AI and You

Transcript

Hi, welcome to episode 76. Today, joining us from the United Kingdom, we have Alexandra Mousavizadeh, a partner at Tortoise Media, the "slow-news" media company founded in 2019, where she is the Director of the Tortoise Intelligence team which specializes in global and industry indices and data analytics. In that vein, she is the creator of the groundbreaking Global AI Index launched in December 2019, and the recently released Responsibility100 Index, which is a ranking of the FTSE 100 companies on their commitment to key social, environmental and ethical objectives, inspired by the UN Sustainable Development Goals. I said FTSE there, and in the USA that means flirting with your toes, but in the UK it means the Financial Times Stock Exchange, the top 100 companies on the London Stock Exchange, kinda like a bigger version of the Dow Jones. She holds a degree in Economics and mathematics from the University of Copenhagen and was head of risk management at Morgan Stanley in London. She also started the Global Disinformation Index, which we'll be getting into in part 2. Tortoise Media is hosting and informing a lot of important conversations about how to evaluate the role and impact of AI in the world today, and we caught up with her right after she hosted their Cyber Security Summit. Let's get to talking with Alexandra Mousavizadeh.

Alexandra, welcome to the show.

Well, it's lovely to be here, Peter, it's a real pleasure, thank you so much for having me on.

You've achieved so many things and what we wanted to primarily talk about here is the different indexes that you have created, which occupy, to me, a pretty unique sort of position in the ecosystem of the world economy and corporate responsibility. And that's not something that's on the career advisor's wall at a school; here is something that you might do when you leave school or university and start one of these things or even understand what they are, how they work. So, what was it that propelled you, that drew you into that kind of work?

It's a very good question. And actually, it's interesting looking back at my career, and having not set out to spend it entirely on index creation and index building. For corporates and for nations. It's it is where I ended up. I am an economist and mathematics is my background. I'm from Copenhagen. And I moved to New York and started my career at Moody's in their sovereign risk team covering Russia, Central Asia, Middle East, and ended up also covering Africa. And anytime you're assessing a nation, you're doing it on a lot of different parameters, essentially, the methodology you create there as an index. And that index evaluates nation's capability and capacity on debt, sustainability and their ability and willingness to, to pay back debt. So that's how I got into thinking about how you model risk and look at risk. And essentially, that is through the framework of an index, then I went to Morgan Stanley to do the same thing. And

then I have also run something called the Global Prosperity Index out of London. And, and when I joined Tortoise Media, four years ago, it was to set up the Intelligence and Research Unit for Tortoise here in London, that would build and produce indices that would provide the longitudinal studies on topics that we were very interested in. But having that index background was the reason James Harding, who was the founder of Tortoise Media, came and said, "Would you come and build that here?" And as it happens, just as we were starting Tortoise Media, there were a couple of governments that said, "You are an expert in index building, could you think about how we would create a new index, measuring national AI, national ecosystems on AI, because so many countries were about four years ago, surfacing with strategies on AI, it's important topic, and there was no real measuring mechanism of how you would track progress, and monitor it over time. So, sort of that was one of the first indices that we were asked to build. And then others, as you mentioned, have come subsequently, one is on measuring the FTSEs on their ESG. And as you know, I've also been involved in establishing a global disinformation index. So it wasn't by design, Peter, but it has been by default, really, that I have ended up spending my career on index creation, and how you use the data that's available. And now it's much more sophisticated that we can tap into what you would call unstructured data and use all kinds of techniques to gather data that you couldn't when I started my career. So actually, index creation has evolved over time, creating an ability to give us much more insight than we could 25 years ago when I started out my career.

Now, I want to understand what the role of these things is in the global ecosystem, because from a hundred-thousand-foot view to a newcomer, the AI index, for instance, looks like a beauty pageant or *American Idol* or *Britain's Got Talent* kind of ranking. And there's a lot that goes into that because, as you just alluded to, there are complex factors that have to be weighed and yet, that's what you're doing. So, as a result, who uses the index and what for?

It is - If I may step back, and look at what the purpose of an index is first? And you're absolutely right, these rankings get released and is a bit a little bit like a beauty pageant, you know, who's top, you know, and who's second, and third, and who's at the bottom of the index, that gets a lot of attention. Now, the reason why I think it's good that it does get attention, it is that the purpose of the indices is, while they're not perfect, because you're trying to measure many different types of nations on something that's quite complicated. And you're using a sort of a one size fits all. So, there will be some of the nuance that you that you do lose, but what you do gain is you're putting everyone on an equal footing, you're creating - some would say competition, I would rather say, and use the word *inspiration*. Because when you organize the data like this and create an index and a ranking, you can it sharpens people's mind on how they are performing, and hopefully also creates a "let's look at countries that are doing better so, they can be a source of inspiration, or a source of this as a model that works well in this country, maybe it's something that would work well for us," for example, and I'll go into the details of the AI index and sort of what we're trying to achieve with that index. But for example, Finland has been very successful in certain aspects of the AI ecosystem, and has been used as a, because they've taken the view that the entirety of its population should really be versed in AI,

as much as is possible. And so that has been lauded as you know, this is something maybe we should all think about, maybe our population should have access to online learning when it comes to AI and actually should be a requirement for all that have taken some sort of base course in this. It doesn't work everywhere. But it's definitely a source of inspiration. And it's a model that's worked well for Finland. And then you've looked at sort of the Israeli ecosystem that has a very different profile, but other areas of strength that others other nations are looking at as a source of inspiration, and so on and so forth. But when you're looking at trying to wrestle down into an index something so complicated as measuring an AI and national AI ecosystem, there's a lot of thought and time that goes into, What is the framework? What are we trying to get to here? And what are the right components that go into it? What are the right indicators? How do we source it? And also, how do we weight it; are some of these indicators more important than others? And so, we've did gather a very great - and I'm very grateful to them - Advisory Board, on looking at joining from academia, CTOs from big businesses, AI startups, policymakers, and the like, to really get our arms around all of the different aspects that go into the ecosystem. And from there, we started out with maybe 500 indicators, and we kick the tires on them. And then we ended up with 150 indicators that sit across seven pillars. And actually, the interesting thing with the AI Index is that it's so difficult to measure this using what I would say normal static data points, as in drawn from the World Bank and IMF and other places and UNESCO on education. We had to go to sort of quite creative and unusual data sources to really figure out what how do we map the talent pool, the research community, and the investment space, and the funding that goes into this, because they don't necessarily sit on what you would [call] traditional statistical platforms; they sit in coding communities and online platforms, and then hackathons and meetups, so we had to be quite creative in terms of what data we used. And then we had to set out to actually gather all of this data. And also, a lot of considerations of data sources that are really good for maybe the US and Europe, are they are they also good for Asia? And specifically, are they good in China? So, we had to go to a lot of experts on the data sources themselves to work out are we using the best sources possible?

And the parallel that's coming to mind here is that there are often there are studies that talk about the best country in the world to live in, which is obviously a lot of axes, but it they look at things like standard of living, cost of living, median income, access to health care, education and things like that and try and put those all together and we see those results from time to time, because obviously it grabs attention. And perhaps we like to think that it motivates a government to do better, or at least makes them aware that the world is keeping an eye on what they're doing. Is that the kind of reaction and usefulness of the AI index?

It is something that the governments pay a lot of attention to now, because it is it is now the largest measurement platform of AI ecosystems out there in the world. And therefore, a lot of the governments are using it to benchmark where they are. So, they keep a keen eye on how they're performing on the index. And it's not just because you want to be high on the index, that, of course, is very nice in terms of the ability to attract investment and so on. But also, AI is, you know, as you know, Peter, it is, you know, it is something that is on a lot of people's

radars, and it's not only because it's important to be at the forefront of innovation, and it's good to be at the cutting edge of AI, in of itself, but it's also because the promise of AI, is that once you've got an ecosystem that can innovate, and has the capacity to innovate on AI, you also would hope that there is a capacity to adopt it, because the adoption of AI is something that could lead to a step change in growth, it would impact productivity positively, it would, adopted correctly, would support health systems and also efficiency gains across not only the private sector, but the public sector. So, it holds all of this promise for improvement and economic growth. But what it also does, nations are competing on this when it comes to geopolitical standing. The countries that do well on AI are also countries that can lead on things like facial recognition, machine learning; but quantum compute is on a lot of government's radars. And the importance of quantum compute is that if you are on the forefront of the ability to innovate and to actually hack and crack and commercialize quantum compute, then you're also able to impact cybersecurity. The encryption models that are in place now will be heavily impacted by what quantum compute can do down the line. But also quantum compute is sort of almost no outer edge on what we imagine that this can do, we were just having a very interesting conversation here with Demis Hassabis who runs Deepmind, but also Kai Fu Lee, as you know, who was running Google in China and CEO of a big investment platform and sort of really thinking through what quantum compute can do. And everyone agrees it can be very it can, it can revolutionize the way that we, you know, operate today across many, many sectors, and in many, many areas, so, but it also has a I wouldn't say a warfare component to it. But there is a certain sense of an arms race when it comes to this, whoever owns the edge in these areas are going to have the edge on many things on cyber on growth, on in on disruption of industry as we know it today. So that definitely is an aspect of the race here, that is geopolitical and not only great in terms of unlocking growth and so on.

And talking about the risk, you pointed out the risks of quantum computing with respect to disrupting encryption protocols and with AI, there's a lot of talk about the risk to the economic stability by automation. Principally, not necessarily making half the population redundant but of accelerating the flow of capital in the wrong direction from people who are doing jobs that are easily automated to people that own the technology that automates that. Do the Responsibility and the AI indexes track that kind of inequality or the level of governments' responsibility with respect to helping prevent this divergence, this parting of the waters in the population?

It's a really good question; it is not directly explicitly in the index, because measuring the impact on labor markets is something that's quite hard to do. That said, it is something that we think about a lot. We discuss in our AI community around the index, we have these monthly roundtables and summits, twice a year. And the question of inequality comes up all the time. How is this going to impact? There's a there's a lot of layers of AI and inequality. The first one, which you touched upon is, how is this going to impact the labor market? Who's going to be made redundant? And there are different theories on this, there is the question about, which jobs are going to be in danger? And if you look globally, you would, the theory is that actually in the US and Europe world, it is actually a sort of white-collar worker, that is much more at risk of

being impacted, and less so much service and blue-collar workers, because robotics is still sort of quite far away from being able to carry someone or care for someone. But elsewhere, where robotics is being implemented, sort of from the sort of baking in businesses that are being set up. That's where you could see the blue-collar worker being impacted. So, this is sort of theory that in some parts of the world, blue-collar workers will be more impacted. And in other parts of the world, white-collar workers will be more impacted by this. And then there's a theory about with this change, yes, some people may be displaced, but many, many more jobs are going to be created from the use of AI, they're just going to be different in different areas. And as we know, people are talking about upskilling, and the need for that. So really, the burden goes back to the government to go back to your question: Are they aware of sort of the parting of waters and the disruption that this would create and I think the new AI strategy coming out of the new UK just a week ago, very much sort of has that at the top of the agenda in terms of the importance of training and upskilling, and the type of skills that are needed in order to avoid that kind of disruption and create a dislodgement in society and inequality in society where people are left behind by the AI, and the implementation of AI, and not being able to sort of get, you know, maintain a foothold in the labor market, because they don't have access to the skills and training. And so that I think is very much on the mind here in the UK. And I think also across Europe, the question is, whether it's enough on their mind, and if it's on the minds of countries, sort of elsewhere in the world, because there is a desire to be able to innovate and implement this, because of the promise, and maybe a little bit "too little too late" on sort of mitigating the disruptions that that this will cause I think that's absolutely a risk for sure. And then there's an inequality question that comes up, just in the question of developing AI, we're sort of often not really aware of the type of labor that is used to label data, and make sure that the rails that AI, run on is performed by people who often paid well below a living wage, let alone a minimum wage in order to make this happen. And so there is now a growing awareness of that you know, there are companies out there, there's a great company in Canada called Summa that focuses on trying to, you know, address the question of inequality when it comes to all of that sort of lower level labor that goes into facilitating AI when it comes to labeling on facial recognition, but it's also just sort of object recognition and all that, because if we don't have that right, we can't have autonomous vehicles, all of this will be much more glitchy and more dangerous, and less capable of being rolled out in any sort of greater scheme. So, it then also impacts AI adoption in societies and in the private and public sphere. And then there's also just a question of there's a gender diversity question in In AI as well, you know, the people who produce it are very male skewed. And so that's something that, you know, has to be addressed. As, as we go and develop, go, you know, as we develop as AI is developed and implemented, we got to be very conscious of how it's developed, and it's not inadvertently, is skew as you know, that is not in favor of diversity, and minorities of women as well. So that's something that we do not incorporate directly in the index yet. It is something we're looking at, we're looking at, we're just looking at a blueprint for an AI ethics index, as well as an AI regulation index, and also as an AI adoption index that will lie as, as parallel indices to the core

global AI index that we publish, we're actually about to update that, and it will be in its fourth year, soon. So, we've got some data to back on now, which is great.

Well, that puts you at ground zero of an incredible debate at the moment, including right now in Congress; the hearings about Facebook, for instance. Can all those indexes that you were talking about, the extra ones, can they track the responsible development of AI with respect to diversity, for instance, and looking at the areas of bias that you alluded to as to whether a country is fostering responsible development with less bias, or is more reckless in that regard?

Again, Peter, you ask great questions. This this is a this is an area that is almost flowing into the other index, a big index that we publish, taught us, which is the Responsibility 100 index, which is a very different index, but it looks at the FTSE 100 on all of the ESG metrics. So, we look at climate we look at, you know, good business, your renumeration, modern slavery and human rights. whether the companies of tax havens, we look at gender pay gap, we look at ethnicity pay gaps, we look at disability reporting and so on. But actually, where the two are sort of converging is, I think that there's now a call for adding an ethics aspect to the ESG measurement. Because most companies now are handling large data sets. AI is a big part of how they analyze the world that they're in, but also analyze the data that is specific to their company, whether it be a bank or a services company of any kind. So, AI is a big part of what they do now. So the component tagged on to ESG, which is sort of ESG plus AI ethics could be and is something we're actually looking at, we're looking at AI ethics grades that we could add into our assessments of companies, and then whether it could then spill back into the AI Index, to look at what's the scorecard that you need to look at as a company to make sure that you've got the sort of the right policies around handling of data, the right policies around if you're an AI first company, and you're using AI from the get go, is it being built without bias? Is it being built with the right set of ethical standards? Is it something that the board is aware of? Is it used in sort of the way that it's supposed to be used in an ethical way that that follows certain standards? So I think that's next, I think that is a component we probably will look to add to our Responsibility 100 index, it's a component we will probably have in our Global AI index. So, but to go back to your question about Facebook, it would be then one that you would then start, and I know many companies are starting to look at looking at sort of big tech platforms, and sort of an ethics grade as being discussed, if not loosely, sort of trying to wrap some metrics around that. But we'd certainly be keen to take a first stab at that from a metrics perspective, given that we are the publishers of the Global AI index.

And wow, there's so many things intersecting here and I'll just remind our listeners that we actually had Charles Radclyffe of Ethicsgrade on an earlier show: episodes 57 and 58 if you want to listen to what he's doing about that. And I can see in Facebook, it seems like all of these things are intersecting at once: disinformation, ESG, and AI. They're all on display right now in Washington. But I would like to, before we leave behind the issue about economic inequality, to ask what your thoughts are about how we could direct the flow of capital, so that it doesn't end up in one place. Because every time some Silicon Valley company disrupts an industry, then

if they're successful, they you get this enormous amount of capital going into the pockets of the investors and the people who own the company. And it's coming out of somewhere else. But at that point, in the American economic structure, it's already too late to do anything about it. Bill Gates has talked about a robot tax; I have yet to see any details of something that looked doable in that, but do you have thoughts - I realize it's a little outside the topic of the index. But this is the sort of thing that I'd be interested in your thoughts on how that capital flow might be made better for the people that it's currently coming away from?

I mean, in Europe, we're certainly pushing for taxation of the big tech platforms. As you know, Margrethe De Vestager in Brussels is leading on that effort; the ethos there is exactly what your what you're alluding to, this is the redistribution of the gains that are held on few tech platforms. And, and how you how we get to a point where we can redistribute some of those gains, so they actually can sort of flow back out into society, and support some of the some of the issues that they create, frankly, but also, there is it is a very big pool of untaxed resource that in the UK and Europe, certainly the view is that that needs to be sort of rebalanced, if you will, and a lot of courses are coming out from here in terms of how you how you could tax in a way that is not too burdensome, but create some sense of fairness. And I don't know how familiar you are with sort of what's coming out from Europe, but there is a sort of idea that on average, that should be at least reaching from what is essentially a 0% tax of the tech platforms to something that's more like sort of a 10 to 15% taxation of tech, tech platforms to begin with. And then we sort of start from there. But I think even that is going to be quite hard to implement. But it's definitely on the horizon. So that's on the taxation side, right, and the redistribution of the wealth after it's been created. And in terms of sort of, there's that's the outcome or output, right? But you also asking a question about, is there something to be done before that happens? And in order to avoid that it's this sort of clustering, and very few companies - and that's where sort of regulation comes in. And there's a question of what role should regulation play? So right now, the conversation around regulation is, you know, what do you do when you get to a point where you're so big, as the tech platforms are today? And how do you view that in the context of taxation, but also in terms of competition. But maybe there's also a role for regulation to play in terms of encouraging a distribution of funding that goes in and sort of maybe how to better redirect that so it's more dispersed on not just a few that clusters that seem to be very successful, but maybe we could do that and spread that a bit more evenly, not just sort of within countries but also across. So, there are funds here set aside in Europe for AI, innovation and tech. And one of those things that they're trying to do is actually make sure that it is dispersed around and across Europe to make sure that that that surfaces maybe also some diversity in thought, some things get oxygen that might not otherwise have got it because the venture capitalists tend to sort of see things in a certain way. And these European funds are maybe going to be a bit more risk taking, and a bit more interested in sort of trying to get out to the sort of the corners of the region, which I think is a very interesting take. Mariana Mazzucato obviously talks a lot about this. And the role of a European body, but also of governments, and what role they should play. And I think that's an

important point in this context, is that, you know, private capital behaves in a certain way and as it should and as it does, but is not taking the risks that lead to breakthroughs and innovation that we've seen come from, as decades ago, where the US government and the UK took some big risks. And that led to a lot of the technology that we use today. And I think that has decreased in recent times, and I think Mariana Mazzucato's point is, we need to probably get back to that, to that mission-focused funding by governments to say, let's take some risk, let's put some big money against things that that may or may not yield an outcome, but I think it's worth trying.

That's the end of the first part of the interview. I think the first takeaway for me was how this hints at the extent of the scaffolding you need around AI to integrate it into its place in our world. I mean, it comes out of a research department or university somewhere and all they're concerned with is making it work and do something new. Then as it gets used more in critical functions you need the accountability and explainability like we were talking about with Michael Hind last week. And then, one sign that AI is no longer just a research tool but an essential facet of the global economy is that people need the kind of strategic and geopolitical information that Alexandra's indexes are providing, and the fact that they exist at all tells you how big an industry AI is becoming, because it takes serious effort to curate them. And those rankings both describe and may influence billions or trillions of dollars in investment and business impact. But they're not just a list of countries, from top to bottom, they're lists of many dimensions on which the indexes are measuring the impact of AI, and just looking at those dimensions, in categories like talent, infrastructure, government strategy, and so on, is itself an assessment of the breadth of the impact AI is having. And then there are dozens of metrics that are combined to give scores on each of those categories, which take a lot of effort to compile, but of course the motivation and the money is now there to do it because of how valuable that information is. And it's only going to get more active as dimensions like ethics, as we discussed, come into play. Really, what we're trying to do here is squeeze highly complicated data down to something small enough to fit into our human brains without mashing it up so much that it loses any value.

In today's news ripped from the headlines about AI, it turns out that having a robot look at you while you're playing a game against it changes both your behavior and your brainwaves. A paper published two months ago by some researchers at the Italian Institute of Technology experimented with a robot called iCub, which has kind of a baby face and robot arms – but no mouth, it's like a human version of Hello Kitty – and it was playing a game against human subjects who were festooned with EEG wires. The game was Chicken, were two simulated cars headed towards each other. And just before they would hit each other, the game would pause, and the participants were instructed to look at the robot before making their next decision. The robot would either look at them or not, according to how the experiment was going, and make a random utterance, like "Nice move," or, since it was in Italy, "Bella mossa," which sounds a lot nicer to me.

Turned out that the humans' reactions and brainwaves were different depending on whether the robot looked at them or not. Reminds me of other experiments that involved putting a picture of someone looking at you above a collection jar in a break room, I think it was, and that affected whether people cheated the jar or not.

Next week, I'll be concluding the interview with Alexandra Mousavizadeh when we'll be getting into the global competition between the US and China, and where she sees them ending up. And then we'll talk about the global disinformation index, which takes on the hot seat task of rating news sites according to their disinformation content, and how they do that. That's next week, on *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.

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