AI and You

Transcript

Hi! Welcome to episode 47! Today we will conclude the interview with Rajiv Malhotra, author of the new book, "Artificial Intelligence and the Future of Power: 5 Battlegrounds." Rajiv has both a computer science background and has been researching civilizations and their engagement with technology from a historical, social sciences, and mind sciences perspective. He is Chairman of the Board of Governors of the Center for Indic Studies at the University of Massachusetts, and is a visiting professor at Jawaharlal Nehru University.

In part one last week, Rajiv compared today's high tech companies' power structures to the British East India Company in terms of a neocolonial or neoimperial impact. When we get academic about this and use big words like that it's tempting to think that the impact is also academic, i.e., subtle and not easily seen; but the impacts of the cultural dominance accelerated by technology are big. Just by the kind of people who are active in AI right now being predominantly white western males, the applications of that technology are shaped to favor that group. It's not usually a conscious decision, but it is an inevitable effect as a result of the system being composed of these people. We've talked about emergent behavior on this show before in the context of how, say, consciousness is an emergent phenomenon of all the neurons in the human brain linking together. Well, all complex systems have emergent behavior, and so we have to ask ourselves, what's the emergent behavior of a system of technology development with all its startups and funding sources and consumer markets and knowledge transfers when there is an ethnic imbalance among the principals in that system?

That's what Rajiv thinks about. In the rest of the interview, we'll talk about how jobs, algorithms, privacy affect those imbalances - and what you can do if you want to make a difference in redressing the inequities I've been describing. Back to the interview.

But there is an argument that AI will create more jobs than it takes away, and that may not be proven. What's your take on that?

So I think that AI will create new kinds of jobs, than the ones it kills, and these new kinds of jobs will require much higher level of education, than the jobs it kills. So it's not going to be that the same people who will lose the job will be the ones retrained into the new job. As I mentioned earlier, the jobs killed by Amazon were very different from the jobs created and they were the jobs created in big warehouses in some locations, whereas the jobs killed are scattered all over the place. So in AI, the same thing will happen. Even if 100,000 jobs are killed and 100,000 jobs are created, there's a huge social disruption because of what I just said, but I don't think that the number of new jobs would be of the same quantity, the same numerical value because automation is making it easier for fewer machines to do the work of a large number of people. With the advancement of not only AI, but AI-related fields like robotics, a lot of things are happening. So I would say that the when I look at reports that say that AI will create more jobs

than it will kill, they usually come from McKinsey, which serves big corporate people, World Economic Forum, which first serves big corporate people, Price Waterhouse Cooper, Ernst and Young; and when I look in the back, I look at the methodology, the methodology says that they went and surveyed 200 largest corporate people in the world, 200 largest multinationals, or so many multinationals of this country and that country, but none of those people have said that they went to the villages where most of the people in India work and looked at the migrant workers or looked at people of that strata in the United States. Nobody who's done this research has gone to the NGOs that serve the African American and Latino communities in inner cities in the United States that are poor; nobody has gone there to see what's the impact on them. You just go to corporate America, in New York City and California and a few places, and you get their consolidated view on what will happen, and their view is very different. So a top-down view of the impact of AI is quite rosy. I'm a technologist by training, I am pro technology, I'm not wanting to kill it or squash it. But I think they ought to be balanced, there ought to be conversation, there ought to be social responsibility. Certainly AI is very good for treating people in medical situations, new medical breakthroughs, in agriculture, all kinds of good things and in my book, in chapter one, I've listed a whole lot of great accomplishments that AI has and will continue having. But I feel as far as its adverse impacts are concerned, the AI industry has not gone to the places that are likely to be harmed the most, which are the poor countries in the world, the poor cities in one's own country, and also certain kinds of industries and people with less education. They have not done a good job to go there and understand what the impact is with those people and try to do something about it. So it's a very kind of an elitist, it will be good for those for some investors can make tons of money, and they already are. So I have no doubt there will be a thriving new economy and a new world order. But it's not going to be equal for everybody.

And that's the key word there, *equal* or *equity*, that AI and technology seems to be accelerating the flow of capital from the people who have less of it to the people who already have quite a bit of it. To look at a conversation that has been happening on a large scale in the United States, but overflowing in into the surrounding cultures; the Black Lives Matter movement has really created a national conversation that's penetrated to workplaces, about diversity, equity and inclusion. And although there is certainly polarization within the culture, there are a great many people now looking at how they can recognize bias and do better. So if some of those people are listening to this podcast and going, yep, I'm on board, Rajiv, I understand what you're saying, I see there's a problem, what do I do about it?

So it depends on the individual, what his capacity is, what his capabilities are. I'm writing a book to spread awareness, and more conversation. What you could do about it is go to the events, the conferences, wherever there are forums on AI, and bring in more speakers, bring in people who are not producers and practitioners of AI, but who are representing the consumers and the people who are going to be impacted. We need to bring in more people from the social sciences, from psychology, from NGOs, we want to bring in people who represent the less developed economies, the non-Western economies, and we want to bring in people who are minorities. So I think what you can do, as far as I'm concerned, go to my website, http://www.aiandpower.com

and register. There's a way to register yourself, enter your email id, we will make you part of the movement and keep you involved in all this and shows like the one I'm on right now are amazing and wonderful opportunities for us to spread this awareness as more people join and have a voice in this. We want to compel the AI powers to listen to us just like you know, climate change. They were these people who were putting out all that problem but not willing to listen until there was enough outcry from the public. I'm not looking for regulations to clamp down on these people, but I'm looking for responsible behavior, and I'm looking for government - the governments need to be more educated. I would say among the different governments that I looked at all their policies so far that are being debated, the EU has some interesting debates going on, they are kind of holding these companies accountable more than anyone else, and other countries need to join in. So what the average viewer or average listener can do is join our list, be part of our mobilization. Let's continue having more conversations like this and build the pressure.

Now looking at what might be some of the biggest engines behind the cultural dynamics that creating inequity and spreading AI and technology, then we have to look at the big corporations, and maybe the eventual battle won't be between the US and China, maybe it'll be between Google and Tencent. But what sort of actions should those companies - let's assume Western ones for now, the Googles, the Apples, the Facebooks, the Amazons - what kind of conversation should be happening in those companies surrounding their ethical obligations with respect to the factors you've outlined about the impact on have-not cultures around the world? And to what extent does that depend on the company's ethical standard itself? If I just think about the ethical temperature of companies like Apple, Google, Facebook, I come up with a different answer for each of them. They don't feel the same. So to what extent are you concerned about the rise of another one of those companies? Could that become the next East India Company by itself?

Yeah. So it's very interesting that Google had a position called AI Ethics, or AI and Social Responsibility, something like that, and there was this woman, a very brilliant woman from a minority background, who was made in charge of this and the purpose was they announced it with great fanfare, it didn't last long, they announced it with fanfare that this is an in-house position and she's going to be the conscience of Google, and she's going to keep us honest, and tell us what we are doing wrong, and how our policies might be not correct with respect to all of this bias. I think her position was called AI and bias or something like that and her job was the kind of keeper of this information, this monitoring, she was supposed to monitor, and evaluate any practices that could be not very good for society. She got fired.

You're referring to Timnit Gebru there, right?

Yes, and I'm sure many of your viewers know this. But just to refresh their memory, she got fired a few weeks after she was hired, because she wrote a very scathing review, but that's exactly what her job was and so you know, this is this is, this is a very sad situation. So whether they are funding a kind of an ethics organization outside, giving them money, but those people know secretly that if you get out of line, they won't give you funding next year, so that it's a way

to contain them, or whether they're starting this kind of thing in-house, the amount of power they have is so huge. I don't know if self-regulation can be enough. I think, certainly they need to be listening to people like me. I have had difficulty getting into these companies with my book. I mean, you would think that somebody who's writing about their industry - I'm qualified to do so, I've known this industry for a very long time and I put a lot of effort into it - you would expect that they would want to at least understand and listen, where is this guy coming from? But so far, it's been sort of like quietly reading and studying it, but not sort of engaging it. I have that problem with the big mighty AI companies so far. They want discussion up to a point. So for example, they will offer one way to keep privacy is to anonymize the database. So it will not say that this is about Peter and this is about Rajiv; it will just assign some kind of a number. This is not good enough, because the issue is not that they know me and my privacy for the benefit of divulging it to other people, which would be against my rights anyway, even under the current law. The point is that whatever by whatever number they've designated me, they're learning my behavior pattern and that allows them to have an advantage in dealing with me. They're learning about the behavior model of people of my ethnicity, my kind of people, whatever community I may belong to. So they're training their algorithms to hack our minds, anticipate our behavior, sell us things: that advantage of training the algorithm doesn't go away by just keeping it anonymous. Another thing that they've offered is that in these developing countries, they'll locate the server in that country. So India feels very happy that foreign social media are agreeing to put all the servers in India, but where the server is located has nothing to do with who has access to it. I mean, if I'm monitoring your information around the clock, it doesn't matter if I put my server in your basement. The point is, I have access to it, it's the information that I have access to, not the physical location. And the AI algorithm codifies that information such that the other person who may access it doesn't even know how to make sense of it. Only the one who knows the algorithm is able to make sense of it. The real trick is these algorithms are not transparent. They don't just give out the source code. They don't give out the actual logic, the actual mechanism of how this algorithm works, how does Facebook decide which posts will be blocked, which will be boosted, on what criteria. So I just did a show called AI and Geopolitics, just came out yesterday and we got a notice from YouTube saying that, because of the word politics, it has to be blocked, because it interferes with elections. Now, it has nothing to do with elections, we had one guy from Switzerland, one from Austria one from India, and we are discussing my book, and it has nothing to do with US elections or anything of that sort, but their algorithm makes that kind of assumption, there is no transparency where they are held accountable for algorithmic bias. Right now, if you have algorithmic bias in hiring people, when the algorithm is screening people for jobs and is biased against certain people, or whatever kind of bias there may be, you can just complain to Facebook or YouTube about some problem concerning our account, they come and say, "Hey the algorithm decided that I cannot help you," as if this algorithm is some kind of a deity that is above all the responsibility and accountability. So they have to take responsibility for what they are doing, whether it's done directly by humans, or whether it's done by machines on their behalf.

I'm just suddenly struck by how we are having this conversation about AI and the Internet creating this inequity in the way people are treated and, and yet, when it started, when the

Internet was commercialized around 1994, it was seen as this great equalizing force. I mean, this conversation would have been unthinkable at that point, because it was the age of "On the internet, no one knows you're a dog," and if you're from Baltimore or Bangalore, you look the same on the network. It should have resulted in this great equalization, and yet, K-shaped curves again; it's done that in some ways, like I can make micro loans to people in Africa at the click of a button. But then there's the whole conversation that we're having, You mentioned in your book, you describe a battle between the metaphysics of consciousness and AI's reductionist challenge to spirituality and we've been getting around the edges of this; I think we did talk about the cultural aspects of it, that but that's pretty demonstrative language that's putting a stake in the ground here. Tell us what you mean by that.

So I come from a tradition where the future evolution of humanity is through yoga, through meditation and so you evolve your consciousness, you go within; you achieve higher states of consciousness. So that is one camp, let's call it the spiritual camp, and there's a lot of consciousness-raising movements all over the world that espouse that from various faiths and so on. Now the opposing camp, even before AI was a biological materialism which said that look, there is no such thing as a consciousness and all that as a overriding principle, if we are just biological machines, and we are just physical matter, when the when the physical organization of biology becomes very complex, we think we have a self and we are conscious, and so on. But at the end of the day, there is no such thing as a soul or a spirit. It's just matter, and that's a materialistic camp that has existed a lot of sciences in that area. So these two have been competing with each other and the biologists have been put on the spot: You guys have to explain the nature of consciousness, if we are only matter, how does consciousness emerge, and they've come up with various theories and so on. This debate is live; it's a very prominent debate, I'm sure your viewers are very familiar with it, lots of action in this area and it seems for the last 15, 20 years, that the consciousness movement is kind of prevailing and moving ahead, as more people have experiences, more people get into higher states through meditation, and they have these experiences, so that movement has been doing well. Now comes AI. AI works off the materialistic model, it says that the brain is neurons in a certain way, neural network, and we can simulate and replicate it in software. Your heart is a machine and we can replicate it, your lungs, your pancreas, your liver, every part every biological entity is basically modeled, you can model it as an algorithm or as a, as some kind of a computational device of the cell, how it works, the DNA, how it works, it's all procedural, just like software, and once you've decoded it in this reductionist manner, taken a system broken into parts into smaller parts into smaller parts, and each of them is described fully as some kind of a mechanistic behavior. Once you've done that, then you can replace these parts you can reprogram them, you can get in and fix them, change them their behavior, you can put in implants. So the reductionist model of biology and life is getting a huge boost with AI because this the success of AI, every time AI produces a product that makes you happy, that can get rid of bipolar, that can solve depression problems, that can give you an artificial view of flying in the sky, or virtual sex, or going down Niagara Falls, or whatever kind of an exciting experience, which is all virtual and a kind of augmented reality. Every time it succeeds in that - and the more products come out the more billionaires and trillionaires, trillion dollar market cap companies emerge on that - the more successful that

materialistic model is, because nothing - and this is the important point - nothing in that materialistic model of AI requires having any presence of consciousness, there is no role of consciousness in providing, in developing, an AI solution. So what it has done is, two parts of my life are in conflict. The part of my life, which is a consciousness-oriented, yoga meditation-oriented, spiritual person, that part which I espoused and pursued all my life, versus the AI person in me, which is what was my former training was as a computer scientist. So that has gone far ahead. So these are the two in conflict, and I call it the battle for self. This is the battle force, it's an important battle, because to the extent AI succeeds, the AI product person is going to say, why do you need to meditate; those guys are speaking 20 years to achieve a certain joy, I'll just give it to you with a click you just put in this you can get some hormones, you will get some mental whatever stimulation, and you will feel happy. So why do you need to do all this? So as we succumb to a mechanistic artificial gratification, we become less human in my opinion, we become more like machines, we are more able to quickly buy this maybe by a streaming service, 10 years from now you buy a streaming service at various levels of payment, and based on that they will stream experiences to you and these experiences could come through augmented reality or implants or whatever. So why would anybody want to go and meditate or enhance their spiritual side or something, when this is all mechanically manipulated, it's all machines anyway and there are some smart people who can do it for you? If that's the future, then some people will say it's a brilliant future, it's a great future because you get rid of human beings being human because they got a lot of nuisance because they fall ill and we will make sure they won't fall ill and they commit crime, we will make sure they don't commit crime. But you know, what happens is that you get rid of free will and you get rid of a lot of what we what is what it means to be human. I have trouble with that.

And I'm sure a lot of people are getting visions of the movie *Wall-E* and humans being carried around on recliner chairs while they watch movies and we're taken care of in every respect. We're not there yet. But what is happening now, what you're talking about, is that the mechanistic view of the universe, the scientific explanation for what surrounds us, which, throughout history, the sciences always said there is an explanation for this, we just haven't found it all out yet, is that AI seems to have created the atmosphere where we think, "Well, we've pretty much got it all down, now, we just gotta build it." And then that results in in kind of this assumption that we've solved all of the problems, we just have to build a bigger AI. I want to relate this now to what we're currently experiencing, we've been talking again about the future, and when the effects of what we're talking about become more blatant. But that's by definition, some distance in the future; it might be a little distance, but it's not now. And yet, AI is having effects right now that just may be in ways that we're not noticing. How are we being unconsciously influenced by AI right now, in ways that you've identified that matter in your book?

Well, every time your facial recognition is used to open your phone, or your thumbprint, or finger fingerprint recognition, all these are AI techniques. Machines can recognize faces quicker, better, more accurately than humans; you can scan a stadium and pick out a person more accurately, whether it's dark or light or different conditions, if the guy has a beard or wearing

glasses, you can still pick him out by facial recognition. So you know, there are things like that happening all the time, more and more traffic lights in the US got camera, and how much they're capturing, who is capturing. I have a friend in Texas whose software business, AI-based, is to supply police stations an analysis of all the social media buzz and facial recognition buzz. I don't know whether it's legal; he says he's got a few thousand police stations as his clients and he gives them a kind of an analysis of who are some troublemakers, or who are using the kind of language that maybe are suspicious and if the police know of some people that they think are suspicious, then he can keep an eye on them. So this kind of monitoring is going on. But it's kind of very quiet. I know in Florida, one judge said that any traffic violation that you cite based on camera, you take the license plate number, and you give a citation and because this guy was speeding through a light or whatever, is voided. I don't know how this matter was resolved. But a few years ago, a judge said that this this kind of a ruling should be not allowed, because it violates this guy's privacy. So there are some judges and some courts that have acted against this heavy-handed use of AI. So AI is kind of becoming more and more ambient. When you have Siri or Alexa, listening to your voice, it's learning your accent, your voice, your lingo, what you do, how many voices in this family, recognize each person's name and who they are, and what time of day they come, to which room they go, so it's kind of eavesdropping and becoming very intelligent about you. So all that is AI. Imagine if everything is running on electricity and a person doesn't know electricity at all, he comes from another place where he doesn't understand it. He would not see electricity, per se, he would just see lots of things functioning and he wouldn't know unless he's an engineer, he would know that they all use electricity. So AI is sort of like that. It's like electricity. It's not like AI per se, very explicitly certain companies are marketing AI per se. They are in that business. But a lot of AI is sort of hidden in the way insurance policies are processed the way bank loans are cleared the way jobs indeed processes job applications, dating services use AI to match people. You know, the law enforcement, the crime kind of people, they look at AI. Defense, the government looks at AI. AI is in the weapons, the weapons being built are AI, driverless cars which are on their way. So AI is sort of embedded in a lot of things that are already part of society and this is happening at a frightening rate. Many people in fact, when I wrote this book, many of my friends said, why are you writing this book? I don't know any AI and nothing is happening to me, I don't see them, kind of that sort of thing. They don't realize that Facebook is run on algorithms and so is Twitter and so is YouTube and so are all these - it's not like bunch of human beings making every kind of decision about you and what to send you and what to think of you. The decisions are made by algorithms and these algorithms learn from the big data and they become smarter and smarter, and so interacting with us on social media, our algorithms, and behind the algorithms and machine learning and that is based that is AI and behind that is the big data which is fueling all this that's the raw material. At the top are some people who are making policy decisions on what to allow, what not to allow, as a matter of policy, but it is a giant machine which is carrying out those policies. So AI is already here.

Well, Rajiv, it's a wonderful conversation. It's an important one and I am sorry, it has to come to a close now; maybe not forever. *Artificial Intelligence and the Future of Power: Five*

Rajiv Malhotra, how should people get in touch with you find your book, follow what you're doing?

So it's available on Amazon everywhere and other places, you just go and look for "Rajiv Malhotra and artificial intelligence and the Future of Power". But if you have any difficulty, or in any case, I would love you to go to my website, http://www.aiandpower.com and there you should please register and join our list and you can look at many videos, maybe 30 of them we've done with various panelists and debates and discussions. There are excerpts from the book, table of contents, and certainly you can hit Buy, and you'll be sent to Amazon and you can buy this book there. I would love to hear from people. I would love to have you read and review the book, write reviews, send us links, and join our list and stay in touch.

Fantastic! Thank you again, Rajiv.

And thank you very much, Peter. I've really enjoyed it. You have a really sharp, hard hitting probing approach. It's my first experience on your show and I must say that it's been delightful.

And hopefully not the last.

Okay, so there you have it. Once again I think we got an illustration of how AI is affecting all of us, across the world, in so many different ways. The idea that you could just sit this one out, or let it go by and not be affected, is one that a lot of people, especially in, say, rural areas, often have about leading edge technology, but I'm certainly seeing that that's just not possible. You may not *see* how AI is affecting your life, but that doesn't mean it isn't. It just means that your story about what's shaping your life is missing a key narrative. Check out Rajiv's book to help make your story more accurate.

In today's news ripped from the headlines about AI, researchers at Brown University have demonstrated the use of a wireless, high bandwidth brain-computer interface (or BCI) capable of transmitting brain signals at single-neuron resolution and in full broadband fidelity without physically tethering a user to a decoding system. No more subjects wandering around with cables tethering them to a computer. Traditional cables are replaced by a small transmitter about 2 inches across and weighing a little under 2 ounces. The unit sits on top of a user's head and connects to an array of 200 electrodes within the brain's motor cortex transmitting 48 megabits per second. This system, called BrainGate, is the first demonstration of a brain-computer interface able to transmit the full spectrum of signals from an intracortical sensor without cables. Lead author Professor John Simeral said, "We've demonstrated that this wireless system is functionally equivalent to the wired systems that have been the gold standard in brain-computer interface performance for years." The trial participants – a 35-year-old man and a 63-year-old man, both paralyzed by spinal cord injuries – were able to use the BrainGate system in their homes, as opposed to a lab setting where most BCI research takes place. Unencumbered by cables, they used the BCI continuously for up to 24 hours, giving the researchers long-duration data, including while they slept.

You can find out more in the [IEEE Transactions on Biomedical Engineering](#). It may not seem on the face of it that this has that strong a connection with AI, but decoding the signals from the human brain is the kind of pattern matching problem that requires advanced AI to make significant progress. And of course, being able to tell how our brains work would be a big step towards making computers that really think.

In next week's episode, I'll be talking with Phil Hall, who creates conversational AI systems. If you think you know what that means, if you're thinking about the usual chatbots, voice recognition, and natural language processing, you've not seen Phil's work. He approaches it from a whole new perspective. His AIs are part expert pals, part performance art. To find out more, tune in next week to *AI and You.*

Until then, remember: no matter how much computers learn how to do, it's how we come together as *humans* that matters.

http://aiandyou.net