

Speaker 1:

The Art of Leadership Network.

Carey Nieuwhof:

Welcome to The Carey Nieuwhof Leadership Podcast, it's Carey here. And for episode 521, we're going to talk about artificial intelligence. My guest is Deon Nicholas. I'll introduce him in just a moment.

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So, so excited to bring you, well, a wide variety of conversations, and I have been interested in AI for a long time, taking notes, listening to podcasts, reading a book or two here or there, and just wondering what kind of future are we heading into. So I reached out to a few friends and I said, "Who can I talk to about AI?" And they recommended Deon Nicholas. He is the CEO and co-founder of Forethought, the AI company, whose mission is to transform customer experiences with human-centered AI. Forethought has raised, are you ready for this? A hundred million dollars in venture capital, was listed in The Next Billion Dollar Startups, in 2021, and won TechCrunch Disrupt back in 2018.

Before starting Forethought, Deon built products and infrastructures at Facebook, now Meta, Palantir, Dropbox, and Pure Storage. Forethought provides customer service solutions, we'll talk about this in the conversation, that transform the customer experience. But what's really interesting is where we are now and where we are going. And we talk about, well, what about the theology and philosophical implications of AI? So if you're interested about artificial intelligence, AGI, ANI, ASI, singularity, the timeframe for when AI reaches general intelligence, and whether the robots are going to kill us all. We're in for a fun conversation today.

Welcome to all of you who are brand new to the podcast as well. It's such a thrill and an honor to have you along. What we try to do is bring you back room conversations that will hopefully bring light to your leadership and to your life. And it's a privilege to be able to do it.

So I want you to imagine waking up wowed by the beautiful content you see on your social media platforms all week long on Instagram, Facebook, and your stories. Imagine them filled with excitement. Well, good content and social strategy will stop the scroll. And the best part is it can be all done for you by the Pro MediaFire team. So the process is simple. A brand discovery. They sit down with you, try to figure out what you are about. Then you confirm that Pro Media Fire knows your brand. And then there's a hands-off done for you, social media management solution. And that's how you wake up wowed buy your social media in three easy steps. You can save time, grow online, and be proud of your brand without doing any of the work yourself. So if you're interested in letting the pros handle your social media while you focus on the mission, book a free consultation today, just go to promediafire.com/Carey for your free consult. That's promediafire.com/Carey.

And pastors, you've heard me talk about Tithe.ly before, and you've likely downloaded their free resource kit that they put together just for listeners of this podcast. If you haven't, grab it now at increasedgenerosity.com.

So that done, you need to know, Tithely builds online tools that help you increase giving, manage your church, and engage your members. They're trusted by over 37,000 churches in 55 different countries. They've got a big online event coming up, October 20th, called Tithely Next that I don't want you to miss. It's free, it's online, and you'll be able to win a ton of really cool giveaways. The one thing Tithe.ly loves to do is giveaway free stuff. You can register to watch Tithely Next on October 20th, by simply going to [Tithelynext.com](https://tithelynext.com). That's T-I-T-H-E-L-Ynext.com.

And with all that said, let's dive into my conversation with the CEO and co-founder of Forethought, Deon Nicholas. Deon, welcome to the podcast. It's great to have you.

Deon Nicholas:

Carey, thanks so much for having me. I'm excited.

Carey Nieuwhof:

Yeah. I'm excited too. I've never done an episode on AI, so I'm going to learn a lot. Hopefully, leaders will learn a lot and I'm excited. But you also got a really interesting story as a leader, as an entrepreneur. So I'd like to start there. You've had a storied career for somebody who's barely 30 years old. You told Forbes, "I'm constantly learning and growing up," and I'm quoting here. "I learned math, computers and physics. Anytime I saw a problem, I tried to solve it through what I knew, even if I didn't know how to solve it." And I think you made your first computer game at seven. Is that right?

Deon Nicholas:

Yeah. Seven, maybe eight, but it was definitely right around there.

Carey Nieuwhof:

Well, I've got decades on you and I haven't made mine yet. So that's impressive.

Deon Nicholas:

Thank you.

Carey Nieuwhof:

When you go back and you look at the breadcrumbs, what made you realize you want to be a founder? What led you to this place where you're working in AI and you are where you are now?

Deon Nicholas:

Yeah, I think it really does go back to what you were saying earlier in that I've always considered myself to be a problem solver, so to speak. I've always followed my curiosity. Anytime I had a question, I would follow it, even if it was a dumb question. I remember when I was learning math and starting to get pretty deep in the math, even in college, I went back and I thought to myself, "I don't really know how division works, like how to divide." And it's funny because you learn a lot of these things in school and it's taught to you in a way that's wrote or whatever. And I've always just had this curiosity in my mind that if I don't fully understand something to the point where you could explain it to me, I'm four, or I could explain it to a four year old, then I just want to learn more.

And so I think that combined with the concept of problem solving, which is the same, different side to the same coin of, "Okay, how do we actually put the puzzle piece together? How do we figure this out?" Has always been a guiding function for me. And that's how I learned to code quite frankly. My brothers and I, growing up, we didn't have a lot of money, but we had video game consoles and we were playing, I think it was Final Fantasy or whatever, but those RPG games. And I was always like, "Well, but how does it work? Where do video games come from?" And that was a really fun thread that eventually led me to trying to understand how to build them myself and how to code. And over the years, every time I found a passion project or every time I found something that piqued my interest, I would come back to

it. And I would ask the question and then try to find the answer to that question as a form of problem solving.

Carey Nieuwhof:

That almost sounds like a pathway to an engineer though. Doesn't it?

Deon Nicholas:

It is a pathway to an engineer. Yeah, no, but that is. So prior to starting Forethought, I did become an engineer. So eventually went to school out in University of Waterloo in Canada, which is-

Carey Nieuwhof:

Here here.

Deon Nicholas:

Yeah, yeah. Exactly. And so I became an engineer. And it was only a few years after that I realized that I transformed that into becoming an entrepreneur. They're kind of different careers to some degree, but they're pulling on the same thread, which is, how do you build things that solve problems for real people?

Carey Nieuwhof:

Interesting. My son, who's a Software Engineer did his first two years at Waterloo as well.

Deon Nicholas:

Nice.

Carey Nieuwhof:

What brought you to Waterloo? I'm Toronto based, just north of Toronto.

Deon Nicholas:

Oh, nice.

Carey Nieuwhof:

I know it well. And Malcolm Gladwell raves about the place. Yeah.

Deon Nicholas:

That is awesome. Yeah. No. So I was born in Toronto actually.

Carey Nieuwhof:

Wow.

Deon Nicholas:

Yeah, yeah. Yeah. I grew up in North York. So over the Jane and Wolf scenario, but the ghettos grad.

Carey Nieuwhof:

We're in the same neighborhood. There you go. I didn't know that. Okay.

Deon Nicholas:

Yeah, yeah. Yeah. Exactly. So all over near there. So yeah, that's where I grew up. Those were my, "stomping grounds." As I got deeper and deeper into coding, it was the seventh grade, I was fortunate enough to be at a school that was pretty academically strong. All the people around me started to really be interested in being good at school, which was a weird thing for me. But I remember there were these math competitions and it was like the Euclid or whatever it was called at the time.

Carey Nieuwhof:

Yeah.

Deon Nicholas:

Yeah. Do you remember that? Exactly.

Carey Nieuwhof:

I do.

Deon Nicholas:

And that was my first time doing those, and they kicked my butt. They were super hard and completely over my head. And they were hosted by the University of Waterloo. They were always sponsored by the University of Waterloo. I don't know if you remember those. And so I just-

Carey Nieuwhof:

I never made it pass round one. I don't think I ever entered. Just math was not my strong suit. So keep going. Yeah. So I don't remember that at Waterloo.

Deon Nicholas:

And because I was already interested in programming and to get good at building things, to build collision and gravity and video games, you have to know a little bit of math. And so I was interested in the math, but it was so hard. I was like, "Okay, I'm decent at this." But when it comes to these math competitions, it was super difficult. And so naturally I was like, "Okay, well, how can I get better at this?" My theme? "How can I learn more?" And so I started really diving into those in high school. There were similar competitions, but on the computer side, programming competitions, so to speak, also hosted by the University of Waterloo. Also, similarly kicked my butt, and also similarly piqued an interest in like, "Okay, well, if this is hard, what can I learn? I must be able to learn more from this."

And that was a thread in high school. But then because the University of Waterloo was sponsored, the whole thing, I had this notion in my head that I want to go to that school one day quite frankly. No one in my family had gone to college. I mentioned before, we grew up in a low income household, my parents were immigrants from the Caribbean and had nothing when they came to Canada or when they went to Canada. And so I didn't really have a concept of university or college, but I just knew in the back of my mind that that was the school, that was my dream school. That was where I wanted to go. And so I did whatever I could in terms of grades and continuing to learn about computing and all that stuff,

which I was on the computer side naturally interested in, but really, really wanted to go there. And so I ended up being really fortunate to attend University of Waterloo. And it was actually an experience that I think was even better than I was expecting to some degree.

Carey Nieuwhof:

Yeah. It's a very prestigious school, especially for engineering and computer engineering in particular. So you switch gears to an entrepreneur. Where did the entrepreneurial gene come from?

Deon Nicholas:

Yeah, great question. So I never knew that I was going to be an entrepreneur. It wasn't even a thing that I knew was possible or, "allowed." I wasn't like, "Hey, I'm going to go and start a business one day." Just from my family's background and where I came from, it wasn't a thing, so to speak. But I had always been building things. And in hindsight now when I look back, then I'll be like, "That's kind of the entrepreneurial pursuit in and of itself," learning how to make video games in high school when I was, again, starting to get into math computers. I was super bad at history actually as just a class. I couldn't memorize any of the dates or the facts and things like that. And so it was really hard for me. And I had this idea of what if I could build technology to help me study?

There's all these notes, there's textbooks, there's already all this information. What if I could use technology to basically accelerate cue cards instead of having to quiz myself or things like that? And so over the years, every once in a while, I would come back to an idea or a problem that I was either trying to solve for myself or a curiosity or a story I wanted to tell, whether in the video game world. And then would, as we talked about, use code or use whatever I knew in order to try and bring that to life. And so that was just a repeated pattern. And it was fun for me as well. I would eventually stop playing video games with my brothers and be like, "Hey guys, I'm just working on this coding stuff." And they'll be like, "Okay, fine. But come hang out and play Halo with us later."

So, that became what I did. And so years later, when I eventually started my company, Forethought, it was really in so many ways, like you said, looking back on the breadcrumbs, it was a culmination of that because for example, that textbook reader study idea was why I actually got into AI in the first place, which is trying to understand how can technology understand text, understand human language the same way humans do. And back then, it wasn't even a possible thing. It was very early stages of what we now call AI and natural language understanding and so on. But I was like, "Okay, but somehow we have to be able to build this." And so I think the technology in and of itself started getting really powerful over the last decade or so, but it was definitely something that stuck with me. And so eventually, I started a company in AI, I guess, surprisingly or unsurprisingly when you put all those pieces together.

Carey Nieuwhof:

So let's go there. You went through Facebook, you went through Dropbox and other places before you started Forethought. But what is Forethought? What do you do?

Deon Nicholas:

Thank you. So at Forethought, we use human centered AI to transform the customer service experience. So in a nutshell, when you think about the last time you were put on hold. Maybe you bought an amazing product, but it didn't work as planned, so you had to call a support team. Or you were at work and you had a benefits question, so you had to shoot off an email to HR. Or you had an urgent healthcare question about a loved one, and you had to call your primary care physician or something

like that. In all of these cases, you have a question that you need answered, but you're greeted by being put on hold or by an agent who doesn't have the full context. And so the idea behind Forethought is, what if there was AI embedded into this interaction, into the system? AI that had all of your conversation history with support, all supports conversation history had learned how agents have answered certain questions, had learned how consumers had asked those questions, and then could provide efficiencies on top of that.

So automatically resolving issues. I think we've all interacted with kind of legacy chat bots before. So imagine that, but maybe way smarter. Or helping get these issues into the hands of the most knowledgeable agent and then empowering that agent to be more efficient, more intelligent with respect to your specific case and all of the insights and analytics on top. So, that's how we think about ourselves on the whole. And our long term mission and vision really is to bring this first to customer service, but also to, I think, every single human centered workflow could benefit from AI in this way.

Carey Nieuwhof:

Okay. Well, I want to break that down and then I want to pull the camera back a little bit and talk about AI, which I think most of us barely understand. Okay. So let's say I'm calling a company a 1800 number powered by Forethought. How is it different? Do I get Siri on the other line? Do I get Alexa? How is that different from, "Your call is important to us," which it's not, because I have to wait 20 minutes. Right?

Deon Nicholas:

Yeah.

Carey Nieuwhof:

How do we get beyond just the looped tape that plays in the background? What's different?

Deon Nicholas:

Absolutely. So let's talk specifically about email and chat digital channels because they're sure easier problems to solve and a lot of our customers are using those digital channels. But if you were to send an e-mail to Instacart or somebody today, support@instacart.com and then, "Hey, I have an issue, my order wasn't delivered," and so on. In the old world, you'd be greeted or you'd get this little e-mail back saying, "Hey, thanks. Your issue's important to us. We'll get back to you," as you described. And then you'd wait maybe 30 minutes or so, or an hour or whatever. Sometimes days.

Carey Nieuwhof:

This is my week this week. I ordered some clothes. I get the notice, "Your package has been delivered." I'm like, "There's no package."

Deon Nicholas:

There's no package.

Carey Nieuwhof:

So I go to the website, I find their customer service number. I send them an e-mail, letter or e-mail. Send them an e-mail. I get the, "Hey, you know what? We acknowledge receipt. We'll get back to you in a day or two." A day later-

Deon Nicholas:

Volumes are a little bit higher than expected.

Carey Nieuwhof:

Yep, volumes are always higher than normal. They're never normal.

Deon Nicholas:

They're never normal. Of course.

Carey Nieuwhof:

No. So then I get an e-mail back saying, "Well, sometimes it's marked as delivered, but it didn't really happen." You know what happened just before we did this interview? It got delivered. So it worked, but it was a two-day process, literally. And I think there were actual humans typing it out once the autoresponder went out. So let's talk about that, because that's something all of us can relate to too.

Deon Nicholas:

Perfect use case, right? And so in your experience, took many days, probably a bunch of wrong answers and a lot of frustration. With, say, Forethought in the background, well, one you send in that e-mail. The first thing that happens is our AI is reading the e-mail and saying, "Okay, what is going on here? What is Carey's problem? What's the issue that Carey has?" A few things can happen. So most likely for this kind of issue, our AI will literally be integrated with the order tracking system or the refund system or whatever down the stack. So one, step one, it will understand, okay, you're having an issue, your order wasn't delivered. There's some AI wizardry, I guess, to even figure out what is your problem based on the text and the language you sent in your e-mail. Because again, computers aren't human. For us, it's obvious, but it's like, "Okay, first, you got to do that."

Then step two, it's like, "Okay, did you put your order number in the e-mail or not?" And you've probably typed it in free form. And so then it will figure out, "Hey, okay, of all the texts that you just said, this is your order number." You've said, my order number is blank or whatever. It's using natural language understanding to say, "Okay, this is the order number." Then it will go and check, "Okay, order number, blah, blah, blah, blah, blah." Get back the response from the system. And all of this is happening in seconds, by the way. So you simply get an e-mail instead of saying, "Hey, we'll get back to you in 24 hours." You get an e-mail saying, "Hi, this is Forethought or Agatha or whoever," on behalf of the business.

Carey Nieuwhof:

Company.

Deon Nicholas:

Yeah, exactly. And it will say, "Hey, thanks for your e-mail. Sounds like you're having a problem with your order. I've tracked that your order number is this, looked into the system. Here is where we see your order." It says maybe, "Delivered in this system. But we found that there's an error, blah, blah, blah, here, common issue." All of that. Writes out that response and sends it to you, and you get that back within two minutes. And so you at least get that, all of that instant response time as well as something that's a little bit more intelligent than just your wrote response.

Carey Nieuwhof:

Oh, that's fascinating. Okay. So now I want to break it down. Back to your question, what is long division? What is AI? So what is happening on the servers and what is going on to generate that? Because that's something I don't understand.

Deon Nicholas:

Those are my favorite kinds of questions. What is long division? Why did we learn this weird algorithm in grade school that says you have to carry the... What does it even mean and why does it work? So here we are. What is AI? We're foreign. And I think it's a great question. So high level goals I'll talk about, and then we can talk about the mechanics of how it works today. So high level goals AI or artificial intelligence is really any technology that is built to mimic either how a human behaves. So you can think of classical chat bots as mimicking speech and stuff like that, or mimics how humans think and make decisions. And often those are two very different things. So example is even Google ads today, ad optimization, things like that. That's actually using AI under the surface to try and make decisions about what you might like as a consumer and whether to serve you this ad or not, or whatever, using decisions that a human would otherwise be making. But it doesn't mimic how a human speaks or behaves or whatever. It mimics the decision making process.

So we almost don't even realize that there's AI going on under the hood there. And so it's important to take those two things. It's a broad, broad term. Anything that tries to mimic how a human behaves or how a human thinks is considered AI. And there's been many generations of AI, so to speak, over the past, call it 50 years, maybe even longer. So in the early days, it was a lot of rules based logic. "Okay, if person says, I guess in the case of customer service, refund, go and issue refund," and so on and so forth.

Carey Nieuwhof:

So it's almost pre-programmed in the program days?

Deon Nicholas:

Pre-programmed. Yeah.

Carey Nieuwhof:

"When you see refund, do this."

Deon Nicholas:

Exactly. And nowadays, we almost don't even consider that AI. I like to say, I consider that more artificial than intelligent. But again, it's trying to mimic, I think in that case, not even how a human thinks, but how human behaves, right? "Oh, hey, you got to response back that said, I think you want to refund," or whatever. But it was literally just looking at the word refund. If you had said, "You guys suck, I just want my money back." It would have no idea how to respond. Right?

Carey Nieuwhof:

Right.

Deon Nicholas:

Yeah. And so there are generations of it. The current incarnation or the current iteration of artificial intelligence is called machine learning or deep learning. And that's probably what 80% of AI is in today's day and age. I still think there's more beyond this and it's not necessarily the best thing, but here's where we are. And machine learning and deep learning work by basically training, in air quotes, the system to pick up patterns from history.

So because we have a proliferation of data today. Again, like Google ads, Google probably processes billions of queries a day, an hour. I don't really know. But we have all this quick through data on you, on whatever. And so there's all this data on your history that could be used to make predictions about how you might behave in the future. Other examples like being able to predict or rank whether somebody's likely to default on a loan or whether they should be eligible for this mortgage. And so all of these systems are using past data and basically statistics, quite frankly, like the probability that you do X, or probability that you do Y, and pretty fancy algorithms, to then build a model or a computer program that can then make those decisions. So you're no longer pre-programming or hard coding anything. You're saying, "Hey, we want you to mimic roughly the decision making that's been going on in this process."

When you see an email labeled as spam versus not spam, this is how it's been labeled in the past. Now let's get a machine to learn how to do that. And so that's been the most common iteration of machine learning to date. And one more, just to throw another term in there, there's this now concept called deep learning, which is even cooler. A variant of machine learning, which is again, just a type of AI using statistics. Deep learning uses these tools called artificial neural networks. So the program that you're building or the program that you're training, so to speak, it's really a big graph of numbers of matrices and vectors or whatever, but it's meant to mimic neurons in the human brain. And so each individual unit is a mini program in and of itself. And then given the training or given the tuning, it's learning to produce signals or numbers at the end of the day to other units of the network.

Turns out weirdly enough, if you build a big enough artificial neural network, a deep enough artificial neural network and given enough data, it can actually learn common mathematical functions, like addition, subtraction, whatever. It can learn or be tuned to actually produce those outputs, given the inputs.

And it also turns out, it can be used to produce really complicated mathematical functions like, "Will Carey click this article or not?" It's pretty wild. There's a lot of theory about it. But yeah, when I say training the model, that's usually what kind of model people are, "training." And I'm using these terms loosely.

Carey Nieuwhof:

So again, AI kindergarten here, and then we'll move up to first year undergrad at some point in this conversation. But in the simple cases of AI, that could be a simple computer, like a software that just does this. But if you're talking about deep learning, you then got a neural network. You've got multiple computers, multiple processors, multiple machines working at the same time. Because what I'm thinking about, I have done some research on this. When you really research how certain trees operate, they're a network. You think a tree actually is alone. But if you look at, I think it's Aspen, underneath, there's a network. Even sequoias apparently, do not have a very deep root system, but they're all intertwined. And that's why you can have a 300 foot tree and it doesn't get toppled in a strong wind because they're all interconnected. And there's research about whether trees actually talk to each other, communicate with each other, et cetera, at some conscious level sentient level. Something like that is happening with AI as well.

Deon Nicholas:

Exactly. Quite literally, but in a mathematical form. It's a simpler unit.

Carey Nieuwhof:

Sure.

Deon Nicholas:

One clarification I will add though, is that for even moderately deep neural networks, you can do that all in one computer. And so it's literally just different cells or memory, you know what I mean? Different variables, so to speak. But then as it gets pretty large, you might have to do it across multiple computers. And that's where you get into what they call distributed computing, which is literally that, how do you run these programs on larger and larger machines? So like somebody, the big tech giants will probably be, have thousands of these machines running these programs or so on and so forth. But yeah.

Carey Nieuwhof:

Okay. And I'm going to throw a bunch of acronyms at you, AI, AGI, ASI and ANI. So Artificial Narrow Intelligence, Artificial Intelligence, Artificial General Intelligence, and just Artificial Intelligence. Those are some terms that are commonly banded about. Feel free to pick two or three to focus on. Maybe some are tangential. I assume Narrow Intelligence, we've already touched on that a little bit. It just does very limited function. But what about AGI, ASI and AI?

Deon Nicholas:

Yeah, no, absolutely. This is awesome. So the way I like to think about it is AI is a broad term and it can mean a thousand different things, including the click through ad serving example that we talked about earlier.

Carey Nieuwhof:

So the computer in that case knows it's me, knows I'm interested in church leadership, knows I'm interested in leadership as a whole, knows I love to barbecue, knows what I buy. And it serves me up a, "Hey, you need these sneakers," or, "Have you ever seen this barbecue stand?" Or whatever that is, right?

Deon Nicholas:

Absolutely.

Carey Nieuwhof:

So it kind of knows me. And you, it's serving up video games or whatever.

Deon Nicholas:

Exactly. Yeah. Where's the next generation of Pokemon, right?

Carey Nieuwhof:

Uh-huh.

Deon Nicholas:

And so that is how I think about the term AI, and it can mean many different things. Well, I guess the problem with AI is that sometimes it can be boring. The idea that the things serving your ad is actually AI is almost unsatisfying to the imagination. AGI captures almost the sci-fi definition of AI.

Carey Nieuwhof:

This is what everyone's scared of, singularity, right? Thinking, "The robots are taking over."

Deon Nicholas:

The robots, yeah. And C3PO from Star Wars or whatever. An AI that can roughly interact the same way a human can in most daily situations. It could be limited in some fashions maybe by form or function or whatever. But most people looking at that, would be like, "Oh, that's intelligent. That's doing things that a person would."

Carey Nieuwhof:

So just at the lay level, I think a lot, I will link to one of the videos, but is it Boston Robotics or what's the company that produces those dogs?

Deon Nicholas:

Boston Dynamics, I think. Yeah, yeah. Yeah.

Carey Nieuwhof:

Boston Dynamics. Yeah. That freaks everybody out about once every two years or so they're releasing a video and it's like, "Oh my gosh, look at these dogs!" Is that AGI or AI, or what is that?

Deon Nicholas:

Yeah. So it's starting to blur the lines and then I think it depends on how you think about it. But it does look remarkably how those dogs walk, the Boston Dynamics. It looks exactly like how a real dog would walk down to how they stabilize themselves and at the bounce. And I think that's not just pre-programmed, that's because it ended up discovering the optimal way to walk, which ends up looking a lot like how we figured out how to do it. And so that's when you start to get into, "Okay, this looks like true artificial general intelligence." The only problem with those, is that I think they don't make decisions or communicate. And for better or for worse, we as humans, think about speech and communication and language as part of the concept of AGI.

I think you could get AGI without it. You could imagine if something were the IQ of a fruit fly or something, even. It's flying around, it's making choices, whatever. You'd probably feel like, "Wow. That's pretty intelligent," relative to a basic computer, I guess, to some degree. So I don't know. I think there's lines that are blurred for sure. But in general, as things start to look and feel like our day-to-day concept of intelligence like, "Okay, this dog, maybe Boston Dynamics is now starting to bark and communicate and whatever. And it's like, "Hey, I need to be recharged or whatever."

Carey Nieuwhof:

Or go find its owner or something like that.

Deon Nicholas:

Or go find its owner and just know to do that without anyone having pre-programmed that because a lot of it you can pre-program. Then you're like, "Okay, this is starting to get into AGI." And so I think it's a fuzzy line, but that's really the definition of AGI. And then contrasting that to ANI, Narrow Intelligence, most AI tasks today are human level. They can perform as good as a human, but only on the specific task. You can build a model or build one of these deep neural networks or whatever to, I don't know, generate Shakespeare, actually nowadays, to generate text. And it gets really, really good at generating Shakespeare or there's like Dolly, which is an open AI model, can literally paint. You give it a prompt of, "I want a picture of a dog riding a bicycle on the moon in the style of Van Go." And you type that in. And then it'll just produce a painting.

Carey Nieuwhof:

Is that available broadly? Or do you have to have access to that, Molly? I've heard different podcasters say that they've tried it.

Deon Nicholas:

Yeah. I think you can apply to get access. I don't have access, but I think there's versions of it online that you can literally just play around with, like simpler versions. Maybe they're not as powerful. So that becomes, "Okay, it's really powerful and starting to border on AGI in theory." But again, it's on a narrow task. So is it? Or is it not? Well, it's at least artificial narrow. It's pretty narrow, but it's powerful. And so this specific task, it achieves human level kind of accuracy.

Carey Nieuwhof:

Got it. And ASI would be the high end of AGI. Right?

Deon Nicholas:

Exactly. Yeah.

Carey Nieuwhof:

Artificial super intelligence is the high end.

Deon Nicholas:

Yeah. Beyond human intelligence. Yeah.

Carey Nieuwhof:

One of the debates and this is in sci-fi. It's actually becoming a somewhat live issue in our lifetime. But I've heard it described as singularity. So singularity, to my mind, and again, I want your definition. I could be wrong is that point at which the super intelligence of a computer or computer network eclipses that of a human being, Cue, the Frankenstein narrative like, "Oh my goodness, the machine is taking over and is out to kill me." Or, "The robots are taking over," or, "You have robot armies," or that kind of thing. And singularity, I guess goes back to that point of creation at the beginning of the origin of the universe when there was nothing, and then there was something is what scientists will call singularity. Is that an approximate understanding of singularity? How would you define it? I could be totally wrong. Again, I'm just an immature learning these things.

Deon Nicholas:

No. Yeah, yeah. Yeah. That's right. Just for disclaimer purposes, I am not the expert on this, but I do have a lot of opinions that I'm happy to share.

Carey Nieuwhof:

Oh great. Sure.

Deon Nicholas:

Yeah. But no, I think that's right. The concept or the reason the word singularity is used is because it's that point of no return. Once it's beyond this, you can't unravel it because quite literally, if you have an AI that is more intelligent than humans, you have AI that has a concept of self and self preservation. Then literally at that point, you've created something that will then self-propagate or whatever. I don't know what you want to call it.

Carey Nieuwhof:

Yeah. Yeah, yeah.

Deon Nicholas:

And so that is a singularity in and of itself. I'm an optimist when it comes to these things so I'm probably not the person to... There should be people working on the pessimistic view of how do you make safe AI and things like that. And how do you prevent a singularity or whatever. But I actually like to think about analogies. I think if you had an AI that was approximately as smart as humans, you would have that the same way you'd have another human or the same way you'd have an animal like a dolphin, which is pretty smart. We don't get scared that there are dolphins, or even that there are other humans because for the most part... People can suck sometimes, but people are people. And so I also think about it that. It's almost not as exciting, but almost a more sober view, so to speak, of AI in that if you had something that was about as intelligent as a human, that would be the equivalent of having another human. It'd have more capabilities, because it could connect to the internet and this sort of thing.

But for example, and I was thinking about this the other day, it still took Einstein, who you'd argue is a pretty superhuman in terms of IQ, a very long time to even figure out relativity or quantum physics or whatever. And so if you had something roughly the IQ of a human, it would still take a reasonably long time to solve some of the hardest problems like how to break cryptography or whatever, whatever those NP hard problems are, so to speak, but the equivalent of that. Maybe AI hard problems. And so it would be a useful tool because then we could probably accelerate it.

It might take an Einstein plus an AI less than the 10 or 15 years, it took him. Maybe it would take three years or whatever. It'd be useful to advance human knowledge. We'd be able to figure out proteins to cure cancers and stuff like that over time. But these things, I think the fear is like, "Oh, this is going to happen overnight. And then suddenly the AI is going to take over the world and destroy everything." I don't think that works that way. If you thought about having another person who's as smart or smarter than you in the room and could access the internet. That's kind of what we're saying about real AGI in the short time frame. I think eventually, we just figure out what happens in terms of a singularity, but I think we're even way far out from that.

Carey Nieuwhof:

Yeah. So there's a couple of active debates. One is the timeline about singularity. Some people say it's within the next decade. Other people like you just hinted like, "Ah, we don't even know, but it's way far out." And then the whole... Well, let's stop there. And then I'll ask about malevolent versus benevolent, which is exactly a raging debate in AI circle. So to that point where you would have an equal, and I understand that, okay, once the AI has the ability to self-perpetuate, to think independently and we can, "lose control," that could spiral quickly. But how far is that possible singularity? And I realize a lot of this is speculation, but is that going to happen in the next decade, perhaps our lifetime, another century, do we know?

And one more caveat. I was listening to a podcast from an AI expert recently and I think he said, right now, all the combined, the fastest AI or the best AI sort of is the equivalent to the mind of a honey bee. And I'm like, "Really? Is that it? Is that accurate?"

Deon Nicholas:

I think so. And I've heard that phrase before or that tone, like honey bee or worm or something in that. Actually, bees are pretty smart. So probably they're right around there. And that's for what it's worth from a human achievement perspective, huge. That is really powerful. But yeah, we're kind of far off. Although, it's hard to predict these things because most advancements happen in this weird step wise fashion. In the sense of it doesn't happen in a continuous way. It happens, it's a bunch of people putting energy in and 99% of it doesn't work out. And there's a chance that last 1% didn't as well. And then we ended up nowhere. But maybe it did work out by some luck of the draw. And then, "Oh, suddenly, cool." Now we have AlphaGo or a chess champion AI, and so on. So I do think it's non-linear in that sense, non-continuous.

And the other thing is that even though we have all these models of the universe of probabilistic, you can model economics or you can model how a field is going to develop, it also happens by people. And so say what you want about Elon Musk or whatever, whether you like him or hate him, but electric cars, for example, they were kind of a thing. And then it took a reasonably wealthy billionaire person to go and make electric cars cool. And then all of a sudden, "Okay, that was a nice little leap forward." And then all the other companies are following suit because they have to and so on. Whether you want to attribute it to that or not, that happens because you happen to have people and so on just deciding to do that. And that doesn't happen every day.

And so it's a weird thing in that things are always evolving, but they're sometimes not. So anyway, to answer your question, I do think though that in the last even decade, there have been so many powerful, at least Narrow Intelligence AI that have come out like Dolly that we talked about that can paint Shakespeare or paint Salvador Doll.

Carey Nieuwhof:

Shakespeare.

Deon Nicholas:

Right. Like Salvador Doll. Yeah. There are enough of these coming out that are starting to be like, "Oh, at least on this task you're doing as well as a human can," for the most part. You can look at it for the Shakespeare stuff, you can kind of tell it's actually still garbled garbage, but it sounds like a high school kid plagiarized something, but got very close that I think we are probably in the next five decades, probably 50 years, we're going to have something I wouldn't call singularity, but some sets of things that are more than just artificial narrow AI, but still feel general.

But again, I think also at the same time, you have all of these researchers studying safe AI, you have all these researchers thinking about how do you make sure that this is done in a responsible way? And I think the two fields probably progress around the same amount. And so even if you had an AI, if it's restricted to a computer, then it's not really that dangerous or hard on it. You know what I mean? And so robotics would have to get good or nanotechnology or whatever before it starts to become a nuisance. So anyway, more to think about there, but hopefully that answers your question.

Carey Nieuwhof:

Yeah, no, that really does with timing. And again, there's a real variety of opinion out there. But I'm also interested in your benevolent view of AI because I think Elon Musk is on record as being deeply concerned about the negative potentials of AI. Others that I've listened to or read have a much more benevolent view. I think it was in Henry Kissinger and Eric Schmitt's book. There was a third author on that, on AI that came out last year. They were talking about what you were hinting at, the pharmacological benefits of that. Basically, drug research is trial and error. And you worked for six months or a year on a problem, and then one day you discover, "Ah, no, wrong field. We're going to move to another research area." And you start researching this a year, goes by. Now, dead end there. And you start again. Whereas, AI could speed that up significantly. On the other hand, chemical warfare, somebody missed programs, your Tesla to wound and kill and-

Deon Nicholas:

Etc cetera, et cetera.

Carey Nieuwhof:

You're in a very bad spot. Yeah. We discovered nuclear capability and then had the atomic bomb. Right?

Deon Nicholas:

That was actually the analogy I was going to give. There's always this like, with great power comes, great responsibility, Uncle Ben thing going on. I think nuclear's probably the best example of it. And there's probably maybe a single digit handful number of technologies in the past in human history that are equivalent in power and potential, but also equivalent in potential to damage. And I don't have a good answer. I think at the end of the day, people are people. And with nuclear, we do have probably today the ability to perpetually power the energy of all humans on earth. That, and plus or minus solar, there's a few other things. But we also have this dangerous ability to literally wipe out all humans on earth, no way to sugarcoat that.

And so somehow we have survived so far. This is the morbid view. I don't know if that's a good way to put it, but my point is, in the end, it will boil down to all of this, the research people, putting in ethical practices, government, policy, all of that. And I'm optimistic that I think people will, as these things develop, start to develop the processes. I am not under delusion that it couldn't be dangerous, I would say, is probably how I would describe it.

Carey Nieuwhof:

Yeah. But that is a really interesting case study. It's been almost 80 years since the atomic bomb was deployed. It's killed a lot of people, but we haven't blown the entire planet up. And I know there's a school of thought that says, "Well, we're destroying the planet anyway through climate change, etcetera, et cetera."

Deon Nicholas:

Cars, carbon.

Carey Nieuwhof:

Cars. Yeah, carbon. But it is a really interesting dance. As tense as the world is at times, we have managed to restrain from blowing each other to smithereens, which is a really interesting study in human nature and perhaps Providence in the grace of God or that kind of thing. Is there anything inherent in AI or AGI that would say the rules that have governed us for the last 80 years, which is tense sometimes, whether you're talking about North Korea's threats or China or Russia or America or whatever. There's been a lot of saber rattling. But is there anything inherent in AI that would make that different? For example, chemical warfare. If you're programming machines to make advances, you theoretically could relate... Or is there something in the nature to AI that would make human beings treated differently? I think that's probably the heart of my thought.

Deon Nicholas:

That is the question.

Carey Nieuwhof:

Yeah.

Deon Nicholas:

I'm trying to think because usually, or the way I like to problem solve through these kinds of questions is to try and pull pieces of different analogies. It's not a brand new technology, even though it is, there's probably elements of it that can be pulled in. So how have we treated so nuclear as we talked about? Arms race. So what'll probably happen then is every government goes and tries to figure out how they can go build their own form of AGI. Let's assume that's already happening right now.

Then I think like security, cybersecurity maybe actually the best analogy. There's a lot of wars being fought on the cybersecurity front even today, with stuff going on in Russian and Ukraine and stuff like that. So what we saw with that, even just taking cybersecurity and social media as an example, potentially destabilizing elections or whatever, those are all areas. So I do think with AI or potential AGI, there's going to be a lot of that, but I think it's going to end up being a similar like, "Okay, you develop the technologies as you develop the policies and defense mechanisms," so to speak. And you get to a state of stable equilibrium unfortunately, or fortunately actually is probably the better way of putting it, where it ends up becoming Stanley. I think any one of these technologies, cybersecurity, social media, nuclear, probably nuclear is the most powerful there because of just the physical energy capacity there.

But I think you've seen them develop in similar ways. People start to learn, figure it out, use it for their own good, and then start to figure out countermeasures. So that's the best I can think of. I don't know if there's anything necessarily new. And we'd like to think so because we think of the C-3POs of the world. But if country A had a C-3PO and country B had a C-3PO, it just makes a better ally in thinking and strategy and whatever, but I don't think it would fundamentally change the rules of engagement.

Carey Nieuwhof:

Well, nuclear is a really good study in good and evil because a lot of people who are concerned about climate change would say nuclear perhaps is the solution. Nuclear energy is clean.

Deon Nicholas:

Exactly.

Carey Nieuwhof:

If it's managed well, it can do the entire planet. We can reduce our carbon footprint. And what I didn't know, Todd Wilson, who has been on this podcast a couple times, he was in the Nuclear Navy, trained under Admiral Rickover, I think that's his name, famous, famous leader. And for decades, seven, eight decades, the American Navy has been powered by nuclear power. Never been an incident, strict protocols. That's how a submarine can go from Japan to California without having to refuel. That's why they can stay underwater that long. Never been an incident because they have safety protocols. So we'll just let people noodle on that.

Deon Nicholas:

Yeah. Yeah.

Carey Nieuwhof:

Okay. So again, we've got phone systems we're working on, we got a long way from phone systems right now, but in our conversation. Where do people see AI today in their general lives? Where are they seeing it today?

Deon Nicholas:

Yeah, absolutely. So in today's society, a lot of recommender systems, so anything that's learning preference. So Netflix, they had done this big AI challenge probably years ago, they paid, I think a million dollars or something, to the best team that could figure out AI for recommenders. Self-driving cars are starting to become a big thing. And that's an interesting case study in and of itself because I think that was born out of computer vision, which was a narrow branch of AI. It started with literally researchers figuring out how to detect whether this scribble was an A or a B or a C, just from a picture. Or is this a cat or a dog? Now facial recognition in social media or in your phone, that helps you unlock your phone. All of that stuff is starting to propagate. So it's literally everywhere. But again, it's AI, not AGI in our lives. You got to remember, behaves like human or thinks like human. And a lot of the stuff are just making decisions using human concepts under the hood without you realizing it. But it is pretty ubiquitous everywhere.

Carey Nieuwhof:

So self-driving cars are really good example of the question I want to ask next because in programming at Tesla, and there are levels of AI in cars that are much more than any government permits. There are totally self-driving cars. You don't have to touch a thing. But in the programming of them and the engineering of them, engineers had to make moral decisions. So in some of the research I've done, they've talked about, what if your Tesla came with an ego mode or an altruist mode? So the ego mode is the computer has to decide, are we going to save your family and kill the little old lady crossing the street or the toddler who ran out to get his ball? Or is it the altruist mode where you sacrifice yourself but the little old lady gets saved? Those are real world questions that are now coming up.

And as a driver, you kind of make that decision in the instant. But imagine you had to program your car that way. Well, the people programming your cars have to make that decision and that's philosophical,

it's theological, it's spiritual, it's moral, it's ethical. What are some of the ethical, spiritual, theological, philosophical implications of AI moving forward?

Deon Nicholas:

Oh, very deep, I will say.

Carey Nieuwhof:

Yeah, they are.

Deon Nicholas:

Well yeah, it's interesting because have in the real world today for decisions like these, you have human judgment, you have human bias and for better or for worse, there's a single person making a decision at any point in time. Whereas with AI, you almost have policy decisions. You almost have these decisions like, "Hey, I'm an engineer sitting at Tesla and deciding, am I putting an ego mode or altruistic mode, or you decide?" It's a catch 22 and this may be a cop out answer, but it is because I think any ethical question, it really depends on your axioms. It really depends on what you take as the source of truth.

If taking a life under any circumstances considered bad by your government or whatever, or your belief system, then you're going to have that as your source of truth. And it's tough because am I the one deciding? Like I, the programmer or whatever. Is the company deciding? Is it the government or the religious institution or somebody else deciding? It's a tough question. And I think outside of AI, we don't even know how to answer that question today. There are a lot of things, for example, even going on in the world today where you're like, "Hey, okay, X, Y, and Z is happening, but say in the United States, the US constitution says A, B and C. And so are we supposed to be making the decision on what is right or not at least from a country governing body or does the constitution say that?" And that's a completely hard moral question to answer.

And so I think with AGI or with AI in general, it's going to continue to be challenging. But again, I think it's probably not more challenging than having an additional human pop up. Do you know what I mean? Now AGI, if it were about equally as intelligent as humans, but you could program, you could morally push. Maybe the equivalent of how are you allowed to raise your kids. What is morally right when you raise your kids, if you could ...

Carey Nieuwhof:

AGI on parenting? It could be helpful.

Deon Nicholas:

AGI on parenting, or parenting of AGI. Do you know what I mean? So yeah. A lot of considerations there.

Carey Nieuwhof:

What gets me, Deon, is I think intuitively, imagine going down the road, you're surprised, somebody runs out. I think in the split second, you have to make a decision. We all go to ego mode. If my wife and kids are in the car, I'm trying to save my wife and kids. But I think when you make that decision in advance, it creates a debate. It creates a debate because you're not in that moment. But then do I say to my wife, "Well, your car is programmed for ego mode. Mine is for altruist mode." And then your wife and kids or spouse and kids, whatever, never want to travel with you in your car. I don't know how I'd answer it. I don't have to answer it. I don't know how I'd answer it.

It's a really great question. So when you're thinking through the ethical implications, even of what you are doing at Forethought, what resources are helpful for you in... Because I think we're all facing moral decisions. As somebody who sells courses and runs The Art of Leadership Academy and does a podcast, I have ethical decisions. I've said no to certain brands that want to advertise on the podcast because I don't support what they do. And you leave money on the table, you walk away. But I think on AI, you got to think about that at scale.

Deon Nicholas:

Absolutely.

Carey Nieuwhof:

So how do you make those decisions?

Deon Nicholas:

So again, I'll give the direct answer, but I will just note that what came to mind was around, this is probably why Mark Zuckerberg is such a hated guy. Imagine, and I think we have a similar analogy, if you could control information, social media, what people think or what people basically get access to and you have to make these decisions ahead of time, are you going to allow any policy or any perspective on your platform or are you going to police certain perspectives? It's a hard job. So I will say that. So bringing that back to this particular question. For me, I do think genuinely it boils down to your values and I mean that in a very literal sense. So going back to the concept of your constitution. Is it immutable in your business? And that may be different for everyone. It may be different for different businesses.

I was just looking at the WeWork example before and I'm sure what was immutable, was very different than many other businesses in terms of ethics and morals. But you got to decide that for yourself. And we do that here. We have our values. We call them the genius values, growth mindset, intelligent empathy, being an owner, acting with integrity, being unstoppable and putting customers first. And we try to institutionalize those or what's the word? Operationalize is actually the word I was looking for. So build it into how we do business. And so the more you can get clear on what do you stand for as a business. And sometimes that can be straight up on the business value side and how you treat your customers and whatever. But sometimes that can be, "Hey, how do we make decisions about these larger issues?"

And you won't have all the answers all the way, but I think if you can come up with at least a policy or, again, this constitution that you believe in, people will self-select. Not every business operates the same. And if people don't buy into how you operate, then they'll go to another business or vice versa. But then at some point as the business grows, you'll have that culture. And that's what actually builds culture. It's starting from your values and then building those into your behaviors. And then you got to decide.

And so hopefully 80% of decisions are, "Hey, this is what we said we were going to do, and we are going to stick to it." But then there's probably 20% that are gray area. And also some subset of that that make you question your values. You sometimes have to ask yourselves, "Okay, well, now in a new world with this new technology, with this new capability, does what we were saying before actually still apply? And what was the spirit of it now that we have these new circumstances?" And I think that that's ironically very, very applicable to many things in our lives today.

Carey Nieuwhof:

You just made me realize, and it's great, Deon, I guess in the back of my mind, even as much as this is a very occasional hobby for me to think about AI, I assumed that there was some big governing board somewhere that was making the ethical decisions. But what you made clear is, you know what comes down to your company, my company, Google making its own decisions? So if you think about autos, what happened to VW a few years ago, where they were cheating about gas mileage and emissions, and the CEO got fired and the whole deal, that was an ethical choice they made, Detroit has made other choices with their auto companies, accounting firms go down, investment banks go down. You're right, the ethics are probably going to be made company by company, designer by designer, coder by coder.

Deon Nicholas:

Yep.

Carey Nieuwhof:

Really interesting. Is there a leading voice on the ethics of AI or a resource or a book or a podcast that you would recommend? I honestly do not know of anybody and will take listener suggestions.

Deon Nicholas:

Yeah, no, that's a great question. I would love resources from the audience here, but I think there are a few ironically, companies who are at the forefront of this for better or for worse. So OpenAI, DeepMind, and a few others, their goal is to build things that are reasonably ethical. I'm pretty sure OpenAI just plastered that. Thereof, I would assume the Elon Musk's School Of Thought, since he was one of the co-founders that, "Hey, AI is going to be dangerous. Let's do what we can to make it safe." And so I would follow them.

Again, whether or not you agree with the leadership or whatever, these are definitely resources for folks who are looking into this stuff. I do think though over time and where governments and institutions come into play is some things will be, "regulated." Crypto is being regulated. And oftentimes, things are over regulated. But in many cases, they are regulated because there is a potential danger or something where having a central source of governance would be helpful. And again, whether you think that's good or bad is a different discussion. So I do think over time, these central governing bodies may pop up and it'll often be by consensus or the IEEE who makes standards on a whole bunch of engineering stuff might end up doing this. So we'll see.

Carey Nieuwhof:

Oh, that's good to know. Well, we're coming up on time. Anything else you want to share with the audience, Deon?

Deon Nicholas:

No, I'm super excited. Thanks so much for having me. You can find me on social media, on Twitter, on LinkedIn, on I'm at @dojideon, D-O-J-I-D-E-O-N. The story behind that is for another day. Or just Deon Nicholas on LinkedIn. But I'm very excited to be here. Thanks for having me.

Carey Nieuwhof:

I really appreciate it. I've enjoyed this a lot. Thanks, Deon.

Deon Nicholas:

Likewise, Carey. All right. Talk to you soon.

Carey Nieuwhof:

Man, I thought that was a really great conversation. It's also on YouTube, by the way, if you are more of a watcher or you want to see what we are doing. You can find that on YouTube, just search for The Carey Nieuwhof Leadership Podcast, and you will find it there. And well, if you want transcripts, we got those for you too. I'm amazed there's a couple of shows that I go to for transcripts. If I really find something compelling and I will take notes. So you can find those at Careynieuwhof.com/episode521.

Coming up next episode, we have got Cynt Marshall. She is the Dallas Maverick CEO, and man, do we have a conversation. Here's an excerpt.

Cynt Marshall:

I remember just being upset about it one day. And one employee came in my office and he was sobbing, sobbing, a very senior employee. And his response was, he said, "Thanks for cutting off the head of the snake." I'll never forget it, Carey. And I said, "What?" And he was sobbing. And then he told me story after story, after story of frankly, what was pretty much mental and emotional abuse of what they had gone through. And he said, "We can live now. We can come to work now and be okay." And he was sobbing. I had no idea that that was going to be the impact of that particular termination.

Carey Nieuwhof:

If you are all interested in reversing a toxic culture, man, has she got a lot to say? So that's next time on the podcast. Thanks to our partners. We want you to have the best social media done for you, and you can find out what that looks like for you by booking a free consult by going to promediafire.com/Carey. And make sure you register for Tithely's free online event. It's a massive one called Tithely Next, by going to Tithelynext.com. That's T-I-T-H-E-L-Y next.com.

Also, coming up, we got Tim Tebow, Joey and Christie Spears. Sharon Hodde Miller. Who else? Brian Koppelman, Chris Anderson, Nancy Duarte, Pat Lencioni, Irwin McManus, James Clear, and a lot more.

And if you like this episode, please leave us a rating and review wherever you're listening to this podcast. And I want to give you something to help you. How to Build an Influential Online Presence is a free mastermind where you will learn how to find your dream audience, and you'll figure out how to get them to notice you and engage with you.

So whether you're just starting out or you've been online for a few years, this free mastermind will give you insight into timeless principles that will help your message and your content stand out. Why did I create it? I created it because I have been asked a hundred times, a thousand times, "How did you get to where you are when you started as a hobby?" Well, there are principles and if you're interested, go to influencekickstarter.com, it's absolutely free, and you can start building your online presence today. If you want to know how I did it, I've got a session when you go deep in the material on my complete guide to podcasting as well, almost 25 million downloads in counting. How do you get that when you're still working out of your basement? Well, if you want to figure that out, go to influencekickstarter.com and you'll learn the principles that I think have helped not only me, but lots of other people gain traction online and surprise, they're not what you think. Influencekickstarter.com. That's a free gift for you.

Thank you so much for listening everybody. I so appreciate it wherever this episode finds you, for listening to the end, I'm grateful. And we'll catch you next time on the podcast. I hope our time together today is going to help you thrive in life and leadership.