

# Research and Innovation Podcast

**Episode:** The limitations and potential of AI - and the role humans have to play in its success

**Speakers:** Professor Aristeidis Theotokis and Rashik Parmar, MBE

[00:00:06] **Aris:** Hello and welcome to the Research and Innovation Podcast. I'm Aristeidis Theotokis, or just Aris. I'm professor of marketing at Leeds University Business School, and in today's episode, I'm joined by special guest Rashik Parmar. Rashik is Group Chief Executive Officer of the British Computer Society at the Charter Institute for IT.

Rashik, welcome.

[00:00:25] **Rashik:** Thank you Aris. Delighted to be here. Looking forward to our conversation today.

[00:00:30] **Aris:** Thank you very much. In September, Leeds University Business School hosted "the Business of AI" event as part of Leeds Digital Festival. The event included panel sessions on how AI can be used to empower business success and also to manage innovation. As part of the day, Rashik gave a keynote address titled "AI: Boom or Bust", and this is the topic that we're going to be discussing today.

AI is a very interesting technology, but some people say it's more than that. Actually, AI has an autonomous intelligence that makes it able to function as almost a social act. So my first question is - we're hearing a lot about AI at the moment, but can you please tell us what can AI actually do today? And what's just hype?

[00:01:19] **Rashik:** Yeah. So, you know, we've had a lot of advances and, when people go to tools like Chat GPT or Gemini or Claude and they converse with it, it almost feels like it's real and it knows things, right. And that sense of discussing things, and it is a chat-based kind of discussion, conversation, it leads you to believe it can do a lot more than it can really do.

And actually, there's a lot more than AI that's needed to make all this possible. What we've really done is we've been able to advance using things called Large Language Models, which allows that natural conversation to take place.

We've had huge advances in things like vision and using AI to analyze images. Huge advances in things like sound analytics. And so these are, these are great. These are, these are tremendous advances, but it's nowhere near the power of a human, nowhere near. And what people are getting confused with is, I go and watch movies like Terminator or Ex Machina, and I see these wonderful movies and I think, "Hey, that's ChatGPT, it's there, it's going to kill me", right?

But it's nothing like that. What it is, is those tools are just a very sophisticated autocorrect. It's just taking words and repeating words based on what looks like a useful structure. So, the reality is we're a long way from AI really being anything like a sentient being, but it has huge value in what it can do because it can take simple repetitive tasks and it can apply them.

So I'll give you a real simple example. If you want to go and, let's say you broke your finger and you go to the hospital. You'll get an x-ray taken and somebody will look at that x-ray when they're looking at the x-ray, the accuracy of the radiographers looking at that x-ray on a Monday morning when they're fresh is really good. On a Friday afternoon when they're looking forward to going home, it's not so great, surprisingly, I've read.

What AI can do is you can take that image, and it can mark out "this is an anomaly". This is something that you as a radiographer should look at, and it improves productivity. That's a simple example of how it can make a huge difference.

At the same time, things like ChatGPT and those tools can provide a framework. If I ask a question of, I want to write a book presentation about this topic, give me a framework. It can distill what's been done in the past and give you a framework to build from. So those are some of the practical things that we can really make real advances on and improve society.

[00:04:15] **Aris:** Thank you very much. That's a very nice answer. I will pick up your quote that AI at the moment is like a very sophisticated auto correction tool. That's a very interesting point because in my research, we're trying to understand how consumers or people, humans in general, understand AI and you're very right - that people attribute way more human attributes that maybe it is necessary to AI. And that, according to my research, makes them really scared of it. So, something that we have found is that the way that you frame AI, the way that you present AI to either consumers or employees has a huge impact on how they perceive it and how they react to it.

So, I will get this idea of AI is just a very, very sophisticated tool that works equally from Monday to Friday, and perform tasks very, very efficiently. To promote, AI, especially to those people that we are identifying in my research are really scared of AI being too human. You know, the problem with AI is that unlike any other technology, as I said before, has autonomous intelligence, and that makes it look more like human than any other technology before.

But the problem at the same time is, that when you're trying to connect with AI, it is, as I used to say, too human for technology, but too technological for a human. So your point clarifies, I think very well, and I think a bit underplays in a good way, the framing of AI. You suggest that, "relax guys, it's just a very sophisticated tool that can do many impressive things, but don't treat it like a human".

[00:06:19] **Rashik:** Just kind of building, just building on what you were saying there, because, people are fearful, right? People are fearful for their jobs. People are fearful for their livelihoods. Right? So the way I frame this is - AI isn't going to replace you. Somebody who can use AI better than you will replace you.

[00:06:38] **Aris:** Yes, that's a very good point. That's a very good point. And this leads me to the next question, which is - who is going to use AI, or in other words, I mean, we can understand that larger firms or richer people have access to AI, they can invest in AI and they can get some benefits from it - more money out of it.

However, someone could say that even smaller players, like less big companies can also have access to this powerful machine intelligence and it can make them, this access can make them more competitive. So my question, after your point, is making money from AI and who is losing at the moment?

[00:07:24] **Rashik:** So, the winners at the moment are those that can build those Large Language Models, right? You do a market capitalization on the big platforms. So people like Nvidia, AWS, Google, OpenAI, Microsoft, the market capitalization of those companies have increased dramatically. In fact, it's in the multiple of trillions of dollars that's increased.

So on the other side, I look at, you know, where's the potential value for this? What's actually going to happen? And you can argue that this is a productivity play. So we will increase the productivity of a certain portion of society. And, and the way I break it down is, it's all about the routine work aspect of life, right?

So, if you think about the economy of the world, 10 percent or less is agricultural economy. You know, there's about 20 ish percent or thereabouts, which is manufacturing related. And yes, this AI will help manufacturing a small amount, but it's not going to change the productivity of manufacturing.

Service industries are where it's going to play. And that's where people are fearful, right? So when you look at the service industry, you break service industries into three categories. There's personal services, so that's care workers, that's, you know, medical staff, that's, you know, your hairdresser.

Are we going to get an AI hairdresser in the next 10 years? Yeah, yeah, I don't think so somehow, right? So there's some categories that aren't going to get affected. There's another group, which is creative industries, and they will increase their productivity. We're already seeing that where AI is helping them look at creativity in different ways.

Fashion designers are looking to look at fashion trends and find new ways of doing different forms of fashion. And so there's, there's a level of improvement that's not going to change dramatically, but there's another class of class of service industries, which is. What are classed as routine work, you know, things like the checkout operator, the things like, you know, the taxi driver.

Will we see autonomous vehicles? Not in the next 10 years because there's lots of issues, but will we see increased assistance around those? Absolutely. Will we see automated checkouts, changing and reducing the number of people at checkouts? We're already seeing that self-checkout as an option because we've got AI to help us out, right?

So, you look at routine work and routine work represents about a third of service industries. So a third of 70%. So that's about 20 percent, or 21 percent or 20 percent of the economy. And then you say, well, that's going to improve, increase productivity about 10, 20 percent or thereabouts. So you're looking at something like, 2-ish trillion dollars of potential GDP is going to move. There's going to be a cost to that. The net of it is, when you look at the market cap of the platform providers and look at the potential value, there's a mismatch.

And so there will be winners and losers, right. Some of those platforms will win, some of those platforms won't.

But the real thing is, I liken this to a very similar experience that we had with the dot com boom, but also with the gold rush. The people that make the money aren't the people that have the gold, typically, it's the people who make the shovels, right? And so recognize who are the shovel makers. So these are the people who are building the AI tools.

So if you go to a website, like, which is like, it's called "there's an AI for it". Search that. You'll see the explosion in number of APIs built on top of these AIs, and that's going to continue to explode. Some of those will be the places where people will make lots of money. There'll be small bits of tooling, which will solve specific problems like the radiography problem.

There's tens of thousands, if not millions of those little problems that need to be solved, and there will be specialist AI built for those, and that's where a lot of money is going to be made.

[00:11:32] **Aris:** Yeah, that's a very good point. I very much agree that those that they will make money are those that they produce that. But I also feel based on recent research that big winners will be those that they manage to integrate AI in a successful way. And by integrating, I mean, I was reading recently an Academy of Management journal article that was presenting the use of AI for salesforce employees.

Okay, so they were working together with AI to improve their performance and results. So that it was the combination of human mind from experienced salesforce with AI that yielded the best results. So the summary of this article suggests that if you rely solely on AI, if you think AI can do miracles without you doing anything, you will definitely be a loser.

So that research was really, really mind blowing by suggesting that the most experienced salesforce were the ones benefited more from the use of AI. Why? Because they were able to integrate their experience with what you suggest as routine or problem-solving nature of AI.

So I very much agree with your point. And I feel that the future should be to investigate how to integrate AI in all aspects, either very routine jobs or more advanced types of jobs. So how to integrate AI in a way that we get the most out of it.

[00:13:11] **Rashik:** Yeah, just building on your point of integration, because, you know, integration may come because you understand friction that exists in somebody's daily life. And unpacking that friction is really important. So think about what happens with friction. When you get sand inside an oyster, that oyster will polish that sand and eventually make a pearl.

In the same way, you'll make pearls of capability using AI, which will be magical and make some fantastic experiences for the human-to-human interaction. The world is about human-to-human interaction, and we're using AI to improve that. And if we can find the ways of making that human-to-human interaction better, that's where there'll be value.

[00:13:57] **Aris:** I agree. It should be like, a collaborator and assistant. It should never, at least at the moment, it feels that it should never replace the human nature or the human interaction. So I think that's a key take-out for defining who is going to win in that battle of AI. And if you don't treat it like that, yeah, it's risky.

I agree very much with you. Speaking of risk. We all know, we'll read about different risks of AI, privacy, different other things that we're going to lose control, AI will take over our lives and so on and so on. What I want to ask you is not about the risks that we are reading, but I want to ask you if there are any other risks that we're not talking about enough, related to AI.

[00:14:44] **Rashik:** You see, the biggest risk here isn't the AI itself. It's what humans will do with that AI. Just as you can use it for good. If I give you a knife, you can use that knife to cut an apple and feed yourself. I can use that same knife to kill somebody. AI is just another tool which humans can use to improve health care, improve daily life, improve human interactions. They can also use it to hurt people.

[00:15:13] **Aris:** Can I interrupt you here? Because I think what you said is brilliant. You just say it and you, I will let you develop more of your answer, but I think you say the real risk is human. Don't worry about AI. And I, I think this is brilliant. Please go on.

[00:15:25] **Rashik:** Yeah. I'll give you a real example. So there's a journalist, a tech journalist in San Francisco, and he got a phone call from somebody saying "I want to let you know that we've kidnapped your wife. Here's a voice of your wife, you hear her screaming and I'm from the Mexican mafia and if you don't give us a large chunk of money, we're going to kill your wife." Now, what that perpetrator had done is they'd taken his social media profile, found out about his wife, took the voice footprint of the wife, the voice print of the wife, and created a sound image of that wife speaking, and he could interact with it if he wanted, right? And that made him feel that this was real.

He followed with that for about a minute and a half. Then he realized that this was a, this was a hoax. He put the recording on call and he called 111 and he had the police, you know, the emergency services listened to the call as he went through and he was smart enough to put it on mute and so on, but for over a minute and a half, he was taken by the whole thing.

And what that shows is, the frailty of human and humanity in large, right? And how this AI can be used to really victimize, persecute. You think about all the problems around, you know, hate crimes, in its broadest sense, they can be amplified with these tools. In a similar way, it can be much more sophisticated espionage. You can look at, you know, things like election interference, all of those kinds, these are big societal risks that will only get amplified by these AIs. So what I say is AI is amplifying the human. It's amplifying the good, and also the bad of humanity. So we have to manage that. And that's where government and governance is going to be really, really important.

And we need to use AI to fight AI, I suspect, right? So we need to fight AI to be able to identify where this is a real footprint, where it's not, you know, and there will be different things we can do. We can use watermarking techniques. There's lots of techniques we can use, but this is the heart of the issue. It's about amplifying the good and bad of society through AI.

[00:17:44] **Aris:** Yeah, correct. I mean, that's a very good point. I feel that AI, as you say, can just increase the risks that we have as a society or we already had. I very much agree on that. And I have another question related to control. Speaking of risks and how to manage AI or control, how to make the risks lower. How do we stay in control as AI gets smarter?

[00:18:11] **Rashik:** Yeah. So, you know, this is a very good question. Last year I published in HBR, an article called "what is responsible computing?". It's our responsibility to know how to ask the right questions, to know where the boundaries of where we should and shouldn't use AI and whether the interactions we have are real or not.

We've got to be on our guard. We've got to be responsible for that. So, so things like, you know, is the AI trained with an inclusive set of data or are there gaps? Is it bias built in that data? Things like, do we have transparency of the AI to understand what it's recommending and whether we can go

and look through that, see if that makes sense or not, so don't abdicate to the AI, use the AI as a tool, know what its boundaries are, know what its limitations are and use it in the right way.

And I think in that way we can make, we can really help make society much, much better with this AI. We can help address things like climate change. We can help address some of polarity in society. We can help unify society. You know, there's huge amounts of good and let's use the AI to really create the world we want to be part of.

[00:19:26] **Aris:** It's about the society; it's not about AI - I very much agree. Actually, I'm doing research and trying to understand how different societies accept AI or treat AI.

And when I say societies, I mean cultures. So together with my doctoral student, we're doing research on different cultures, such as Chinese culture, like Western or Eastern cultures, and how do they treat AI? Something very interesting that we found is, speaking of control, that more Western cultures that have more individualistic elements, they want AI to be controlled. They want to control AI. However, if you go to more Eastern cultures, you see they're looking for better connection with AI. They're trying to build a relationship with AI.

So my point is that building on what you say that AI will be integrated in the existing society, the way that the society integrates different elements from the environment.

So, if we make, and I feel that a society that is solid will use AI in a very effective way.

So thank you very much for your points. I don't know if you have anything to add as a summary?

[00:20:38] **Rashik:** So, so the way, the way I would summarize is, that AI is just the next wave of digitization, right? And for you to be successful, you have to be digital. So I say be digital or be digitized. It's up to you.

[00:20:53] **Aris:** That's a very good point. I agree. For my aspect, building on your point, I would say that this digital revolution, as you presented, should include and will include humans. So we're talking about at this new age, the digital age, we're talking about the interaction of humans with technology with digital elements.

And I think just to promote my research as well, because I think it's interesting - it's critical to understand how humans interact with AI in this new era. So we should focus on AI, we should promote AI, we should develop AI, but we should never forget that humans should be the central element in that environment.

And I feel that research investigating how humans respond to these technologies should provide insights that makes the world better.

[00:21:53] **Rashik:** Perfect.

[00:21:54] **Aris:** So I think this is a very good way to close our podcast. Thank you very much for your great points. And I think people listening to this podcast will understand in a very solid way, what AI is, what AI is not, because we really need this clarity- your clarity – in these days.

Thank you very much.

So we hope you enjoyed the show. If you want to get in touch regarding anything we've discussed in today's episode, our contact details are in the episode show notes. Thank you very much.