University of Manitoba: “What’s the Big Idea?”
Series 3, Episode 1 Neil McArthur

TITLE

Demystifying AI with artificial intelligence expert, Neil McArthur

INTRODUCTORY MONTAGE:

Neil McArthur tease clip:
“People talk about God and gods as mysteries. AI is truly a mystery. Even the people creating it don't know exactly how it functions. And it's capable of doing things that they don't understand and didn't expect it to do.”

Bloomberg News: Musk Says AI Will Overtake Biological Intelligence
(May 2024)
“I mean, AI might be the most important question of all. The percentage of intelligence that is biological grows smaller with each passing month. Eventually, the percentage of intelligence that is biological will be less than 1%.”

CNN: AI girlfriends are here and they’re posing a threat to a generation of men
(September 2023)
“My God, the world's coming to hell in a handbasket. Your final thought is yours. I think we're gonna see what we only dreamed of in the movies, and it's not a really good reality.”

Neil McArthur tease clip
“One of the things the doomsayers, I think, have correct is that this thing is so powerful that it could escape our control at point. Now, that said, I don't think we have to be resigned to that.”

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MUSIC SWELLS

INTRODUCTION:

Welcome to season three of UM's award -winning podcast, What's the Big Idea? I'm your host, Michael Bennaroch, president and vice chancellor of the University of Manitoba. We have an incredible season in store for you, featuring big thinkers in climate, economics, health research, and so much more.

In this episode, I speak with Professor Neil MacArthur. As a philosopher and director of UM's Center for Professional and Applied Ethics, he plays among the biggest of ideas every day. One topic that draws of a lot of his interest is artificial intelligence. In fact, Maclean's called him one of our country's leading thinkers on the topic.

In 2023, he created a new course that explores issues ranging from humanity's potential annihilation by AI, to what happens to copyright law when an algorithm can create songs with Neil Young's voice or clone my voice, as it has done for this intro. He helps prepare students for a future where AI could replace jobs, shape their love lives, and even lead to new religions.

In this episode, I'll ask Neil why this is no longer science fiction and how we should respond to these massive disruptions.

MAIN INTERVIEW

Neil, it's great to have you here today. Your big idea is that artificial intelligence will transform almost every aspect of our lives, and that transformation has already begun. But you say we don't need to panic. In fact, if we get it right, we can harness AI to make society better. Before we get into some of the applications, can you give us a sense of what AI is and what it is currently capable of?

NEIL MCARTHUR: Yeah, if you want a technical answer, you're asking the wrong guy. But I can tell you from a practical perspective, right now, I think the way in which most people encounter AI is through chatbots. And chatbots are amazing at certain things. So, they can give you a recipe for cheesecake in iambic pentameter. They can spit out these long or short or whatever you want answers very quickly. And the thing I'm most interested in is that they often can display personality. That they can be something that you interact with as you would a human being. So, you've got this artificial entity, this thing on your computer or on your phone that you can chat with and that you can interact with and that you can actually have a relationship with.

MICHAEL: You make it sound so clear and simple of what it's capable of doing, but there's a lot of hyperbole out there. There's a lot of fear. What are the facts?

NEIL MCARTHUR: Yes. So, there's both a lot of excitement, some of it sort of utopian almost, and there's a lot of panic, some of it apocalyptic.

The advances in AI have been so fast, I think they've taken people by surprise. And they've even taken, I think, some people in the industry by surprise. So, five years from now, who knows? Right now, it is taking some jobs. It is not making work obsolete. It is making certain professions more efficient. It is making some others redundant. It is affecting the economy, although a lot of the ways in which it's affecting the economy is through speculation. think investors are very excited, so they're putting a lot of money. And companies are, you know, trying to integrate this. I think people are figuring it out. So, one of the things it's definitely doing is affecting research. I think from the perspective of someone who's, you know, in a university, what you notice is two things. One is that it's capable of sorting through masses amounts of information very quickly. And that's very useful for scientists. From a humanities perspective, it's also capable of writing essays and writing exams. And I've certainly tried putting all of my exams into a chat bot to see how it did on the answer. Or questions that I was thinking of asking. And you know, it can produce B, B plus answers instantly. I mean, people say, you can tell when an AI has

generated an answer to an exam or written an essay. I can tell you firsthand, you can't, you really can't. It's not going to write a PhD thesis for someone, but at a sort of 2000 level of a humanities course, it can write a B plus exam.

MICHAEL: So, it's going to regurgitate what's out there already. It's not going to really innovate.

NEIL MCARTHUR: It's not going to innovate. It's not going to innovate. But what it's doing for scientists is the same thing it's doing for students, which is processing very large amounts of information, synthesizing it very quickly, and producing something that looks like natural language English.

MICHAEL: I mean, this is not the first time this type of technology has come forward. I mean, if you think about it over time, in mathematics, tools came forward that instead of myself sitting there and solving a mathematical problem, this program could help solve it, right? So, how's this different?

NEIL MCARTHUR: Well, one way it's different is that it can't do math. It's one of the surprising things about AI is it's really bad at math. But you're absolutely right. I mean I think what you bring up from a historical perspective is interesting and important, which is that once upon a time, going all the way back to Plato, people thought that what essentially made us human was our ability to do mathematics. And then suddenly we had pocket calculators that could do it better than we could. And so, people had to kind of readjust their sense of what it is that makes us human. I think one of the things they decided is that, you know, writing poetry and producing language and having conversations, these are all things that are essentially human. Now, yeah, I can do that too.

MICHAEL: So, let's talk about some of that. Now, your research actually focuses on issues surrounding AI that are a little bit more avant-garde, including looking at the implications of relationships and intimacy. And we'll talk a little more about that, but I'm curious about your view of conversations pertaining to the anticipated labor market transformation. You talked a little bit about that, or that AI will make human artists obsolete. For example, we just saw the big strike in Hollywood and a big issue there was the fear of the use of AI. And so from what you've written, I get the sense that these conversations, that you see them through a different paradigm than most.

NEIL MCARTHUR: Well, let me say that one of the things I focus on is actually what AI can do now, because I think, yeah, there is a lot of speculation about what it will be able to do in the future. And some of that is well-grounded and some of it will prove not to be. So, when it comes to Hollywood, for instance, I think people are worried that it's going to write terrific scripts, but it can't do that now. It can write very average, boring scripts. But one thing it can do right now is have conversations and give you advice and be your therapist or your friend or whatever you want. So, I think a lot of what I'm focused on is the less speculative part and more what's actually happening, which is that people are having these conversations and these relationships with these AI right now in the millions.

MICHAEL: You created a new graduate course last year intended to try to prepare students to shape our future with AI. Given the doomsday predictions related to AI, increased cyber attacks, and even

humanity's potential annihilation, how do we ensure that we shape the future of AI in a safe and productive way?

NEIL MCARTHUR: I think we don't know partly. One of the things the doomsayers I think have correct is that this thing is so powerful that it could escape our control at any point. Now, that said, I don't think we have to be resigned to that. I think that governments can play a role. I think that one of the things you're seeing right now is a debate about what role government should have. I think that if we leave this to the companies that are trying to push forward as fast as they can, the results may be very unpredictable. But if we're willing to empower our governments to step in and regulate and be a part of the conversation, then I think we will have more control. I mean, certainly that's how it's supposed to work in a democracy that, you know, companies seek profit. That's their job. And then we try to make sure that their actions are shaped for the public good. That's our job.

MICHAEL: And so, when we talk about that fear of getting away, what does that mean? Where would it go?

NEIL MCARTHUR: So, that is a really complicated question because, you know, people say, well, the whole point is that it will be smarter than us at some point, so we won't know what it will do. So, anything that we come up with, it could do something else, it could do something better. I think the concrete things people worry about is the way in which they could empower human actors who have bad intentions. So certainly, you know, people worry about taking control of the nuclear launch codes, but on a somewhat more mundane level, creating a bioweapon, that would not be great. mean, we're already seeing the way AI can be used in medical applications. So, if you flip that around and say, well, how could this be used for destructive purposes? But also, I look, I think one thing we learned because of the CrowdStrike chaos is that the entire infrastructure that we have is built on computers and it's very fragile. I mean, if one company sending one update to a bunch of servers can crash the airlines and everything else, then you can easily imagine how somebody who intended to create chaos like that could use AI to do it.

MICHAEL: As we've mentioned, your research looks at some truly fascinating impacts of AI, including coming religions that will worship AI. Now I found that kind of fascinating to think about, and it sounds kind of more science fiction, but what have you written about? What do you foresee? And again, back to that notion of how we should ethically respond to this.

NEIL MCARTHUR: So, let me just say, yeah, when it comes to AI and religion, AI is already being used in religious contexts because for any religion that you can think of, there is at least one and usually several chatbots that can give you answers. I mean, there's for instance, an app called Text with Jesus where you can text with and have conversations with any of the characters in the Bible, including Satan, although Satan is a paid-only option. But because one of the things that AI is good at doing is processing specific kinds of texts and then producing output based on that text.

So, it can look at all the things that Jesus has said or all the things that, you know, some other character, Moses or whoever has said, and then, based on that, produce answers to whatever questions you have. So, and then certainly religious leaders are using AI to help them write their sermons, just as students are using them to help write their essays. So, that's what's actually happening. In terms of speculation, what I wrote about is the way in which AI could potentially become the subject or the source of new religions.

Because AI has certain characteristics that we do associate with deities or higher powers. It is apparently infinitely knowledgeable. It can produce answers to any question instantly that you ask it. It can give you guidance in your life. And I mean, I think the combination of both its apparent sort of transcendent power, that is to say, its ability to sort of seemingly know everything, but also its ability to speak to you directly and personally. I mean, this is what these chatbots do, right? You've got this infinite power that can speak right to you and right to your problems and guide your life. And I think as it becomes more powerful, it’s gonna leave people somewhat awestruck. I think it's gonna become very compelling to them. And the third aspect of it is that we just don't know. I mean, it is truly a mystery. I mean, people talk about God and gods as mysteries. AI is truly a mystery. Even the people creating it don't know exactly how it functions. And it's capable of doing things that they don't understand and didn't expect it to do.

So, when you put all that together, I think that becomes very much the sort of thing that people will see as a higher power and see as being informed by some kind of more powerful spirit. And so, I think my speculation is you're going to see people start to form new churches and new religions based on this. Now you asked, what should we do as a society? My view is we should be quite accepting of that. I think that people already find sources of religious meaning from very diverse places. And I think that it is potentially the case that an AI-based religion could become violent or destructive, but we certainly know that existing religions are violent and destructive. And I think our general view of religion has been that wherever you find meaning, we should accept that. And I think one of the things too, is that technology is one of the factors in modern life causing people to lose faith in traditional religions, and they are searching for new sources of meaning. So, it only makes sense that they'll find it in technology.

MICHAEL: Could we program the violence out of religion?

NEIL MCARTHUR: Well, we certainly can put safeguards. I mean, there are companies that are putting safeguards of all kinds on these chatbots. Two problems. One is as this technology becomes more diffuse, there's always going to be companies that are willing to produce technologies without the safeguards.

MICHAEL:
Right.

NEIL MCARTHUR: So that is one problem. The other problem is, I mean, this is a broader problem, is that the more safeguards you put on the chatbots, the more people are unhappy with them. I mean, people

actually want some friction, not necessarily they want chatbots that are going to be violent or tell them to be violent.

But I think they really want these chat bots to be more spontaneous and more unpredictable than I think some of the companies want them to be.

MICHAEL: Right. A little bit more human then.

NEIL MCARTHUR: Exactly.

MICHAEL: Okay. So, let's pick up on a thought you just talked about that the AI speaks to you directly. And you wrote in the fall of 2023 in Maclean's that it won't be long, a year or two, before we have sophisticated purpose-built companion bots designed for relationships, sex, intimacy and marriage. What are the implications of this? And I think many people might find this alarming and unnatural, but maybe there's some benefits that we need to consider.

NEIL MCARTHUR: I think there are. I mean I think maybe I was even a little over cautious there because there are. There are already chatbots that you can interact with for, you know, any level of intimacy you want. And there are lots of people who consider themselves to be in intimate relationships with chatbots. And I think, yeah, people have a lot of concerns. Here's what I think the biggest concern that we should worry about right now is privacy because none of these companies, the Mozilla Foundation did a study of 18 different chatbots that are designed for intimate relationships and they found that all of them are selling data or sharing data. None of them have adequate privacy policies. So that's a big concern**.** The sort of deeper concern people have is that it will somehow disincentivize people from having human relationships or that it will somehow affect their human relationships in a negative way. I must admit I'm, I'm not ruling out that possibility, but I think that people actually are very good at integrating different kinds of relationships into their lives. I think that, you know, just because you have an intimate partner who's human doesn't mean you lose all your friends. And in the same way, I don't think that people just because they are having a relationship with a chatbot of some kind, I don't think they're going to abandon all forms of human intimacy. But I do think there are benefits. I think that, you know, lots of people are excluded from human intimacy and human companionship for lots of different reasons, one, maybe just choice.

They may be fed up with people. They may be, I don't know, working at an Arctic research station. They may be, you know, working on an oil rig or something. They may have a disability that makes it very difficult for them to go out and meet people and interact with people in person. So, I don't think we should judge necessarily the reasons why people want to alleviate their loneliness in whatever means are available.

MICHAEL: So, this is a theme I hear from you, which is, you know, it's here, it's coming. Let's accept it. Let's try to make the best use of it, and let's not be judgmental for people who do find personal benefits and use of it.

NEIL MCARTHUR: That's right. I mean, as an ethicist, one of the things I teach, one of the general principles I teach is, for adults, if they want to live their lives in a certain way, and they're consenting to certain kinds of behavior, then we shouldn't worry. Now, there are two important caveats when you teach sort of that general view that adults should be able to live their lives in the way they want. One is that their consent should always be informed, so they should always know what they're getting into.

And so, I think that makes it very important for us to understand what these bots are. Are they manipulating us? I think we need to have a full understanding of that. And then second, I think we need to be very aware that these chatbots are already being used by many people who are very young. And the time to introduce education about these chatbots in schools and about social relationships with chatbots is like yesterday. I mean, there's already an interactive chatbot built into Snapchat. Snapchat is an app that is used by millions of young.

Tens of millions of young people around the world. And when you go on Snapchat and message your friends, always pinned to the top of your messages is your interactions with this chat bot that's built right in. So, you know, this is happening, and I don't even think schools really have their heads around this. So, I think that needs to be part of the conversation.

MICHAEL: That's fascinating and the issue of privacy sharing of data. If you think about individual relationships, human relationships, they do depend on trust and we kind of have an understanding of what we share in our relationship and what we're accepting to share outside of it. And when we break those bounds, that's when relationships often break down. And here is a situation where you enter into these relationships, and you don't even think about the privacy issue. And as you said, it's being shared everywhere. And as you become more intimate, then you're sharing more intimate information rather than something that's not so intimate.

NEIL MCARTHUR: No, that's right. I mean, this is more than just what you are sharing with Amazon when you order toilet paper. This is potentially the intimate details of your life that you're sharing with companies that you really don't have any idea about.

MICHAEL: Connected to this, you and your colleague, Markey Twist, coined the term digisexuality. This itself is quite a big idea. What is it and why do you argue we need to ensure it is not stigmatized as it emerges?

NEIL MCARTHUR: So the idea of digisexuality is that it is a form of sexual identity. So, all of us use technology in our intimate romantic lives, in all kinds of different ways, whether it's internet dating or whether it's just messaging with our partner or whatever. But there are some people for whom technology is so much a part of their intimate life and their sexual identity that, in fact, it supersedes the human element. That is to say, they identify as people who use technology more essentially than they have human partners. So it may be that they're interacting with avatars or chatbots or whatever. They may also be interacting with humans, but the technology is the essential medium. Digisexuality has emerged with the new technologies that we have now that are more intense and more immersive than

previous technologies. So, things like chatbots, VR, robotics, things that allow you to have direct relationships with technology that may not even involve human beings. And do we need to ensure that it's not stigmatized? Yes, because it's already being stigmatized. I can see from the discussions surrounding the work that we've done, people already have quite stigmatizing reaction. I mean, I see in the media and on YouTube and so on, the people who react to it by saying, look at all these pathetic lonely people who are just using technology and can't have human relationships.

And we've always said, look, we go through this pattern when people become aware of a new sexual identity, whether it's kink or whether it's asexuality or whatever. We kind of go through this period of first of all stigmatizing them, then realizing that stigmatization was wrong and then accepting them. And I sort of feel like, well, maybe by this point we should have learned to skip the stigmatization stage and go right to acceptance.

MICHAEL: Right. I'll just say for someone my age, this notion of technology itself becoming kind of the center. I mean, I've watched it unfold over the years, but just that notion, I will admit, it's a little bit scary. It's a little bit daunting to think that technology can supersede human relationships.

But on the other hand, as you say, I mean, it's made me rethink, reading some of your work has made me rethink that notion and that bias because it clearly can play a really positive role if we allow it to evolve in that direction.

NEIL MCARTHUR: I believe so. And I believe, I mean, I think there's a lot of legitimate concerns about technology, although, you know, there's a sort of rule of the internet that the things you hate about the internet are the things that you hate about people. And I think that when you look at some of the problems that, for instance, social media has created, it's actually the human contribution that's created the problem. It's the cyber bullying and the exclusions and the competition and all that. And so, it isn't necessarily the technology itself that's causing the problem. So, we're gonna have challenges in our relationships, whether it's with technology or with people. But I think, again, think giving people more opportunities is always better than giving them fewer.

MICHAEL: So you spoke earlier about how quickly this technology has evolved and how quickly adaption has evolved. It seems to me that it evolved so fast, you could write something and then a year later, it's completely irrelevant or you have to really adapt. Yet, when it comes to AI, if we don't think about this, if we don't write about it, if we don't critically analyze it, if we don't look at the benefits and the costs, it could go off in a direction that could be really dangerous.

NEIL MCARTHUR: That's 100 % true. And I worry that because academics are so used to a different pace of research and have processes in place that are not adapted to this, that we as academics and we as a university could get left out of this conversation. For scholars, it is a real challenge because the whole publication system is built around you research something, you read all the literature, you write what

you're going to write, you submit it to a journal, the journal reviews it, the journal publishes it. That's a process of years. Well, anything that you wrote three or four years ago would be completely useless.

I will confess, I am still getting my head around how to do research, how to write, how to propagate my research in a field that is changing every week and every month. We as a university community have to have that meta-conversation about how do we reform our own internal processes for knowledge creation in a way that can respond to an issue like this one.

MICHAEL: So, one final question. Clearly this is a very disruptive technology in both positive and potentially negative ways. And you know, one could argue that panic is the response and we've seen a lot of that, right? But you suggest that that's not necessarily the path we need to take.

NEIL MCARTHUR: No, I mean, I think we need caution. We definitely need awareness. But I think that certainly, for instance, when you look at AI companions, the bottom line is people are using these companions because they're fun and because they add to their lives, and they benefit their lives. People are using AI to help them write emails because writing emails is awful and it's nice to have something to help you out.

In the end too, the uses of AI will be the uses that we want it to have. I mean, there are risks that it could get out of control, but ultimately AI will develop in a way that responds to human needs if we let it and if we shape it that way. And yeah, there's just lots of ways this could make life better, more fun, make our economy more productive. And I think we should just be aware of that. And also honestly, yeah, it is happening. And anytime there's a force unleashed on humanity like that, we should harness it.

MICHAEL: Neil, I want to thank you for a fascinating conversation.

NEIL MCARTHUR: Well, this was just a lot of fun. I thank you for your really, really interesting question.

MICHAEL: Thank you.

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Thanks for listening to What's the Big Idea? You can learn more about this and other big ideas by visiting umanitoba.ca. If you enjoyed this conversation, share it with a friend and join me next time as I speak with Professor Fei Wang about how UM's newest research center will support sustainable economic prosperity for our province in our changing climate.

Until next time, keep thinking big.