So in order to believe something, like believe there's no free will, you presuppose that you have free will that you've chosen a rational conclusion. But if you say you deny free will, what you're saying is I'm a meat robot, and my reply is, I don't listen to meat robots.

Robert J. Marks:

Yeah.

Michael Egnor:

So, it's self-refuting. The third reason to believe free will is real is that determinism, which is the predicate for practically everyone who denies free will, they say that everything that happens in the natural world is determined by the laws of physics and free will doesn't fit. The answer to that is that determinism of that nature has been proven wrong by science. That is that Alain Aspect, who is a French physicist, won the Nobel Prize a couple years ago, along with a couple of the physicists, for proving Bell's inequality.

Robert J. Marks:

Yes.

Michael Egnor:

John Bell was a physicist back in Ireland in the 1960s who proposed an experiment that could show whether local determinism was true or not in physics. Aspect and a bunch of other physicists did that experiment and proved that local determinism is not true. So, at the quantum level determinism is false, at least locally.

Robert J. Marks:

Which is really interesting, 'cause this was really in the face of Einstein.

Michael Egnor:

Yes, yes.

Robert J. Marks:

The Einstein, Rosen, there was a third author.

Michael Egnor:

Right. Podolsky, yeah.

Robert J. Marks:

Yeah, exactly. They thought that just like throwing a dice, the role of a dice, the outcome is determined by the law of physics.

Michael Egnor:

Yes.

Robert J. Marks:

But you know what? We just use a random number, the idea of probability in order to describe that event. What Einstein and Rosen, and what was the third one?

Michael Egnor:

Podolsky.

Robert J. Marks:

... Podolsky asserted was, yeah, we have randomness down here at the quantum level, but there's something deeper there. There's something deeper, which is deterministic, we just have to find it.

Michael Egnor:

Right, right.

Robert J. Marks:

Bell's inequality proved that was wrong, which was astonishing.

Michael Egnor:

There are no local hidden variables. There's nothing in a quantum process that dictates what the next step will be, and it is genuinely random. That's been proven, that right now is the state of the science and Nobel Prize level proof. I've confronted people who deny free will based on determinism with that coin is one person, and the answer generally is, well, okay, so at the quantum level, no, but it averages out that it's deterministic. The answer to that is that if it's not determined at the quantum level, then it's just not determined. Meaning that determinism means it's determined. So determinism as a matter of physics is dead, so you can't base a denial of free will on that.

The last reason I believe that there is free will is that neuroscience is quite consistent with it. There are several very important experiments in neuroscience, Benjamin Libet's work, Wilder Penfield's work that really does suggest, it doesn't prove, but it suggests that free will is a very real thing.

Robert J. Marks:

Yeah, unpack that. You're going to the area of free won't I think here.

Michael Egnor:

Yeah, right. Well, the first experiments, which are a little easier to untangle Libet's work is subtle, but Penfield's work is rather straightforward. Wilder Penfield was a neurosurgeon in Montreal back in the mid-20th century who did a lot of awake brain surgery where you operate on people awake. I was talking about that in a previous podcast. Penfield kind of pioneered that, and he did a number of experiments during these operations to learn how the brain worked, and one of his experiments was that he would stimulate people's brains to raise their arm. He would find the arm area and he would periodically make them raise their arm, and he would ask them, "When you want to, you decide to do it, you raise your arm too. So anytime you want to do it, raise up your arm."

The patients are under drapes so they can't see or feel what he's doing to their brain, and then he would ask them when they raised their arm, "Did you freely will that or did I make you do it?" Every single time, we're talking about thousands and thousands of trials of this over his 40-year career, every patient got it right every time. No patient could be tricked into thinking that he willed it when he didn't. So Penfield said, "I can't find the will in the brain," and he said, "Well, that's because it's free. It's not from the brain, it's not physical." So, that I think is very powerful evidence, actually.

The second thing is ... and basically you can't stimulate a person's brain to simulate free will, which means that the free will isn't in the brain. It doesn't come from that, it's free. The other research on that, it was a guy named Benjamin Libet who was a neuroscientist back in the 20th century who did a bunch of superb experiments. He was very interested, he was fascinated with what he called mind time. Mind time means he wanted to know what was going on inside your brain at the exact moment you had a particular thought, and he was very precise about this. He said, "At this millisecond level, when you're thinking of something, what's your brain doing?"

One of the experiments he did was he recorded brain wave activity in people who were asked to decide to push buttons. So he would put them at a desk, ask them, "Whenever you feel like pushing a button, push the button, and record based on a clock in front of you the moment you make that decision." Then Libet looked at brain waves in the patient's brain. He looked at the moment the patient consciously was aware of the decision to move, and he looked at the moment the patient actually pushed the button.

What he found fairly consistently was about a little more than half a second before people would consciously decide to push the button, there was a spike in the brain waves that correlated with pushing the button. So, it was kind of unconscious. It was before you knew that you wanted to do it there was a little spike. Then the patient would have the conscious awareness, I'm going to push the button, and then maybe two tenths of a second later he pushed the button.

So, it looked as though people's conscious decisions were being driven by their brain activity, which they had no control over, and so it looked like free will wasn't real, at least in that limited experimental setup. But Libet took it a step further. Libet said, "Okay, sometime when you decide to push the button, veto that decision, change your mind." When people vetoed the decision and didn't push the button, there was no new brainwave activity associated with the veto.

Robert J. Marks:

I find that astonishing.

Michael Egnor:

Yeah. So, Libet said, "I didn't prove free will, but I kind of proved free won't. Meaning that I proved that you can be tempted to do something and veto it." The veto isn't from the brain, it's from your spirit, it's from your soul, but it's not from your brain. He said that this free won't thing really supported the traditional ... I believe he was Jewish. He said the Jewish and Christian way of understanding temptation and morality, that is that we are bombarded by our brain with pre-conscious temptations. Hey, do this, do that. Hey, this would feel really good. But we have the intellectual, spiritual, moral choice to accept it or not accept it, and that doesn't come from the brain.

Robert J. Marks:

Yeah.

Michael Egnor:

So, there's plenty of scientific evidence that free will is real.

Robert J. Marks:

That's fascinating. In the Christianity community, there are the Calvinists who believe that everything is predetermined, there's the Armenians that believe that we have free will. My father, when I was a young man, came home from a church service and he said, "I finally found out the difference between free will and determinism." He says, "When you dig a ditch, are you digging the ditch? Are you making the free will choice to dig the ditch, or was the ditch already there and you're just taking the dirt out?"

Michael Egnor:

Yeah, right.

Robert J. Marks:

I thought that was a wonderful explanation of the different philosophies.

Michael Egnor:

That is, that is. That's a very nice idea.

Robert J. Marks:

So, let me ask you this. I agree with you. I do believe in free will, but I also believe that God knows where I'm going to be exactly one week from now.

Michael Egnor:

Sure.

Robert J. Marks:

Which means that in a sense from God's perspective outside of space and time, and I think that that's the key, outside of space and time, that there is predestination in the sense that God knows about it, but to us it's unknowable.

Michael Egnor:

Right.

Robert J. Marks:

What do you think about that?

Michael Egnor:

I think that if I had the answer to that, I would be as famous as St. Augustine and St. Thomas Aquinas.

Robert J. Marks:

Okay.

Michael Egnor:

That's a very, very old argument, and it's a profound argument, and people who I respect tremendously have come down on various sides there. I tend to look at it, and I think you'll appreciate this, Bob, because of your specialty in engineering as an expert on Fourier transforms, I think of it in the same way that I think of time as expressed in the frequency domain, and that is that there are two domains that express reality. There's the time domain where time flows, and there's the timeless domain, which is like the frequency domain. Both are expressions of reality, and time is sort of concealed in the frequency domain and frequency is concealed in the time domain.

The way I think of it is just an analogy, I don't mean this literally, that it's like God lives in a frequency domain. That is that he knows about time, but he's not subject to it. God's reality isn't sequential, and so he knows everything, but it's not a matter of predestination of him saying, well, this is how I've ruled it's going to be. I do believe that he gives us actual free will, because let's face it, if what we freely choose is chosen by God, then we are not free.

I mean, how can God condemn someone to hell for the exercise of free will if it's not free? That's grossly unjust. So I believe, in fact, I think our free will is one of the unique ways in which we are created in God's image. I don't think we're really created in God's image because of the color of our hair or the shape of our face, but I think we're created in God's image because we have free will and because we have the capacity for reason.

Robert J. Marks:

Yeah, there was a physicist, John Polkinghorne, he was a physicist I think in the same department as Stephen Hawking. He decided, I'm tired of being a physicist, I think I'll go to seminary and became an Anglican priest. That's exactly what he did, and he came back and he talked about a lot of things from the perspective of physics.

One of the things he mentioned is that conflicts are often resolved at higher levels, and his example was the quantum mechanics. In the early 20th century, there was an argument, light was a particle, no, light was a wave, no, light was a particle. Well, it turns out the truth of that was at a higher level, and that light is both a particle and a wave. So I just wonder, from my perspective I think that both can be true, I think that God created time. If you look at Stephen Hawking's theory about the creation of the universe, space and time were created at the Big Bang.

Michael Egnor:

Sure.

Robert J. Marks:

So therefore, if time was created at the Big Bang, God must exist outside of time.

Michael Egnor:

Yes.

Robert J. Marks:

We read in the Bible, a lot of verses start before the beginning of time. Wow. If you look at that and take it literally, before the beginning of time in a way is paradoxical, because there was no before the creation of time, but the example that God lives outside of time and can thus see the entire timeline, can see our choices in free will now and in the future, that seems to be consistent with the idea that we

do have free will and that we can exercise free will. I see it according to Polkinghorne as a quandary that's maybe resolved at a higher level.

Michael Egnor:

Yes, I totally agree. I think that part of the issue that we have with understanding things like this is that this is really deep stuff. This gets into the nature of eternity and Boethius, and a lot of these classical philosophers really thought very deeply about this, but understanding eternity is really pushing the human mind, meaning that that's tough to wrap yourself around.

Robert J. Marks:

Oh, I cannot comprehend the existence of no space, I cannot comprehend the existence of no time. It's totally beyond my comprehension, but the math tells me that that's true, so it must be true, Michael.

Michael Egnor:

Yeah, yeah. Well, it's kind of ... I mean, it's much the same way as Hilbert spaces, in a sense that you can have multidimensional spaces that you can't wrap your mind around-

Robert J. Marks:

Oh, no.

Michael Egnor:

... but that can easily be shown to exist. I mean, it's routine for state space and phase space, all kinds of multidimensional things, but you can't picture it. It's not something you can make a mental picture of.

Robert J. Marks:

There was a great book written by a physicist named George Gamow. It was called One Two Three... Infinity, and he talked about these tribes that were really, really stupid, and they could only ... not stupid, but backwards. They could only count to three, and once they got to three, anything beyond that was many. He says, that's probably not very smart to count one, two, three, many, 'cause I can't comprehend above three. But then he went to the example that you went to in terms of spatial dimensions. We can comprehend three spatial dimensions, but comprehending four spatial dimensions, that's a little bit rough.

Michael Egnor:

Right, right.

Robert J. Marks:

Then he went into the ideas of infinities. It does turn out that there's a guy named Georg Cantor, mathematician, looked at infinities, and some infinities are bigger than other infinities.

Michael Egnor:

Sure.

Robert J. Marks:

We can comprehend countable infinities, which is the number of counting numbers, we can do the next level infinity, which is the number of points on the line, and then the third level of infinity is the number of scribbles that you can do on a sheet of paper. He said, beyond that, we can't comprehend that. So he said, in some ways we're no better than this tribe that we can't comprehend beyond the number three, both in the case of dimensions and the concept of infinity. I think that that's true. I can't comprehend no time.

Michael Egnor:

Well, there's an interesting distinction that can be made that I think is vitally important in understanding things. Like I said, vitally important in understanding the nature of the human mind, and that is there is a difference in our ability to comprehend something and our ability to imagine something. Imagine is to make a mental image, to comprehend is to understand abstractly in a rational way. The classic example of that is a chiliagon, which is a polyhedron that has 1,000 sides.

Robert J. Marks:

Oh, jeez, okay.

Michael Egnor:

So it looks like a circle, but when you look closely, it's actually got 1,000 sides. You cannot imagine that, meaning that your mind doesn't have the fine distinction to actually see a picture of 1,000-sided figure. It roughly looks like a circle, but you can comprehend it very easily. It's got 1,000 sides, each half circle has 500, yeah, blah, blah, blah. You can comprehend it, but you can't imagine it. You can't make an image of it.

So infinity, you can't imagine infinity, but you can comprehend it. In fact, you can do mathematics with it. So I think first of all, that argument says an enormous amount about the nature of our mind and our soul. The classic Thomistic way of understanding the mind is that we have an immaterial capacity for reason, that's the intellect. It doesn't come from the brain, it's not material, it's given by God. One of the examples that proves, I think, that we have an immaterial capacity for reason is that we can comprehend infinity.

Robert J. Marks:

Yes.

Michael Egnor:

Nothing physical can correspond to infinity. That is, for example, I can ask you, what number would you be incapable of knowing? The answer is you could know any number. You could know what a trillion times a trillion times a trillion is. There's no limit on a number that you could know. So, then how could that be a physical process in the brain if there are an infinite number of numbers that would come out of your brain? Your brain can't hold an infinite number of numbers.

Robert J. Marks:

You made this argument in a lecture I heard you give, which was the idea of abstract ideas and how that leads to the immortality of the soul.

Michael Egnor:

Right.

Robert J. Marks:

It's a little bit off-topic, but could you go into that, the idea of the triangle? The number eight, I remember the number eight in your talk.

Michael Egnor:

There are several arguments from the Thomistic viewpoint that the soul is immortal, and these are philosophical arguments or logical arguments as opposed to a theological argument that that's what the Bible tells us, which I believe, but there are also very powerful logical arguments for the immortality of the soul. The basic idea is that there are powers of our soul, which are powers of our mind that are not material in origin. The intellect, the capacity for reason, the capacity for free will are not and cannot be generated by a physical thing like the brain. You can't generate reason, the capacity to understand abstract things like logic or mathematics from a physical organ like a piece of flesh like the brain.

Robert J. Marks:

Yes.

Michael Egnor:

Logically it doesn't work. So, the thing is that you then have to ask, what does it mean to die? What does death mean in everyday language? Well, what death means is to lose your structure. Let's say my dog died. Well, actually my dog didn't go away, meaning that the atoms in my dog's body still exist. They're still there, the atoms don't disappear, but what happened is that my dog's form, which is his soul, disintegrated. Disintegration is really the word, meaning you lose your integrity. Only a physical thing can disintegrate. It doesn't make any sense to say that, for example, my capacity for reason, which is an immaterial power of my mind, could disintegrate, because it's not pieces of anything to begin with, so it can't really just fall apart.

So, a nice analogy for that is imagine the number eight. There are two ways that eight can be instantiated. One is you can write it on a piece of paper in ink, and the other way is you can think conceptually about the number eight as being two times four, half of 16, things like that. The number eight on a piece of paper, you can put in a fireplace and burn, and it dies, it goes away. It disintegrates like our body disintegrates when we die. But the immaterial abstract number eight, which is the analog to my capacity for reason and free will, you can't put that in a fire, it doesn't dissolve.

You can imagine humorously a mathematics department announcing that we hate to announce today that the number eight died, so from now on we'll count from seven to nine and we'll skip it. So, you can't make something that's not material die. Now, you can make it cease to exist. It could be that God will sort of snap you out of existence, but that's not the same thing as dying. So dying in terms of going in the grave and rotting can't happen to the human soul, because the human soul has powers that can't rot. It's I think very reassuring, but it's also a little frightening, because it means that who we are and what we are matters eternally. We're not going away. I'm not getting out of this by dying, what I do in my life matters forever.

Robert J. Marks:

Yeah, I have to tell you a story, and it's true. I shared this with you a little bit offline, but went down to Memphis University School and I gave a talk, and one of them talked about the idea of abstract

thoughts. I think that when I first heard it, I thought, man, that makes a lot of sense, but I think that this is maybe a little bit too much of an intellectual lift for young minds. But I tell you, after I presented at Memphis University School, I had a couple kids come up to me and says, "Wow, that was really profound, the idea that you can have abstract thoughts, and if you have abstract thoughts, there must be aspects of you which are abstract that are going to live forever."

Michael Egnor:

Right.

Robert J. Marks:

They thought that was really cool. Another thing, just two days ago, I'm teaching a graduate course in stochastic processes, and we came up on the infinity, and I maintained as Hilbert did that infinity does not exist in reality, it's simply an abstract thought.

Michael Egnor:

Right.

Robert J. Marks:

So this led to discussion back and forth about abstract thoughts, and I brought up your argument about abstractions living forever. I had one student come up afterwards, his eyes were just big, big as saucers. He said, "Wow, that's really, really a great argument." Then another student that was listening in the background came up as we were breaking up, and he said, "Wow, I'd never heard about that before." Both of them it turned out were Christians, but they had never heard of that. I don't know, you can call it unapologetic or something like that, but it's-

Michael Egnor:

Yeah. Well, I've had a similar experience on a somewhat smaller scale, just a couple of conversations with young people. I didn't think about it this way, but you're right, it was kind of surprising. The same thing, that I made an argument for the immortality of the human soul based on our capacity for abstract thought, and they seem to get it quickly.

My guess would be number one, they're bright, young, supple minds who they can figure it out, but the other thing that I think is so true is that so many young people today are drowning in materialism. They are drowning, meaning they're surrounded by this materialistic garbage, this psychological garbage, commercial garbage, intellectual garbage, ideological garbage. The idea that you can show them this glimmer that maybe they're not just a piece of meat is incredibly compelling to them. It's like being thrown a life preserver.

Robert J. Marks:

Well, I believe as a Christian, I don't know if you've seen all of the revivals that are happening, people being baptized and things like that, and I think this is the way that maybe God is using this social media malaise, 'cause you go into social media, you look at it and you think, oh my gosh, the whole world is having a good time except for me, I must be a loser. So therefore, there's the increase of depression, and gosh, I forget, it was a great percentage of young women had body image issues because they weren't as pretty as the girls on the web.

Then along comes Christianity and says, look, you can be in the family of God, and God will take you just as you are, and you have to surrender to him and follow him, but you can be part of the family. I think that that's very compelling from somebody that's been in this world of malaise that has just thought the whole world is having a great time, but I'm a loser.

Michael Egnor:

It's funny, because that single word malaise is something that I don't believe a Christian can feel. I've noticed in my own life since I became a Christian, that's gone. Sometimes I'm not happy, sometimes things don't go the way I want them, but that feeling of just hopelessness, that's never there. That's never there.

Robert J. Marks:

Yeah, that's wonderful. Well, I tell you what, Michael, I'm going to make an executive decision. I'm going to end this podcast and see if you have time to stay for one more round, 'cause we have some other topics that we want to talk about, near-death experiences-

Michael Egnor:

Oh, I really want to.

Robert J. Marks:

... consciousness and Silicon. Okay, that's great. That's great. So, we've been listening to Dr. Michael Egnor. We've been talking about free will and abstract ideas. So until next time on Mind Matters News, be of good cheer.

Announcer:

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