

Bill Gates and Rashida Jones Ask Big Questions

EPISODE 03: Why do we believe lies?

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RASHIDA JONES: Hi, I'm Rashida Jones.

BILL GATES: Hi, I'm Bill Gates.

RASHIDA JONES: And we're here to ask the big questions.

[singing]

RASHIDA JONES: Bill, what is the strangest lie you have ever heard about yourself?

BILL GATES: This thing that I was involved in creating the coronavirus. I don't think it gets much stranger than that.

RASHIDA JONES: Why do you think people think that about you?

BILL GATES: If you want a villain, it helps if they have more money than a human should have, and they think of themselves as overly clever. *[laughs]*

RASHIDA JONES: Do you think of yourself as overly clever?

BILL GATES: Absolutely. *[laughs]*

RASHIDA JONES: *[laughs]*

BILL GATES: Many people have a fear that the vaccine will cause a lot of harm or maybe that the goal of the vaccine is somehow tracking people with a microchip with some connection to 5G. Those conspiracies that turn the effort of the Foundation to save lives almost on its head, are the craziest things I have ever heard about myself.

RASHIDA JONES: Why would people tell those lies? What is the incentive to lie specifically about that?

BILL GATES: Vaccines are given to kids when they're very young. And so that's not too surprising because you're in a very vulnerable period. It's not intuitive this idea of sticking metal needles into kids' arms which they cry. The idea that that literally has eradicated smallpox and saved millions of lives, I mean it's done more to improve human health than anything else. It's not that they're all perfect. They have to be made very carefully, they have to be trialed, but the net benefit of vaccines is mind-blowing.

RASHIDA JONES: I know that generally, you're probably a truth seeker, but is there one lie that you believe?

BILL GATES: I certainly believe that innovation can solve problems. I've been spoiled in that the early work I did in software worked out, the health stuff that our foundation has done has worked out. Even though I know it's not guaranteed when a problem comes along that there's some innovation solution, I tell myself there is. We just have to work hard enough, find the right brilliant people, give them resources, and we can solve any problem. Which is a grand oversimplification. Other people come and tell me, "Well, even if you invent this vaccine, it's hard to get it out there," and all the complexity. But that grand oversimplification of let's just invent something to solve it, that's kind of my creed.

RASHIDA JONES: I do feel like that would be a common thread for people who are successful, is they have to delude themselves on some level that something's possible to then make it possible.

BILL GATES: And take risks. I mean, like working on an HIV vaccine, that whole field is, for the last decade, it's all been dead ends and yet, we still get up and say, "Hey, let's put billions of dollars into that." And yes, we will succeed. Stubbornness can be a virtue but it's partly by not acknowledging the fact that you might completely never get anywhere.

RASHIDA JONES: Right.

BILL GATES: What's a lie that helps you?

RASHIDA JONES: It's similar to you. It's a way to keep myself optimistic, which is that people are good at heart and that the people in charge are capable and more capable than I am. It's something I'm still working on because I actually don't think that the latter is actually very helpful to me anymore. But I think believing that people are good at heart, even if [*laughs*] it's not true, I think I have to keep believing that.

BILL GATES: No, that's important.

RASHIDA JONES: It feels like the person we really want to be talking to about lies and conspiracy theories is Yuval Noah Harari.

BILL GATES: Absolutely. Yuval is such an independent thinker. I've read all of his books.

RASHIDA JONES: What's the big takeaway for you when you read Yuval's work?

BILL GATES: *Sapiens* helps us understand what have we been struggling with; disease, hunger, war. It makes us realize, even though we're not completely done with those things, I mean, our foundation is all about that disease piece, but boy, we have made so much progress and we can actually see that those will not be our daily concern. This deep philosophical question of, what do we do with all this progress we've made, what becomes meaningful and important when it's not those basic needs? I think he was profound at framing the question that way.

RASHIDA JONES: Totally, and I love this idea that he pinpoints that humans are the only species on earth that believe in things that they can't see.

BILL GATES: Yes.

RASHIDA JONES: Whether it's government, or religion, or nationalism, or philosophy, or a corporation, that none of these things are actually true they're just concepts and that these structures give us meaning and that meaning helps us to create community and infrastructure and innovation simply because we believe in these kind of big concepts. Sometimes that's good, and sometimes that's bad.

BILL GATES: Sure.

RASHIDA JONES: Most of the time it's bad, in my opinion, but I really want to talk to him about how to navigate this. Let's bring him in now.

Yuval, Hi!

YUVAL NOAH HARARI (GUEST): Thank you for inviting me. It's an honor to be here.

RASHIDA JONES: Thank you so much for being here. I'm Rashida. This is my friend, Bill Gates.

BILL GATES: Hi! (*laughs*)

RASHIDA JONES: You think we're just born liars, right?

YUVAL NOAH HARARI (GUEST): I wouldn't say that we are born liars. I don't think lies are so important as I put the emphasis on fictions, on fictional stories, which are not true, but they are not lies in the sense that people do believe them. They don't intentionally deceive each other. I think, basically, humans control the world because we cooperate better than any other animal, and we cooperate better because we are so good at inventing and believing fictional stories. All large-scale human corporation is based on inventing and believing fictional stories.

RASHIDA JONES: What is the difference between a lie and fiction or a myth?

YUVAL NOAH HARARI (GUEST): A lie is when you know perfectly well that something is not true, and you say it in order to deceive others. A fiction is very often something that you really believe it and you tell it to other people not in order to deceive them. It can be something small or it can be something big, like a religion or an economic theory or a racial theory. I think that most Nazis really believed the Nazi racial theory, in the same way that most people who believe in a particular religion, they are sometimes crooks, but usually, people really believe the stories that they spread around.

RASHIDA JONES: In the current state of affairs in this country, it's hard to know who is intentionally telling a lie or spreading a fiction or not.

BILL GATES: Yes. If you don't believe that the deaths are taking place, so you think that wearing a mask is a political statement. Mask compliance is lower because of some of these misunderstandings and lies.

RASHIDA JONES: Yes. Yuval, do you think that we have leadership who's intentionally lying for a specific result?

YUVAL NOAH HARARI (GUEST): Even if you want to lie, you need to convince people. The best way to convince people is to believe the lie yourself.

RASHIDA JONES: Right.

YUVAL NOAH HARARI (GUEST): It's not easy to know the difference between deceiving others and deceiving yourself.

RASHIDA JONES: Mm-hmm. [*affirmative*]

YUVAL NOAH HARARI (GUEST): Very often, even if people start by lying, somewhere along the way, they start to believe their own lies.

RASHIDA JONES: You had said in March and April that it's essential that people believe in science as this pandemic starts to grip the world. What do you think now, now that so much misinformation, so many lies have been spread, specifically about COVID- 19. What do you think now?

YUVAL NOAH HARARI (GUEST): It's still essential to believe science and things are not ideal but we are in a better situation than in almost any previous time in history. I'm a medievalist by origin, and you compare the situation now to what was happening during the Black Death. It's a completely different game. When the Black Death was ravaging Europe and Asia, it killed between a third and half of all humans in those continents and nobody ever understood what was happening, not the Chinese, not the Indians, not the Muslims, not the Italians, not the British. Nobody understood what was happening. They had lots of theories. It's an astrological theory about the planets, it's the Jews poisoning the wells, all kinds of things. Not a single person knew what was actually happening. Today at least you have a couple of people who know what's happening. That's an improvement.

BILL GATES: One thing that's novel here is that we have digital social media...

RASHIDA JONES: Yes.

BILL GATES: ...and the speed with which wild explanations spread both within countries and across the globe, that is quite novel.

RASHIDA JONES: Right.

BILL GATES: I think eventually we will get enough people to take the vaccine and this thing will come to an end, but there will be some us versus them. It will fracture the progress towards thinking of all of humanity as being in the same situation and needing to work together.

RASHIDA JONES: Yuval, do you think that lies are more dangerous now than they've ever been?

YUVAL NOAH HARARI (GUEST): No. I mean, they are more dangerous in one sense that humanities follow powerful. Lies that are believed by people with nuclear weapons are more dangerous than lies that are believed by people with stone spears. In that sense, yes, it's more dangerous. But we need to take this in the grand historical perspective. People often confuse information with truth. Information isn't truth. A conspiracy theory is also information. Every new tool for spreading information is also a new tool for spreading lies and fictions and conspiracies.

When the book was invented, printing was invented, or at least came to Europe, it was invented much earlier in China, but when printing came to Europe, people think, "Ah, the scientific revolution." You had Newton and Copernicus and people who are reading about physics. No way. One of the biggest bestsellers was *The Hammer of the Witches*. It was a do-it-yourself manual to identifying and killing witches. This sold far, far more than anything by Copernicus or Newton or any of these guys.

RASHIDA JONES: That would do very well now.

BILL GATES: [*laughs*]

YUVAL NOAH HARARI (GUEST): People think about witch-hunting as medieval. There was some witch hunting in the middle ages, but the really big time for witch-hunting was the 16th and 17th century, exactly the same time as the scientific revolution. It's the early modern age, and it was largely fueled by print. People were printing all these ridiculous conspiracies and it was spreading faster than ever, and people believed it because it's a book. If you see it printed, it must be the truth, right?

RASHIDA JONES: It's real.

YUVAL NOAH HARARI (GUEST): Yes.

RASHIDA JONES: Do you think we want to know the truth or do you think we just want to be told something is the truth, that is actually a lie?

YUVAL NOAH HARARI (GUEST): It depends on what kind of truth you're talking about. When it's the separate, two kinds of truth. There is truth about controlling things outside. You want to hunt a giraffe; you want to know the truth about where giraffes go and what do they do. You want to build an atom bomb; you want to know the truth about nuclear physics. If you believe in some conspiracy theory, you won't be able to have an atom bomb. That's very simple. But, the other kind of truth, or the other kind of stories, are the stories that enable you to control humans. They are the basis for society. Things like religions and ideologies and so forth. And here you don't need the truth for power. Power is based on making a lot of people believe the same story. The truth usually gets in the way. And it's not true that if that story is not real, if the story is not true, it will not be effective. No way! You can have enormous social power by making a lot of people believe in fiction.

RASHIDA JONES: Right.

BILL GATES: Yuval, there is something, though, where people seek overly simple explanations of, okay this bad person caused this thing. Kind of this us versus them. The lies do have a certain pattern to them that make them kind of satisfying, despite their lack of truth.

YUVAL NOAH HARARI (GUEST): Definitely. I mean, usually, the hallmark of conspiracy theories and things like that, they are simple. The world is complicated. I mean you asked earlier about whether people want to know the truth. The two biggest problems with the truth is first that the truth is often unpleasant, and painful to know about. The truth about me. Truth about somebody else, okay. But the truth about me is often painful to know.

RASHIDA JONES: Mm-hmm. [*affirmative*]

YUVAL NOAH HARARI (GUEST): It's complicated. Just to understand what a virus is. Try to explain that a virus, it's not a living organism, it's basically just a bit of information. It's biological code. How does it cause an epidemic? It's very complicated. Our minds, our brains, are lazy. We have been adapted by evolution to understanding certain very complicated things, especially in terms of social relations. When it comes to social relations, we are geniuses. Because evolutionarily, when you lived in a small hunter gatherer band, this is what you needed to know above everything else in order to survive. Social relations. Who hates whom, who is conspiring against me in the tribe.

RASHIDA JONES: Mm-hmm. [*affirmative*]

YUVAL NOAH HARARI (GUEST): You had absolutely no idea that there are viruses or things like that. Our brains just didn't evolve to understand it. We don't like things that are difficult to understand. We prefer things that are easy to understand. Compare trying to really understand the epidemiological chain of events leading from some bat to humans and then spreading over the world and it's so complicated, to the ideas, the conspiracy that a couple of billionaires who are doing all this to control the world. This is something that is very similar to what we used to do as hunter gatherers. Find conspiracy in the tribe. We like it because it makes us feel smart. I understand what's happening in the world.

RASHIDA JONES: Right.

YUVAL NOAH HARARI (GUEST): Whereas if you talk about these viruses, you feel stupid. Oh, only these professors, they understand, I can't understand it.

RASHIDA JONES: I see the search for simplicity. But I also think, as complicated as the truth is, so are the fictions and the mythologies that we've based modern humanity on.

YUVAL NOAH HARARI (GUEST): No, they're usually very simple.

RASHIDA JONES: Really?

YUVAL NOAH HARARI (GUEST): I mean you look for instance you think about...

RASHIDA JONES: Government? Corporations? Religion? It's complex. There are so many stories being told at the same time.

YUVAL NOAH HARARI (GUEST): Corporations are complicated which is why most people don't really understand corporate structure.

BILL GATES: [*laughs*]

RASHIDA JONES: He's laughing too hard. [*laughs*]

YUVAL NOAH HARARI (GUEST): If you compare corporate law to religious mythology, religious mythology is much simpler than corporate law. You do something bad, after you die, you get roasted by demons. It's very simple.

RASHIDA JONES: The ideas that corporations are intentionally or complicated, but the way that they're seen by most of humanity, it's pretty simple.

BILL GATES: Things like corporations come from that technocratic side. It comes fairly late in human history. Government, the idea of knowing the US government budget and the numbers, the percentage of people who are dealing with the complexity in a direct sense is very tiny.

RASHIDA JONES: Right.

BILL GATES: We always ask people, "What percentage of the government budget goes to foreign aid to help poor countries?" And they will say, five or ten percent, but they wish it was only two or three percent. Well in fact, it's less than one percent. We always say, "Hey, you can have your wish."

YUVAL NOAH HARARI (GUEST): [*laughs*]

BILL GATES: Thank god we trust other people, because the percentage of us who actually understand corporations or electricity or viruses, or government tax structures is pretty darn small.

RASHIDA JONES: Let's get back to corporations for a second, because I do feel like there's a lot of lies and mythology that corporations use to operate, whether it's internally or externally, whether it's branding or whatever. But I kind of want to conduct a little thought experiment here and just ask you first, Bill, what Microsoft is, and then Yuval I want to know what your answer is.

YUVAL NOAH HARARI (GUEST): *[laughs]*

BILL GATES: Microsoft is somewhat utilitarian. We build really good products. We weren't as good at branding as say, Coca Cola or even Apple. Steve Jobs had a much more intuitive sense of branding, and I was not good. Microsoft would have been more successful if I'd had more skills in that area.

RASHIDA JONES: I think you're okay. I think it did all right.

BILL GATES: We were good at writing the code, that was our thing.

RASHIDA JONES: *[laughs]*

BILL GATES: We were, just, pure engineers, pretty much. Eventually we tried to develop the other skills. But the core was the innovation.

RASHIDA JONES: Yuval? What's your answer?

YUVAL NOAH HARARI (GUEST): Microsoft, like all other corporations, it's a story. It's a story invented by these powerful shamans called lawyers. The only place it exists is in our shared imagination. It doesn't mean that corporations are not powerful. They are some of the most powerful things in the world. But they exist only in the stories we tell. In our imagination. I mean, you can't touch it. You can't touch Microsoft. You can't see it. You can't smell it. You can't taste it. No other animal on earth knows that Microsoft exists. You can take, say, a chimpanzee to visit Microsoft headquarters.

RASHIDA JONES: *[laughs]*

BILL GATES: *[laughs]*

YUVAL NOAH HARARI (GUEST): The chimpanzee will be able to say, "Okay, there is a building here."

RASHIDA JONES: [*laughs*]

YUVAL NOAH HARARI (GUEST): "And there are people going in and out and there is a banana in the cafeteria." But, the chimpanzee will never get it.

RASHIDA JONES: Well maybe that's because...

YUVAL NOAH HARARI (GUEST): That this is Microsoft.

RASHIDA JONES: ...that's because Bill failed with branding. [*laughs*]

YUVAL NOAH HARARI (GUEST): No. The chimpanzee doesn't know that there is Coca Cola either.

RASHIDA JONES: Right.

YUVAL NOAH HARARI (GUEST): I mean it can drink Coca Cola, of course. But the corporation Coca Cola, this is something that only humans know exist because it exists only in our imagination. It's a kind of collective dream.

RASHIDA JONES: What about beyond that? The thing that Microsoft sells? What about software? It's not something we can touch but it's something that people use, right? And they use together. Does that make it any more real? [*laughs*]

YUVAL NOAH HARARI (GUEST): No, the software is much more real. It really does things in the world. So again, and of course, the software is not the corporation. The judge or the government can order the dissolution of Microsoft. That's it. Doesn't exist anymore. But the software is still there.

RASHIDA JONES: Do you agree with that, Bill?

BILL GATES: Yes, companies do have stories about what they believe in and their values that they use to motivate so it's like a group trying to get each other excited and they might think their competitors are less worthy than they are in some way. There is a type of a us versus them, at least in kind of a sports type, "Hey, let's go beat them," thing inside the company and then this idea that some products try and say, "Oh, if you use my product, you'll be more attractive or have more fun."

RASHIDA JONES: That's true about Microsoft, right?

YUVAL NOAH HARARI (GUEST): [*laughs*]

BILL GATES: Yes, we try to keep that secret, but it's true.

RASHIDA JONES: Do you think, Yuval, is anything true?

YUVAL NOAH HARARI (GUEST): Yes. Certainly. There are rivers, there are mountains, there are humans. I often say that the most real thing in the world is suffering. Suffering is often caused by the stories in which we believe. We might believe some story and therefore go to war. The story is in imagination, in our own minds, but the casualties of the war, the dead people, the injured, the people who lost their loved ones, all this is 100% real.

RASHIDA JONES: Do you think that lying can also get us out of suffering? You don't believe all lies are bad. I think I know that well enough from reading you. But do you believe that lies are the way to also relieve suffering? Mythology, lies, fiction.

YUVAL NOAH HARARI (GUEST): There is a big difference between lies and fiction. When the pope is instructing the faithful around the world in Christian dogma, I don't think that the pope is lying.

BILL GATES: [*laughs*]

YUVAL NOAH HARARI (GUEST): I think he really believes what he says. There have been a lot of popes in the last 2,000 years, maybe a couple of them were liars.

BILL GATES: [*laughs*]

YUVAL NOAH HARARI (GUEST): But I think most popes sincerely believed in what they were telling the faithful. Explaining it to themselves in all kinds of, maybe they don't believe exactly what they are saying to the common person, having a far more complicated theological explanation for what they are saying, but I don't think they were lying. In the same way if you talk about corporations, and money, and all that, it's not a lie. I mean, when, for example, you raised the interest rate. It's not a lie, but it is a fictional story. It exists only in our imagination. Many of these fictions, they can be extremely helpful. Even you think about something like playing football together. Obviously, unlike religion, in the case of football, most people know that the rules were invented by us. But everybody needs to believe the same set of rules for at least 90 minutes in order to enjoy the game.

BILL GATES: [*laughs*]

RASHIDA JONES: Right.

YUVAL NOAH HARARI (GUEST): There is nothing bad about that. I mean the problem starts when we forget it's just a story we invented and we start being enslaved by our own creations. People think about Frankenstein, the idea of creating something and then being overtaken is a modern phenomenon, it's not. Technologically, maybe it's new, but humans have been enslaved by their creations for tens of thousands of years, by these stories that they create about the gods, about nations, about money. They forget that we created them, and then we are trapped inside the dreams of dead people.

RASHIDA JONES: Do you feel like your worldview has changed at all or do you feel like you just keep feeding your same framework? When was the last time you had a major aha moment where you read something or researched something that changed your worldview?

YUVAL NOAH HARARI (GUEST): It changes quite a lot. When I wrote *Sapiens*, there is nothing in *Sapiens* I think about computers, certainly not about artificial intelligence. Maybe a sentence here or there. After that, I started reading a lot, and now it's 50% of what I do is just write and talk about AI and machine learning and what it's going to do. I have a very poor understanding of the technical side. I can't write a line of code, even if my life depended on it, but I try to understand what are the historical, political, even philosophical implications, of all these amazing inventions.

RASHIDA JONES: Bill, kind of the flip side question to you, which is, you do have a grasp on science and you do write code. How much do you think storytelling is a part of your work?

BILL GATES: A lot of the foundation's work is trying to get the world to see what's going on in developing countries, and to think, "Okay, those deaths are a tragedy, even though they're not in my neighborhood." Trying to up the number of scientists trying to solve the diseases of poor countries, the amount of resources that go into those things, and the numbers don't do the job. An audience responds more if I put up three pictures of children who died than if I say three million children died. The storytelling of a hero in the field, a mother who got her children to vaccination or a health worker who got out to a village. Humans are so oriented to stories. The foundation, even though I love statistics, we have to couple the statistics with stories. We're trying to get better at that so that these millions of deaths actually do get a tiny fraction of the world's resources applied to them.

YUVAL NOAH HARARI (GUEST): What do you think happens to humanity once computers, algorithms, artificial intelligence, however we call it, know us better than we know ourselves? Of course, you can say that it's not going to happen, there will always be something about humans that no matter how much information you have, a computer will never be able to understand that. I find it's hard to credit, but maybe that's your opinion, but I really want to go past that and think what happens deeply. Not when it falls into the hands of some malevolent dictator. People usually go to the dystopian scenario that you have this totalitarian regime that follows everybody all the time, knows everything about you and that's terrible.

But let's leave it, let's say it's not a totalitarian regime, it's not dystopian. The system is really in your favor. It's a benign system. But still, it knows you better than you know yourself, and it can basically take all the important decisions in life for you. What to study, what music to listen to, which books to read, who to marry. What happens to human life in such a situation?

BILL GATES: Yes, I certainly think a software agent will eventually know you better than you know yourself, or better than other humans do. The whole purpose of, okay, why do I learn things? Why do I pick certain experiences? I mean, we have values. You could say that certain drugs give you pleasurable experiences, and yet, we find it abhorrent that somebody would sit there for a decade and just enjoy those drugs as opposed to get out and make movies or write books.

YUVAL NOAH HARARI (GUEST): Mm-hmm. [*affirmative*]

BILL GATES: This software agent will be able to engage you in such a fulfilling way that it's a very sophisticated pleasure mechanism. Then you'll have this deep philosophical question, the machines will be able to make enough food for us, what should we do? When we organize socially, to what purpose? I find the answers to when you get past the thing that evolution picked us to do well, I don't know the answer to that.

YUVAL NOAH HARARI (GUEST): How much time do you think we have until a computer can know me more or less better than I know myself?

BILL GATES: We're still a few inventions away. This thing where we just scale up these machine learning systems, they don't represent knowledge in a deep enough way. The interesting test is, when can a machine read a book and process that information, say take a test, way better than humans? We're not there yet. We don't know how to represent knowledge. But in the next certainly 50 years, the inventions that will let us do that either by cheating and looking at how evolution did it in the brain, or just inventing it de novo, that will happen. Then you get machines that are more expert than we are and can take over in terms of inventing things and managing things in a way that really makes you question the purpose of individual activity. I mean, if the machine is 10 times better, that's a little disheartening.

YUVAL NOAH HARARI (GUEST): [*laughs*]

RASHIDA JONES: Yes, just a little disheartening. [*laughs*]

YUVAL NOAH HARARI (GUEST): The thing is that we won't be able to understand how they make the decisions because they make a decision in a completely different way than humans. Humans, at least when we think consciously, we can't take into account more than two, three,

four salient points. Like if I'm a banker and you come to me and you ask me for a loan, then I will basically make my decision on the basis of three, four salient features about you. Like your past credit history, or if I'm biased or racist, maybe on the basis of your race or gender. This is how humans do it. The thing about AI, it can take into account thousands and thousands of tiny data points, like at what time in the day you came in to ask for a loan. And it has a 0.07% influence on the decision, but it's there.

RASHIDA JONES: Right.

YUVAL NOAH HARARI (GUEST): Sometimes people say, okay, even when computers will make the decisions, we'll have a law, like in Europe with the GDPR, that it has to be explained. Like humans have the right for an explanation. If you applied for a loan, the bank said, no. You have the right to get an explanation why the bank said no. But this is completely irrelevant because the bank will say, "Well, we have this algorithm and the algorithm went over masses of data. If you want, we can print you all the data, but we can't make sense of it. We just trust our algorithm." The thing is that if the algorithm made a decision in the same way as humans, we wouldn't need it. We would just have a human banker.

RASHIDA JONES: I wonder if you, Yuval, and also you Bill, are you concerned about the autonomy of AI? What happens when they are so sophisticated it no longer feels like the relationship is us programming it?

BILL GATES: Eventually, that will be an issue. I'm not sure there's much we can do about it right now. Eventually, the universe gets into this heat death thing where complex objects can't exist.

RASHIDA JONES: This heat death thing? Okay, maybe we'll get back to that later.

YUVAL NOAH HARARI (GUEST): *[laughs]*

BILL GATES: How much we should think way out in the future and can we change that versus what is kind of real today about suffering and autonomy of humans versus other humans. If I ever figure out how to avoid that problem, sure. But you can spend a lot of time on it without coming up with much. It's not imminent but it is possible that we'll be delegating a lot, and our sense of who we are and why we do what we do will be deeply challenged by that.

YUVAL NOAH HARARI (GUEST): I agree that the kind of Hollywood science fiction scenario of the robots are coming to kill us because they are evil and they want to take over the world, we don't need to worry about that. But the other kind of autonomy, it's already here. I mean, the idea that a bank won't give you a loan because an algorithm said, no. This is not science fiction,

this is reality increasingly in more and more parts of the world, and I think we should be concerned about it. And coming back to where we started, with all these conspiracy theories about COVID-19, I think that we shouldn't dismiss conspiracy theories too easily. They often represent deep, and sometimes justified fears that humans have. The idea that COVID-19 was created in order to implant people with computer chips to control them, this is ridiculous in many different ways. But it represents a real and realistic fear of surveillance technology, and it is, I think, true that one of the consequences of the pandemic, unintentional, for a minute, I don't think anybody planned it, but I think that it is a reality that we see a huge rise in the implementation and acceptance of surveillance technology all over the world. And this understanding of these conspiracy theories, I actually think, conspiracy theories is something somebody else has. I never have conspiracy theories, I have legitimate concerns. I think this is a legitimate concern that COVID-19, even though it wasn't intended or planned, will result in much more surveillance of people.

RASHIDA JONES: Right.

BILL GATES: When people say to me, "What else?" you know, given that in 2015, I talked about this pandemic, they say, "Okay, what else is worrisome about the future that we ought to be ready for?" Of course, climate change is one answer. There will be future pandemics. I do think bio-terrorism is something the world isn't as worried about as it should be. If this idea of the conspiracy theory that a human created this thing led to brilliant investments to prevent bio-terrorism, then I'd actually say, "Wow, this conspiracy theory, even though it was nuts, led governments on our behalf to bring together lots of resources and experts." And it is an interesting trade-off that if you want to stop bio-terrorism, there's a little bit of surveillance where you're watching people in laboratories trying to make sure, so can you have benign surveillance like that to stop something very, very bad. Just like we watch the people who get to mess around with nuclear weapons. I hope we have them under very serious surveillance.

RASHIDA JONES: There's a difference between surveilling people who are working in a lab and people who are just walking down the streets.

BILL GATES: You're right. I hope we can draw the line there.

RASHIDA JONES: We won't. We probably won't. I agree with Yuval in the sense that this will be an excuse to do a widespread surveillance operation. We have that to look forward to.

YUVAL NOAH HARARI (GUEST): *[laughs]*

RASHIDA JONES: I want to get to something more hopeful because I don't want to end with global surveillance and dangerous AI.

Does anybody want to say anything about, I asked Bill earlier, what he thinks about the world in the next 20 years, and he feels pretty hopeful about life being better and there being less suffering. Yuval, do you think that? Do you feel like in the next 20 years we will continue to see the trend of life getting better for more people?

YUVAL NOAH HARARI (GUEST): It completely depends on us. I don't think that you can really predict the future. I don't think that history's moving in the deterministic direction. If you think about something like COVID-19, you can react to it by generating hatred, blaming it on foreigners and minorities, by generating greed, thinking, "Okay, how am I going to make a lot of money from it," and by generating ignorance, as spreading and believing all these conspiracy theories. And you can react in diametrically opposed way by generating compassion, "How can I help other people in this emergency?" By generating generosity of contributing what you have and generating wisdom. Let's believe science and let's use the opportunity to understand for example, what a virus is, and how an epidemic starts and how it spreads. If people react in this way, then it will make it easier, not only to deal with the present crisis, but with all future crisis as well. From this perspective I think our biggest enemy now is not the virus, it's our own inner demons of hatred and greed and ignorance.

BILL GATES: But aren't you willing to say that somebody born 20 years from now or 40 years from now is likely to be better off than they are today?

YUVAL NOAH HARARI (GUEST): Not necessarily. Because I don't think that history's moving in a straight line.

BILL GATES: Okay.

YUVAL NOAH HARARI (GUEST): We have the example from if you live in Europe in 1913, you thought that's okay, then things are going to continue like in the previous 40 years and obviously that they didn't. I think that there is a possibility that people would look back, certainly in the West, people would look back at the period from say 1990 to 2015 as a kind of golden age. And it's downhill from there, both in terms of not only of the ecology, but also of politics and so forth. But I don't know, again, history is very unexpected. As a historian I know that you should never underestimate human stupidity.

RASHIDA JONES: *[laughs]*

YUVAL NOAH HARARI (GUEST): Data and science and all that, it's great. But you should never underestimate human stupidity. It's not invincible. We have made a very significant progress in the last few centuries. It's important to realize it. There are some people who say there is no progress at all. And this is dangerous because then the message is that there is no point trying.

RASHIDA JONES: It's impossible, right?

YUVAL NOAH HARARI (GUEST): If everything that people did in the last century didn't improve our health, our education, the way we treat minorities and so forth, then it's probably hopeless.

RASHIDA JONES: Right.

YUVAL NOAH HARARI (GUEST): It's probably something in the laws of nature that prevent any kind of progress. It's important to realize there has been very significant progress.

RASHIDA JONES: Right.

YUVAL NOAH HARARI (GUEST): This is not a reason for complacency, it's a reason for responsibility. It means that we can make even more progress.

RASHIDA JONES: Yuval, thank you so much for joining us and taking the time and I just feel really honored to talk to you and I said this to Bill before, but if you wanted to start a cult, I would join it.

YUVAL NOAH HARARI (GUEST): *[laughs]*

RASHIDA JONES: I know you probably don't want to, but I'm there. Just know you have one member.

YUVAL NOAH HARARI (GUEST): *[laughs]* Okay, I'll think about it. *[laughs]* Thank you.

RASHIDA JONES: Thank you so much.

YUVAL NOAH HARARI (GUEST): Thank you and thank you, Bill. It's been a pleasure.

BILL GATES: Yes, it was great to talk to you.

RASHIDA JONES: Did Yuval say anything that surprised you?

BILL GATES: Yuval has this broad way of looking at things. It's really brilliant. Reminding us about fictions and how much of modern life is so abstract. That's part of his brilliance, is to see that. A lot of those fictions are beneficial. They're helpful to people.

RASHIDA JONES: It was really helpful to talk to Yuval about lies in a historical context, because it's a reminder of how far we've come really. I still worry that we're entering a super dangerous new territory and that we're living in a world that if I believe the sky is green that I can find some sort of experts on the internet who's going to back me up and tell me that I'm right and that's actually the truth. In this era of fake news and so-called facts that exist to support pretty much any crazy idea that you have, is there really such thing as an absolute truth? And if there is, where do I find it?

BILL GATES: There are sources that aren't just trying to appeal to your outrage that really are trying to be factual. I hope we figure out how to encourage people to gravitate to those sources that are there to connect you to reality instead of what just sounds good.

RASHIDA JONES: I think that's the point is, how do we get people to become truth seekers? Because I think we're at a place now where people think that they're seeking the truth, right? And then they're just going just as far as their nose. And the people who say, "Yeah, you're right. The sky is green." They're like, "Great. I did it. I found the truth. It's true. My truth is the truth." We have to encourage people to seek out the truth in a kind of meaningful way. It's a lot to ask from people.

BILL GATES: It's not like the public's getting less educated. They are fooled by some attractive memes. But mass opinion isn't going to solve hard problems and so to seek out experts and make sure those experts are put in charge. I'm hopeful that we'll keep improving health care and education and reducing poverty.

RASHIDA JONES: I remain worried. But I do think that we need some better PR around experts. We need to guide people towards wanting experts and to believe in science.

BILL GATES: Yes, and it's sad that one party thinks of the experts as sort of systemically against them. That we have to solve. And maybe the experts need to change some to avoid that.

RASHIDA JONES: Okay, watching you experts. Focus on experts. We have got to fix the experts.

[*music*]

RASHIDA JONES: Bill Gates and Rashida Jones Ask Big Questions is a production of the Gates Notes. It is written and produced by me and Bill. Thank you to our guest, Yuval Noah Harari for joining us today.

Our creative director is Ian Saunders; our supervising producers are Jen Krajicek, Pia Dierking, and David Sanger. Our design director is Anu Horseman. Our technical director is Alicia Salmond. And our researcher is Brent Christofferson.

Thank you to executive producers, Lauren Spohrer, Phoebe Judge, Bridgitt Arnold, and Nick Mocerri; co-executive producers, Kara Brown and Megan Groob; and producers Carl Malone and Nadia Wilson.

Special thanks to Larry Cohen. Audio mix by Rob Byers, Michael Raphael, and Johnny Vince Evans and recording by Joel Barham. Galen Huckins is our composer. Our theme song is "Talk" by Khalid.

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