Life & Arts

Kazuo Ishiguro and Venki Ramakrishnan: imagining a new humanity

Two Nobel laureates on the ethics of AI and gene-editing, the battle over truth and the age-old rift between the 'two cultures'

Kazuo Ishiguro and Venki Ramakrishnan MARCH 25 2021

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The truth about truth

Kazuo Ishiguro It seems to me that in this past year, we've reached the peak of two opposing ways of approaching truth. On the one hand, we've had a search for truth as it exists in your world, in the world of science, and we've come to rely on that desperately. All our hopes are placed on you being able to tell us what's happening, how we get out of this situation. And I think we really appreciate the fact that all the discussions you have are based on evidence and rigorous method.

Contrasting to this, particularly around things like the US election, we seem to have this completely different approach to truth, which you could summarise by saying "whatever you feel with sufficient conviction is the truth". And the evidence is almost irrelevant. It's your emotions that give the truth validity.

Venki Ramakrishnan At the very forefront, science is very fuzzy. There are lots of uncertainties. What we try to do is keep refining the probabilities until we know, with much greater certainty, what is actually happening.

The way we arrive at that is not because we scientists are any less emotional than non-scientists. Scientists, as individuals, are just as vulnerable to bias, emotions, all of the other things that make us human. But, rather, the way science works is first of all, people check each other's work, so there are cross-checks. There's a rigorous method. You don't take people's word for it, you have to look at the evidence.

So, that is how science proceeds. Whereas what the public wants are certainties, and this makes the public vulnerable to charlatans, who are prepared to give people certainties. This is true, whether you look at things like climate change, or genome editing, or even the Covid crisis. But in the end, scientists believe that truth wins out and there is an objectivity to science that's a result of the process of science.

KI I've often felt that I've been allowed to grow up in a world with some sort of a big Berlin Wall between the culture of science and the culture of the arts. Even though my father was a scientist, at a very early age I decided that way of thinking was for somebody else. And I sometimes felt even proud of the fact that I knew very little about science. Not just the facts, but about the methods, about the assumptions, and about that rigour.

My worry is about people who do what I do, who trade in fiction and storytelling, where you try and move people and stir their empathy. I'm wondering if, inadvertently, by emphasising that there is another kind of truth to the kind that you argue and debate over in the world of the sciences, [we have suggested that] this other kind of truth is, in some ways, just as important.

VR I think the deeper problem is something that Bertrand Russell once called the infancy of reason. We pretend we're very rational creatures but, deep down, we're actually highly emotional beings. So, there's this veneer of rationality on top of us, but it's a very thin veneer. So how do we guard against that? I don't have a good solution, except to educate people and be transparent about how we know things. Scientists need to say not just that climate change is occurring, but constantly talk about how we know that.

Artificial intelligence: a new Delphic oracle

Chris Crawford, a computer scientist at the University of Alabama, who has spoken out against bias in AI © New York Times / Redux / eyevine

KI My novel [Klara and the Sun] isn't supposed to be an analysis or debate about AI, as such, or about gene editing. In the novel, I'm concerned about what the huge development in these fields will do to human relationships within the family. Would it somehow change the way we regard ourselves, as individuals? And if I look at somebody differently, will that change the nature of, say, love?

I'm one of those people very excited about AI. I think already, even during the pandemic, there was a breakthrough by DeepMind about protein folding. But obviously we have to be concerned about how we reorganise our society around such huge changes.

What are the things that concern you the most? I know that you're not particularly worried about robots taking over the high street.

Today, AI is taking over lots of jobs that we thought could only be done by humans. So, that's going to create a class society: the very few, the high priests who are still needed

VR I sense that AI is already impacting our lives in huge ways. You mentioned some of the good ways — the use of AI in medicine and science is going to transform the way we analyse large data sets and glean conclusions from them. But with that comes a bunch of risks. I feel that sometimes we're sleepwalking into a world where we don't know what's going to happen. And if we don't make the right sorts of decisions, it could be a problem.

I'll tell you just a few of the things that concern me. For example, AI will make decisions based on large data sets. Now, these decisions will come with all sorts of biases, because the data sets are biased. If, in today's society, we're biased against ethnic minorities or by gender, these biases will be reflected in the AI analysis unless we somehow take pains to eliminate them. And it's not clear, entirely, how that'll be done.

Then there's the question of the impact on jobs. In the first industrial revolution, people don't realise that it took over 100 years before the average worker was better off. Their lives were disrupted, they were thrown out of their work into poverty. Today, AI is taking over lots of jobs that we thought could only be done by humans. So, that's going to create a class society: the very few, the high priests who are still needed, and the rest of the people are made redundant. And there's the whole business of the loss of privacy, because AI makes surveillance and totalitarianism so much more powerful.

And, finally, I should say that AI can generate very convincing fakes. You can have Obama saying things that he never actually said, and how does the average person, then, take this pseudo evidence and dismiss it?

KI I share all those worries. Around your remark about the industrial revolution: there was this idea that although jobs would be lost to mechanisation, new jobs would be created. A lot of people think that is not going to happen with AI. Jobs will just disappear. And we might have to completely reorganise the way we run our value systems, not just in terms of money but prestige, our sense of worth, because we've spent so many centuries committed to this idea that we're valuable because we contribute to the common economy.

I would add something to what you said about it taking 100 years for the average worker to be better off. Of course, we're not even looking at children sent down into mines, seven-year-olds working for 10 hours a day. And we haven't even mentioned how the industrial machine fuelled the slave trade. We went through some horrific things before reorganising society, and you could argue that the two world wars came out of the later stages of coming to terms with the industrial revolution.

VR In the 1930s, [John Maynard] Keynes wrote an essay called "Economic Possibilities for our Grandchildren". He predicted that advances in technology would be such that to produce all the food and shelter, and everything else we needed, we would only have to work for a few hours a week. And the rest of the time, we would be engaged in the arts and leisure activities.

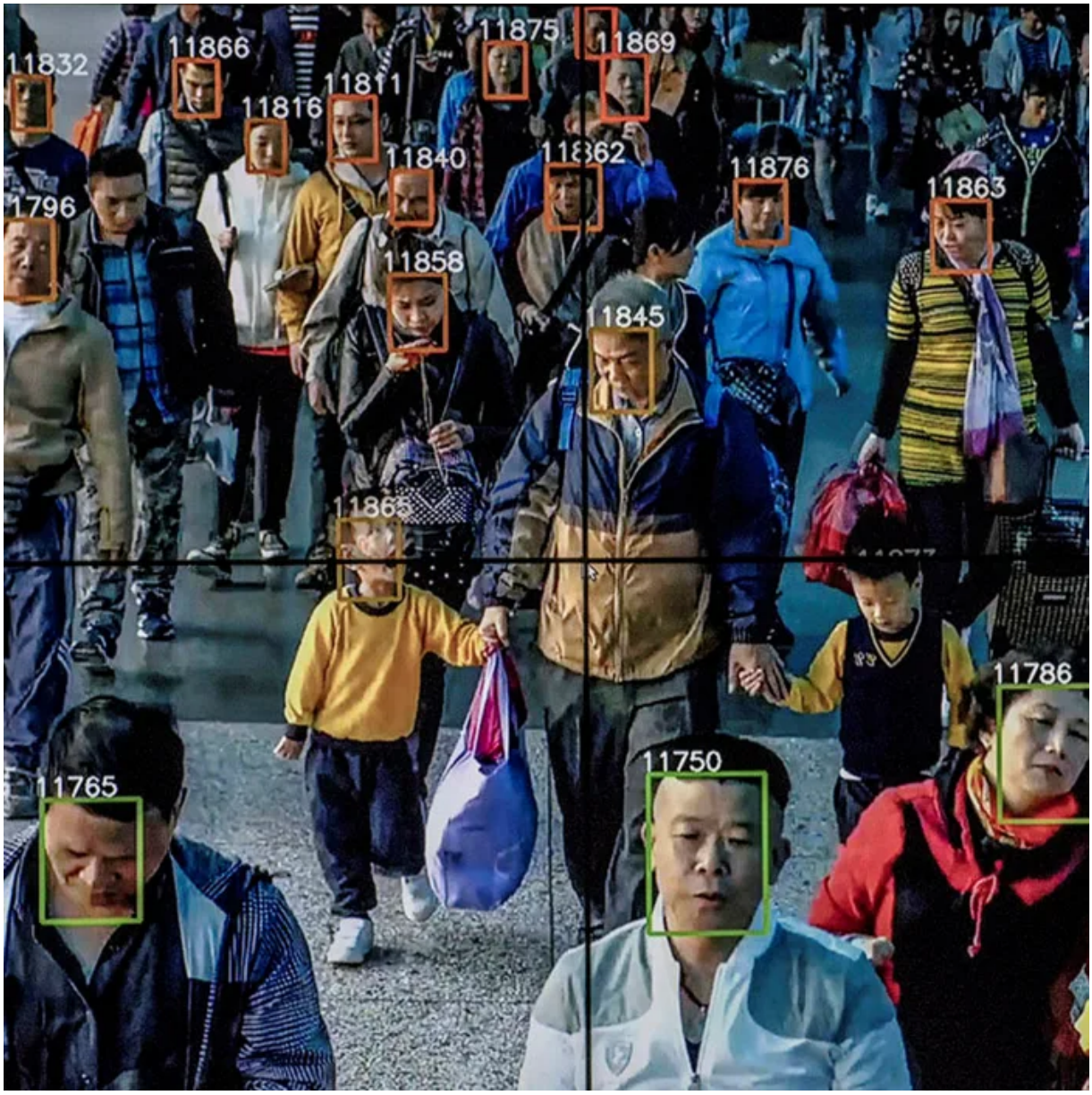
We're more like the arable land . . . the ground that is being excavated. The data is the product. We're just things being harvested

Of course, that never came to pass. David Graeber, who died last year, said that what has happened is the growth of "bullshit jobs". We all do these jobs that we really hate, but the system requires us to be employed in order to grind out a living. And so, I think that actually AI has the potential, if we are willing to use it that way, to free us from really horrible work.

KI I just want to comment rapidly on two things you said earlier. This black box idea about AI — that biases, prejudices, will be hard-baked into them — does concern me because we only have to just glance back through history and we can see how much we've changed our views about things that were once highly institutionalised.

You don't have to go back a long way to find that slavery was seen to be a perfectly OK thing to do. But it may be that these AI black boxes, the recommendations of AI, will become things that we don't dare to contradict, even though we don't understand the basis on which the recommendations have been made. In other words, it will become a kind of Delphic oracle.

'We're just things being harvested' — taking back control from Big Tech



Facial recognition software in use at the headquarters of the artificial intelligence company Megvii, in Beijing, May 2018 © New York Times/Redux/eyevine

KI My question is this: how do we build the platforms on which we can have meaningful discussions about how we reorganise society? Not just in the face of AI, but something we haven't touched on yet, about gene editing. There are academic conferences but, at the moment, I don't really see a meaningful platform for debate.

The other thing that concerns me is that in the past, when we've had scientific breakthroughs, they have been under governmental supervision. It seems to me that at the moment a lot of the ground is being made inside private corporations, particularly the Big Tech companies, and their business model doesn't really encourage them to open up the debate. Their incentive is to be as free of legislation and oversight as possible. I'm not suggesting that they have bad intentions, but they have their priorities.

VR I think the public needs to be aware of the problems and be active in pushing for information, for action, for legislation and, above all, for transparency. I've just listened to a talk by Yuval Noah Harari, who said that transparency has to work both ways. That is, if government wants more information about you, then you should have more information about government. And I think this reciprocal transparency is a good idea. For example, we know nothing about how these corporations work or even, sometimes, about how governments use our data.

There's a famous headline in an article, which said: "If it's free, it means you're the product." Because you're not actually the customer. The customer is the people who are selling ads to you, directing ads at you. So, I think people have to be aware of the value of their data and the consequences of giving it up without any control over it.

KI I would even dispute that, Venki. I don't know if we're even a product. I think we're more like the arable land. We're a bit like the ground that is being excavated. The data is the product. Somebody who buys that data is the customer. We're just things being harvested.

VR That's an even better analogy.

KI Once again, there are so many areas where we don't seem to be having the right discussions. I occupy an area of the world where we put out stories. Some of them are entertaining but [they also build] into public concern, public consensus about what are the big issues. I think we're very well prepared now, as an international society, about what to do if the zombies start to take over. And we know what to do if our spouse turns into a vampire, because we've had so much education through popular culture on this. We don't seem to have a lot of these [other] notions out there.

Gene editing and the pursuit of human perfection

A staff member feeds cloned monkeys with circadian rhythm disorders at the Institute of Neuroscience of Chinese Academy of Sciences in Shanghai, January 2019 © Xinhua News Agency/eyevine

VR AI has something in common with gene editing, which is that we're again in danger of sleepwalking into a future that we don't really want. Gene editing, like AI, has a number of advantages. We could use this to correct genetic defects and there will be huge pressure on scientists and governments to allow that.

But then we can talk about people wanting to improve their genetic potential. They may want to be taller, or stronger, or smarter, or have blonde hair, or blue eyes, or whatever. And then you're down this path of creating a genetically modified superclass, something you alluded to in your book. And the problem with both of these is: how do you control transformative technology?

KI I think something like cosmetic surgery is a very good parallel, as an indication of where we might go. Cosmetic surgery was there, originally, to help burn victims or injury victims, but now it's this big industry in enhancement. Now, I don't know how you can stop that.

Once we get to that stage where some children, who will rapidly become adults, do have "superior characteristics" — whether that's intellectual, cognitive, physical — the whole idea of meritocracy, on which our liberal democracies and our free world, to some extent, depends, becomes problematic, it seems to me.

VR Absolutely. You can buy your way into meritocracy by simply altering your cell for your offspring. I don't think we're quite there yet, but if it becomes likely, then it's almost too late to think about it. So, I think we need to think about these things now to make sure that we're going down a path that we're happy to live with.

This is something that all of society has a stake in, and it has to be international, because we know that if procedures are not allowed in one set of countries, people will simply go off to some other part of the world where the rules are more relaxed.

Is technology finally getting beyond the biological capacity of humans?

VR I think there are areas which are so complex that they're beyond the reach of any human. Even the design of a new microprocessor is done now by programs and by computation. We generate the algorithms, which then go off and actually carry out the design. And you could argue a lot of large-scale data is not understandable, except by the use of data-analysis algorithms, which somehow filter it and give us conclusions from it.

So, yes, we are reaching that stage, but I would like to think that, conceptually, we're still more or less in control. At least, we're the ones asking the questions, defining what the problems are. I think the next stage would be if AI starts to ask questions that we haven't even thought about.

KI There is this phrase that you often hear in the AI world: "Humans in the loop." Which is, I think, a reassuring idea — that there will always be something like a human nightwatchman in there, supervising AI. But I remember, Venki, you and I were at a dinner when [psychologist] Daniel Kahneman said, with great conviction, that this is just naive.

Human beings are just so far behind that there is no way that you can keep a human in the loop. It will be, indeed, like having some kind of retired nightwatchman trying to supervise a stadium full of rioting football fans.

Is the present too complex for us?

A technician runs diagnostics on a humanoid robot at the World AI Conference in Shanghai, July 2020 © Bloomberg

KI I think it's very important that we are determined that the answer to that is no.

One of the things that interests me, as a person and as a writer, is with all this complexity, how do we keep the human individual as the basic unit of importance in the way we build our societies? Because we struggled through the 20th century with all kinds of systems where that ideal was abandoned. Where some other big ideal, like communism or whatever, meant that you could sacrifice the individual to the bigger cause.

I think it's a very dangerous thought, that idea that the modern world is so complex we might as well give up. That reminds me of where we started [our discussion], truth is so difficult to find, let's just give up. Let's all have our own truth, based on whatever we want to believe, and we'll just shout at each other. We mustn't give up.

VR Isaac Asimov had these rules for robots of not doing harm, etc, and there was a group on data governance about a year ago, and the single rule that came out of it was that humans should flourish. I think that's a valuable principle to have in the development of new technology.

What is your perspective on AI writing a great novel?

VR I think a great novel asks questions. And that is still something that AI doesn't do. We're the ones asking the questions. It's often used to provide the answers.

So, I'm not really convinced that it's going to do that in the near future. But, as Daniel Kahneman pointed out, anything we say about AI is completely out of date even as we utter it, because it's moving so quickly.

KI I'll give a very terse answer to that one. AI, at the moment, perhaps doesn't understand human empathy enough to write a novel that would actually make you laugh and cry. But when that happens, I think the least of our worries is about whether I'm going to lose a job or not. Because I think that means that AI will be able to run political campaigns, will be able to identify what political movements are on the rise, will be able to identify the emotions that are there, the anger, or the frustration, or the hopes that are there in society.

In other words, don't worry about AI writing great novels, worry about AI writing our constitutions. AI could come up with the next big idea, like democracy, or communism, or Nazism, or money, or the joint stock company. Once it understands how to manipulate human emotions, we've got much bigger things to be concerned about.

Kazuo Ishiguro's latest novel is 'Klara and the Sun' (Faber/Knopf). He was awarded the Nobel Prize in Literature in 2017

Venki Ramakrishnan shared the 2009 Nobel Prize in Chemistry; he is a former president of the Royal Society

Video on demand tickets to the FT Weekend Festival are still available, giving access to all of the talks at the three-day event. Highlights include Yuval Noah Harari in conversation with FT Weekend editor Alec Russell; Mark Carney in conversation with Gillian Tett; and an audience with Ugur Sahin and Ozlem Tureci, BioNTech's vaccine visionaries. To purchase a pass, visit ftweekend.live.ft.com

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