School Shooters, the AI Church, and Patents

Austin Egbert:

Greetings, and welcome to Mind Matters News. We're continuing with excerpts from interviews that our host Dr. Robert J. Marks has given about his book Non-Computable You. Up first, we have John Catsimatidis hosting The Cats Roundtable on WABC in New York City, talking with Dr. Marks about CinchIT AI, and whether AI could predict school shootings.

John Catsimatidis:

Dr. Marks, tell the American people how you feel.

Robert J. Marks:

Well, let me just start out by saying that I don't want to distract from artificial intelligence. It's doing great and exciting things. It'll continue doing great and exciting things, but there's a lot of hype associated with it. People think, "Well, is the terminator going to come alive? Are we ever going to face a scenario like we see in The Matrix?" And the answer is, "No. There are certain brick walls, which artificial intelligence will never go through," and we know this because we're computable. It does turn out, as far back as the 1930s, computer scientists knew that there were things which are non-computable. The biggest one was Alan Turing. He was the father of computer science, and he showed a bunch of problems, which you couldn't compute. You couldn't take to the computer and solve these problems. So, this begs the question, "Are there things that humans do that are not computable?"

Robert J. Marks:

Well, if they're not computable, they're not going to be captured by artificial intelligence. I would maintain that the simple ones to grasp are emotions like love and empathy and anger, but more significant is the idea that artificial intelligence will never understand what it's doing. It'll never have sentience, and it will never be creative. Now, I've mentioned these things, and one has to be aware of seductive semantics. All of them need to be defined before they're deconstructed, but fundamentally, artificial intelligence is never going to go-

John Catsimatidis:

Well ....

Robert J. Marks:

... Through that, and you're never going to have artificial intelligence which duplicates the human.

John Catsimatidis:

Well, not today. I mean, I watched Star Trek, and Data's doing pretty good.

Robert J. Marks:

Yeah, yeah.

John Catsimatidis:

Dr. Marks, the question is... Give me what our creator, who created us, the human brain as a comparison to what today's computers are. Give me the comparison.

Robert J. Marks:

Well, I don't believe so. I think that if one is a diehard materialist, and believes everything can be explained by science, and are "materialist," if you will, you can go to no other conclusion than, "The brain is nothing more than a computer made out of meat," but there are also some people, most notably Roger Penrose, who won the Nobel Prize last year, or maybe it was the year before, who says just the opposite. In fact, I've learned a lot from Roger Penrose in reading his book. One was called The Emperor's New Mind, and he pointed out that, "Yeah. There were things that computers will never be able to do," and one says, "Well, what about computers of tomorrow?" Well, "computable" means computable, and if you go back to the 1930s computers, today's computers, and computers of the future, it all addresses the question, "Is what you do computable?"

Robert J. Marks:

And in computer science, there's something fancy called the Church-Turing thesis, which basically says that, that even the computers of the future will be limited to do computable things, and they will be able to do them faster. They'll have more memory. They'll be more amazing, but basically, we could do them on computers here even though it would take longer.

John Catsimatidis:

Can artificial intelligence... Can we develop them to have emotions the way we have?

Robert J. Marks:

You can always make artificial intelligence simulate emotions. I don't know if you ever saw the movie AI, where there's a robot boy.

John Catsimatidis:

I did, but there was rumors around that Google last week had a computer that was a sensual being in artificial intelligence, and the computer was afraid it's going to be turned off, and was going to hire..., the computer was going to hire a lawyer.

Robert J. Marks:

There are so many ways to take down that story, John. One of the things about these hype stories is usually they come out, and the rebuttal doesn't get the press that the original claim did. And if you look back in the Washington Post, a recent article said that this computer program that was named LaMDA was trained using dialogue of over a 100,000 questions and answers. These were called "crowd workers." These are guys that come in and you hire them to do something, and they were told explicitly... And this is a quote... "The crowd workers are explicitly informed to reply in a safe, sensible, specific, interested, grounded, and informative manner." And guess what the artificial intelligence was trained to do. It was trained to respond in a safe, sensible, specific, interesting, grounded, and informative matter.

John Catsimatidis:

The computer didn't interpret what the answer should be. It was a preprogram by the programmers?

Robert J. Marks:

Yes, exactly. There's the old thing of "garbage in, garbage out." Computer programs, including artificial intelligence, will do exactly what the programmer said they're going to do. They will never be creative.

John Catsimatidis:

50 years ago, I was a computer programmer. When I had my first three stores, I programmed the computers, the basic computer at that time. Now I'm just an idiot right now with these new computers, but can the computer sort out all the social messaging, and predict who the FBI or the CIA should look out for, really bad people?

Robert J. Marks:

Yeah. In fact, I have an article written about this recently, Can AI Help With School Shooters? And the answer is definitely yes. I mean, we've known the characteristic of school shooters for a long time, and I think AI can allow us to drill deeper in there, and better identify these people. One of the problems is if this AI can tell us who the school shooters might be, but there is something lacking called an "explanation facility." It can tell us who that potential shooter is going to be, but it can't tell us why. And so it can aid us in doing that, but this is never going to stand up as due process in the court of law, and there's actually legal history of where AI has identified troubling people, and the court has thrown it out, because the AI could not explain why it reached this conclusion. So-

John Catsimatidis:

Doctor Robert Marks.

Robert J. Marks:

Yeah, it can help. It can help as a tool but not as a final authority.

Austin Egbert:

David Krieger hosts The Power Hour, which can be found on KCXL in Liberty, Missouri, and KTRW in Spokane, Washington. Here's Dr. Marks's response to a question about the artificial intelligence church.

Robert J. Marks:

In fact, there're entire religions, which are based on artificial intelligence. One of the most incredible ones is a guy named Anthony Levandowski, who founded an AI church. In the AI church, here's some examples. We are told that someday we will be able to be uploaded to a computer, and we can be reborn into an eternal life of silicon. And so that's kind of copying from the Christian Church about immortal life. That's the way they want to do immortality. They also say that AI someday is going to write better AI that writes better AI. Now, that's going to assume that the artificial intelligence is creative. In order for artificial intelligence to write better AI, it has to do something that was not in the intent of the original programmer.

Robert J. Marks:

So, it has to come up with creative ways of writing better and better AI, and that isn't going to happen, but if one has the foundational ideology, one believes that we are computers made out of meat... Our

brains are computers made out of meat... And indeed, there is ample evidence that there's something going on there, which is not computable, the things that I mentioned, for example.

Robert J. Marks:

So, this Levandowski guy founded something called The Artificial Intelligence Church. This was for real. He was in California, and he founded the church, and what do you do when you find a church? First thing you do is you write a letter to the IRS, trying to get tax exemption. So, he wrote a little letter to the Artificial Church... I'm sorry... To the IRS about his church, and in it, he said, "The Way of the Future Church..." That was the name of his church... "Believes in the realization, acceptance, and worship of a godhead based on artificial intelligence developed through computer hardware and software." This was a for real church, which was founded in California, and Levandowski started this church. I don't think he got very many members... I don't know if he got any members, for example... But I do know that there's a lot of people that worship at this artificial intelligence church that believes artificial intelligence is going to take over someday. Interestingly, Levandowski-

David Krieger:

Did the IRS actually grant him the 501 (c)(3) status?

Robert J. Marks:

I don't know. I don't know 100%. I do know that he applied for it, and the IRS, knowing how they do these tax exemptions, probably did. I don't know that for certain though.

David Krieger:

How do they greet each other when you walk in? Nanu-nanu?

Robert J. Marks:

I don't know. I don't know. It was a curious thing, but interestingly, the AI church had no equivalent of the 10 Commandments, because soon after founding the AI church, Levandowski was a Silicon Valley "vunderkind," as they say. He was working at Google under their self-driving company called Waymo, and he wanted to move to Uber's self-driving company, and when he did this, he took 14,000 files with him, and he was convicted of intellectual property theft. So, they didn't have a commandment about, "Thall shall not steal." So, the really interesting thing is that he eventually went bankrupt. His church now is closed, because he can't afford to do it. Google had a judgment against him for ... in the millions, and Levandowski just couldn't afford it. So, that's where the AI church went.

David Krieger:

And I think that people may not understand. AI is basically two categories, artificial intelligence and artificial general intelligence. What's the difference between the two?

Robert J. Marks:

Well, artificial intelligence is defined differently in different places. If you get into my field, you go to these specialty conferences. They tease apart the idea of computational intelligence and machine intelligence and artificial intelligence, but I think for the purposes of discussion, we can go with the kind of media definition, which is anything that a computer does that, when you see it, you go, "Wow. That was really incredible." So, that's my definition of artificial intelligence at a very, very high level. Artificial

general intelligence is this hope, this religion, that in some way, and some day, that we are going to have artificial intelligence, which duplicates everything that a human being can do. We've already talked about the fact that it's never going to be creative, or sentient, or have understanding. A computer can add the numbers 15 and 20, but it doesn't know what the numbers 15 and 20 are, has no understanding of what it's doing, and it's kind of like a software of the gaps.

Robert J. Marks:

They believe that someday that they will have this software that actually is able to duplicate humans and then there is this idea of even going further than AGI, and it's to go to "super intelligence." This was the topic of Ray Kurzweil book. The Singularity is Near, I believe was the name of it. But it was the idea that AI would be creative and write better software, better AI, that in turn would write better AI. Pretty soon, we're up against just a super intelligence, and that is never going to happen, because all the super intelligence in AGI requires that the computer be creative, and the computer itself is never going to be creative. Now, you have to define "creativity," here and we can do that, but there is no evidence that a computer has ever been creative.

Robert J. Marks:

AI has never, ever been creative. Well, let me define it really quickly. "Creativity" is when the AI does something that is beyond the explanation or intent of the computer programmer. In other words, the computer does exactly what it's told to do, and that's test for creativity, if the artificial intelligence can do something which is beyond the explanation, or the understanding of the computer program, or somebody with similar sort of expertise. Now, that doesn't mean that AI can give us... It won't give us things that are very surprising. They give us surprising results all the time, and many times, unexpected results. But, in every case, the computer and the AI is doing exactly what it was programmed to do. You could go up to... I don't know if you remember, but there was this artificial intelligence that championed the world's most difficult board game, Go, or we can even take chess, which is a more familiar example, and you could go up and you could ask that software, "Explain to me the rules of chess," and it couldn't do it unless somebody came in and programmed to do it.

Robert J. Marks:

So, what this incredible program did was phenomenal. I mean, it beat... Jeez, I don't know, decades ago... The World Champion in chess, but it's very narrowly focused. It is not creative. It can't even explain to you the rules of chess, and that's, in general, what is characteristic of AI is the inability to do something that it wasn't programmed to do.

David Krieger:

Well. And see, the old saying, Dr. Marks, was that, "Computers are only as smart as their human counterparts," and I still hold that to be true.

Robert J. Marks:

Absolutely.

Austin Egbert:

Pastor Greg Young is the host of the nationally syndicated talk show Chosen Generation on USA Radio networks, which can be found on stations including KTRB in San Francisco, KDIS in Little Rock, and KYAH in Delta, Utah. Here he is with Dr. Marks, discussing artificial intelligence and patents.

Pastor Greg Young:

There he is.

Robert J. Marks:

Can you hear me?

Pastor Greg Young:

Hi, Dr. Marks. Yes, I can. Welcome aboard. Great to have you with me. Thanks for being here.

Robert J. Marks:

Well, it is good to be here. We switched to Zoom real quick, so I had to go comb my hair.

Pastor Greg Young:

I completely understand. I have my bathroom brush and my desk brush here.

Robert J. Marks:

Exactly.

Pastor Greg Young:

And you got to brush your beard and then you got to brush your hair, and I'm right there with you, my brother. I'm right there with you. You look great, by the way. You look spectacular.

Robert J. Marks:

Well, thank you. You do too. I do have to admit my beard is better than yours, but that's-

Pastor Greg Young:

I know. It is. Well, I had mine like that, but my problem was is I was carrying too much of dinner with me. So, I-

Robert J. Marks:

Exactly. In fact, Pastor Young, that's the reason my wife made me shave up here, my mustache, because she says that it "contains the aromas of meals past." So, that had to go.

Pastor Greg Young:

Oh dear, I hear you. I hear you. Well, one thing that AI doesn't have is beards.

Robert J. Marks:

That's right.

Pastor Greg Young:

They don't.

Robert J. Marks:

They don't have beards, among a number of other human attributes.

Pastor Greg Young:

Well, like conscience and things of that nature. So, it's funny. When I put out the kind of lead into this, I was like, "Well, it's like The Terminator has arrived." Right? you know, and I have Alexa. I think a lot of people have Alexa for lights and different things of that nature.

Robert J. Marks:

Sure.

Pastor Greg Young:

And so my Echo turned off the lights this morning, and I said, "Thank you," and they said, "Thank you. You have made this AI's day," and I-

Robert J. Marks:

[laughter].

Pastor Greg Young:

... Thought about that as we were rolling into this. A number of years ago... I can't remember which... But I had a guest on, pretty wealthy guy, that was talking about AI and saying, "Look, people need to understand. This is the greatest threat to humanity. This is it," and people need to understand it, and this was a guy who invests in AI, has been involved in development of AI, and so on, but he was just saying, "Look, people need to be aware that there needs to be controls on AI."

Robert J. Marks:

Exactly. I would argue that it is not the greatest threat. I would say that thermonuclear weapons are a greater threat. I would say that EMPs that have the capability of taking out our power grid are a bigger threat. And AI, I think, is often overestimated in what it can do, and in movies such as The Terminator. AI itself will never be sentient. It'll never understand what it's doing, and it will never be creative, and all of these things are required for all of these dystopian future sort of things to happen.

Pastor Greg Young:

So, your suggestion too is that some of our... Now we're talking about AI and a patent. That's part of the question that's going on here. How did we arrive at a place where it would be suggested that AI, which is actually not really... That's not an entity. It's not a corporation. It's not an individual. It's not a partnership. It doesn't really fall within any of the guidelines or terms that we would associate with an entity with autonomy that would be entitled to that kind of protection.

Robert J. Marks:

Yes. In fact, the US Patent Office has said that patents can only be issued to humans. And then we have to fight back, or we have to push back, because it's the truth of the reality of the assumption that computers can be creative. Computers do not have the ability to be creative, and we have to define "creativity." Creativity is something... If a computer program is "creative," it does something which is beyond the intent, beyond the expectations, beyond the explanation of the programmer.

Pastor Greg Young:

Let's talk about the patent issue and then let's go back to the War Games, and again, kind of what we see in that as this computer computing the end of the world, if you will, which, I think, maybe that's kind of the genesis for the whole concept of terminators, and so on. But let's talk first about the patent issue. You were mentioning that the Patent Office says that, "Patents are only available to human beings." So, how do we get to a debate then about AI and whether or not AI should in fact be granted a patent?

Robert J. Marks:

Well, it's like looking across the room... I'll dovetail into your answer here just-

Pastor Greg Young:

Sure.

Robert J. Marks:

... In a second... It's like looking across the room at a bouquet flowers. You don't know if they're real or not. And then you go up more closely, and you examine the flowers, and you say, "These leaves don't feel right. There's no dirt in the pot. This must be fake flowers." It's the same thing with artificial intelligence. On the outset, when artificial intelligence does something, there can be the illusion of creativity, but any of the creativity that happens from artificial intelligence is due to the programmer. And I'm an engineer, and us engineers do things like design stuff and design, and design is-

Pastor Greg Young:

It's been known to happen.

Robert J. Marks:

"It's been known to happen," exactly. So, design is an iterative sort of process. You come up with a prototype, "Well, that doesn't work very well." So, you do a little bit of changing on it, and you do another implementation, and there's still some things wrong with it. So, you iterate. You do a search for the best solution. In fact, there's probably stuff in your household now that was so designed. You're familiar with Formula 409. You know why it's called 409? Because, it took 409 tries before they got the proper chemical that worked very well. It's the same thing with WD-40. WD-40 stands for "water displacement on the 40th attempt," and it was done by an industrial chemist who iterated over and over and over again. So, artificial intelligence uses invariably a lot of this integration, either on the front end or the back end, and in one of those cases, what it does is it doesn't need a wet lab like they needed for WD-40, or Formula 409. All of the design information is within the computer program.

Pastor Greg Young:

It's in the computer program, sure.

Robert J. Marks:

Yes. And so we can do it over and over and over again, and the faster the computer program does, the better. One of the AI issues... This is not the one in front of the Federal Court, but it was a new type of antibiotic, which was discovered using artificial intelligence, and they generated a number of different antibiotics. How did they do it? They searched through 100 million different molecules. Now, the computer had enough knowledge within the computer program to do this search and so-

Pastor Greg Young:

But it couldn't go outside of those boundaries, creatively, and come up with an answer that was outside of the scope, beyond the information that had been put into its brain, so to speak.

Robert J. Marks:

That's exactly right. In fact, there's an old saying, "You're thinking outside of the box," and that's exactly what artificial intelligence....

Pastor Greg Young:

Or, "garbage in, garbage out."

Robert J. Marks:

"Garbage in, garbage out," that's another one. That's another one, exactly. So, if you're a garbage programmer, you're going to get garbage out, and if you're a good programmer, the only thing the artificial intelligence is going to do is what you tell it to do. Now, with that in mind, the results can be surprising. They can be unexpected.

Pastor Greg Young:

Sure.

Robert J. Marks:

But that does not imply creativity. The programmer-

Pastor Greg Young:

Well-

Robert J. Marks:

... Itself was the one that guided towards that solution.

Pastor Greg Young:

And as you mentioned, processing speed, so the speed at which the conclusion... In other words, whereas it might take a human 50 years, for example, to get to a particular answer just because of how we have to process, you could go and put something into a super computer, put all the components into that, and based on its processing speed, it can arrive at that in... I don't know... However long depending on processing speed and information.

Robert J. Marks:

Exactly. The head of the Allen Institute for AI in Seattle said something kind of profound. He said, "AI is nothing but a pencil in the following sense."

Pastor Greg Young:

Sure.

Robert J. Marks:

"No matter what a no matter a computer program does, if you were to given a million or a billion years, you could work it out with a paper and pencil."

Pastor Greg Young:

Right, and because really that's all we've done is we've created a processor. That's why they're called "processors." It's a process and then we attach a program to that process. The faster the processor, the more information created within the program. It's really the genius of the programmer, not the genius of the AI.

Robert J. Marks:

Which brings us back to the patentability issue... The AI itself is nothing more than a tool, and should no more be granted a patent than my word processor should be given credit for an article I write. It's just a tool-

Pastor Greg Young:

Sure.

Robert J. Marks:

... To get me to a final solution, and make no mistake. It's a very powerful tool, and it's a tool, like any tool, that can be used for good, or it can be used for evil, but it's a tool that we have available now to us.

Pastor Greg Young:

And we're going to run out of time. So, what I'm going to have to do is I'm going to have to bring you back on to kind of go into the whole War Games and Terminator thing as a specific topic matter for us to really break down and discuss, to help people understand.

Robert J. Marks:

But if you do, I've got to go back and re-watch War Games? It's been many years.

Pastor Greg Young:

All right, sounds good.

Robert J. Marks:

But I'd be happy to do that.

Pastor Greg Young:

Sounds good. Non-Computable You is the name of the book, Non-Computable You, by Dr. Robert Marks. Dr. Marks, thanks for being with us this morning. I truly appreciate it. It's been a very enjoyable conversation.

Robert J. Marks:

Well, thank you Pastor Young. I enjoyed it myself.