

Caitlin McDonald:

On today's fourth episode of Leading Edge Forums, growing digital ethics and practice podcast, I'm joined by leading privacy expert Ivana Bartoletti. I'm your host, Caitlin McDonald. Okay, welcome to today's podcast. Today I'm joined by Ivana Bartoletti who's the co-founder of the Women Leading in AI network. She was the woman of the year in the 2019 Cyber Security Awards, and she's the Technical Director for privacy at Deloitte. She recently authored an Artificial Revolution on power politics and AI. Welcome Ivana.

Ivana Bartoletti:

Well, thanks so much for having me.

Caitlin McDonald:

My pleasure. I want to start today talking about privacy. So would you say privacy is the fundamental AI ethics problem that we have?

Ivana Bartoletti:

That's a very good question. I think privacy as it is right now and as we've always viewed it, is a risk. Because I think we have to really fundamentally rethink the way that we've viewed privacy so far. So, it's an interesting one because we have seen privacy very much as the right to protect myself, the right to the not having interference in the right. And of course that is very much a risk at the moment. What is a risk through facial recognition, through various artificial intelligence systems and not just as an individual, but also as a group of people. So with similar characteristics, vulnerable people in particular. But at the same time though, I do think that the reason why privacy is to me very much a risk, is if we think of privacy as the right to autonomy, and freedom of thinking, and developing our own path in life. That's how I see it.

Ivana Bartoletti:

Because the problem we're facing at the moment in my view, is that with sort of algorithmic advertising, and sort of this competing advertising, what we're having at the moment is all our histories, all our browsing activities it's just materials ingesting into algorithms to then target us, to tell us what to read, to look, to tell us what even what we're going to do in 10 years time. And if we view privacy as the right to navigate through life, without having too much interferences coming from other sources, then yes, I would say privacy is definitely a risk. And I've realized that through my son, when he started to buy things online, books, that he was getting all these recommendations. And I started to think, "Well, excuse me?" You start reading one book and then in a month or two, you've just read the books that have been recommended to you based on some obscure algorithms hacking into your personalities. And to me, that is the greatest privacy risk that we have at the moment.

Caitlin McDonald:

Yeah. Actually, in your book An Artificial Revolution, you say that we should redefine privacy around freedom from persuasion. And I wonder if you could elaborate a little bit on the idea of what freedom from persuasion is, and what that means and how we would know if we had achieved that.

Ivana Bartoletti:

To me, this is actually something that worries me very much because of what I see under threat is the real basics of our democracy to an extent. Because in democracy, you and I can have different thinking. We vote in a different way, but we can both express what we believe in to an extent, obviously with the constraints. But what is happening at the moment is that with this online manipulation, which happens online, when you're targeting, not targeted... not just an advert, or shoes, if you've been looking at a pair of shoes online, but you're targeted with specific news based on your interest, your weaknesses, and even your fears. And if you and I Caitlin, we see different news and we see different facts, then I feel that is the basics of democracy they're going to trample.

Ivana Bartoletti:

What can we discuss if we don't have access to the same facts? And this is what I find to me, as the real problem with this sort of online manipulation, which is a real infrastructure of persuasion that we've built online. It's through their real time bidding process through this enormous data privacy free zone, which is the digital infrastructure and the architecture of persuasion that we have online. And to me, privacy should be really redefined as the right and not to have this sort of persuasion, not to be manipulated online based on these super computers really, hacking to our most intimate secrets really.

Ivana Bartoletti:

By developing this patterns of behavior and all this sort of psychosomatic behavioral advertising. And I just find this as really disconcerting. And this is worried for democracy, is worry for our own development as individuals. So there's been some amazing work done on this. Sandra Walker from the university of Oxford, and it's been actually fantastic of this, and really looking at what we've got to put some limits to how much these companies to their algorithms convening for about us. And she's been absolutely great. So I think that is the right direction to study and research for privacy professionals at the moment.

Caitlin McDonald:

Mm-hmm (affirmative) yeah. And I really want to focus on that idea of not having access to the same facts. So I was having a conversation with a human rights lawyer recently, who was saying, if you're dealing with discrimination, for example, lack of gender equality in the workplace, and you place an advert in the newspaper, and it's very clearly targeted towards one gender, at least I as a person of another gender have access to the information that's there. If it's in the newspaper, we can all see it. Whereas when you're dealing with targeted advertising, I might not even know that that ad exists. And that is a discriminatory act.

Ivana Bartoletti:

Well, yeah that is completely right. That is exactly the point. And the craziest thing has been in the complete lack of accountability around what is happening in this area. The only voice that we've heard over the last few years telling what was happening, and it's been sort of tech activists that people say, "Well, I don't want this product to be developed. I don't want this to be used." People who know the unintended consequences of this kind of situation, this kind of... And I think this is seriously problematic because that is exactly what it is. The creation of this synthetic personality, or this sort of... It's what happened to an extent with the leave campaign, where the Cambridge Analytica, with all the profiles that were created around the individual.

Ivana Bartoletti:

So the company had so many profiles of people, and they would send them specific adverts. So for example, if somebody was profiled as being an animal lover, they would receive adverts saying, now Europe was terrible with animals and completely they disrespected animals rights. So, when it's like that it's really, really difficult because you don't see it, you can't see it. It's totally unaccountable. It's totally not transparent. And this is what is I think, one of the most sort of disconcerting things that are happening at the moment.

Caitlin McDonald:

Yeah. And I'd like to focus on that area of accountability. And I think there's some really interesting things happening in law at the moment, and also in kind of a convention within the industry. And I'd be curious for your perspective on who is responsible for creating those mechanisms for accountability in AI, and to whom is AI itself responsible.

Ivana Bartoletti:

Yeah. So, I mean, AI is a human creation, isn't it? So it's created by humans. And it took, just to say, I don't know if you agree with this, but I felt really a little bit of real pain when the eight levels thing happened. That was terrible. But what I also find terrible in there is that you had all these young people correctly, so demonstrated, but they weren't demonstrating against the algorithm. And you're like, "Well, what do you actually expect from a government that is got some specific ideas and specific objectives? Do you expect this government to produce an algorithm which is different from that?" Do you see what I mean? Algorithms are created by humans, and they will mirror and reflect the values, and the parameters of the people who created it.

Ivana Bartoletti:

And the fact that something so, I would say, clear and obvious. If you focus on the number of students, obviously you're going to have a problem there because of the sheer fact that there are less students in private schools. And if you based your decisions on how the schools have performed over the last five or 10 years, obviously you're going to have a biased result. So what I'm saying is that, there are humans making this decision. So when they don't make it, but that happens by accident, the fact that you don't check them, that you don't test the systems, and you don't see the problem, it's problem in itself. It means that you really don't care. And in fact that you don't care as a human responsibility.

Ivana Bartoletti:

So the accountability lies with the humans that should be doing the due diligence that is required. Although, the problem is that you can put all the due diligence that you want in a system in itself. The Cambridge Analytical data scientists, they will tell you that what they've done was fair, that their algorithm was totally fair, that there was no problem with the algorithm itself. And the issue is that, the problem remains, and it's beyond the algorithmic fix, beyond the technological fix, the problem remains with what is these artifacts are going to be useful for. And it's a little bit of sort of the discussions that we're having around facial recognition where we all seem to focus on, "Oh, AI doesn't recognize black people," we turn the consequences.

Ivana Bartoletti:

Yes, I agree it's terrible. But the problem is even if we created a perfect AI system that recognizes everybody we're still wanted, and I'm sure that even if it was perfect, it would probably be deployed in such a way that would wrap surveillance around the most vulnerable, in any circumstances. So it's just

like the accountability lies with the people who create it. If there is not enough governance in the company to understand, into questioning, to challenge, and to what the consequences of a particular artifact may be, the consequences of lies with the company that has deployed this particular tool. And I think we have to be very clear about it. Now, one thing I would add is that I am very conscious that we do not want to stifle innovation. I mean, I've worked with large organizations that really want to innovate and innovate for the common good.

Ivana Bartoletti:

And I really, really support this. And whilst I have all my concerns, I also worry about how we use artificial intelligence to really innovate and grow economically. So I've always said, why don't we try new things, for example, sandboxes and all this is very good, but also the idea that we could probably have liability free zones, or at least have reduced liability zones for companies that demonstrate that they're accountable, and they've put all the due diligence in place. And that would be in my view, something that could speed up innovation because we do need it. We've seen it now with the sort of COVID-19 with the pandemic. So, I'm not talking about stifling innovation when I say these companies need to be accountable, but we really need to make clear that there is technology in itself, doesn't bear responsibilities, the people who deploy it, and the people who use it that need to be responsible.

Caitlin McDonald:

Mm-hmm (affirmative) yeah. And that actually really takes me nicely onto the next question around accountability. And your point about the idea of regulatory sandboxes, or experimental zones that have special protections around them is an interesting one. And I'm wondering when you think about the kinds of approaches we have now, essentially, I think there's really three mechanisms that you have for influencing AI and digital technologies more broadly, but specifically talking about AI governance. So you have the regulatory mechanisms, you have industry best practice, and reputational mechanisms. And then you also just have people voting with their feeds. So you have in particular technologist who may not want to work for certain kinds of organizations, you have consumer pressure as well.

Caitlin McDonald:

But I would say in many cases, actually, it's the workers who are really quite highly skilled and who are making some choices about where they want to work by just having the bigger budgetary pressure than actually potentially consumers. And I'm wondering what you think about in terms of the appropriate balance between these various mechanisms to put pressure on companies essentially, to do the right thing, to be ethical. Where do you think is the most important areas to focus on and where are we relative to the right amount of balance between those mechanisms?

Ivana Bartoletti:

Yeah. I mean, you're spot on. I mean, at the moment, what we're seeing is just sort of these three elements. So I work a lot in the industry and I have to say that I'm seeing basically two things. One is that companies want to establish the right systems in place. They go so far as to say, "Well, we want an ethics board. It has to be a real one. It can't be one that cannot stop something from happening. And there has to be a real one with real teeth." So there are companies that want to do this. They also want to communicate it to the consumers because they do think that something is changing in the way that people feel, privacy, ethics, fairness, and obviously the Black Lives Matter movement is really bringing to life the [inaudible 00:14:58] link between technology surveillance and at the same time, social inequalities.

Ivana Bartoletti:

So there is one element. Then there is the other element of regulation, and the regulatory power where it's a tricky one. Because the speed at which all these innovation goes compared to the speed of the law is incredibly different obviously. The GDPR has been a good piece of legislation, although one that has favored... put in an easier position, maybe the biggest companies, because they have the tools to automate some of the processes, the rights within the legislation.

Ivana Bartoletti:

But at the same time the regulation regulatory side is in a tricky position because at the moment we haven't yet performed every old fitness test to understand how the current legislation that we have in place can deal with the algorithmic decisions with algorithmic workplace, with the algorithmic society, and all that. So I see interesting developments here where new funding going to people are going to understand how algorithmic work places are going to be, what do workers right loop look like in an algorithmic society.

Ivana Bartoletti:

So the balance I think, is a tricky one to find because we need all of these dimensions to work together. So corporations need to do their part, obviously. And I think they need the pressure coming from regulators, and they need the pressure coming from citizens. There is one thing though that I think is fundamentally missing in all this, that needs to bring everything together, and I think it's the issue around redress. Because I always wonder what happens to an individual where say for example, they are a victim, or a group of people. They're victim of automated decisions end up being discriminatory, or where they are cut out of essential services because of the way a particular algorithm has been built. Where can these people go and seek redress? And I think something like that would be so powerful because it would bring the idea of justice to something more coherent in sort of the algorithmic age.

Ivana Bartoletti:

And at the same time, it would be a big push for regulators and companies equally to do something that has got real teeth. And so I think it's more about having valuing all the different dimensions that you mentioned. But I think we need to find somewhere that ties all of these together. And I think there is something around redress where citizens can get justice for these things. But of course it's very problematic, but we have to think about something like that maybe.

Caitlin McDonald:

Yeah, and I think it's as simple as if your consumer rights are violated, you get compensated for that.

Ivana Bartoletti:

Exactly.

Caitlin McDonald:

It's without having a mechanism for redressing a wrong, what you have is a nice set of principles. You don't actually have accountability. You don't have a mechanism for really addressing that wrong. So do you see any movements on the regulatory horizon to actually start building these mechanisms for redress either at the UK level, or the European level, or anything like that?

Ivana Bartoletti:

I think the Information Commissioner in the UK has been quite interesting, hasn't he? All the work on explainability, all the work around how GDPR with all the sets of rights applies. And I think that's something that's been a little bit underestimated. Because every time we talk about GDPR, everybody's like, "Oh yes, automated the seizure and the explainability." And I'm like, "Yeah, fine. That's good." But there's something more important in there, which is the subject access rights. And the right to know what is happening to your personal data. And I think, at the moment, I don't think people have yet be able to understand how that works within these systems. But I think it's important. And I always say when I work in these organizations, "Look, the right of access, the right to deletion, right to... They apply to the systems that you create." And the informational rights in general.

Ivana Bartoletti:

The right to know what happens to your information. It applies to that system that you're creating. So yes, I mean, of course, you have the GDPR with the right to... So question mark around there, but a degree of explainability, which I'm worried about because it doesn't mean anything in my view without sort of clarity. But in terms of access, it's very strong. And I think we'll have to see some movement around that. What does that mean? How can we really enforce and leverage this informational access, this power that we have as consumers? And I think the regulatory side will really, I think, change when this becomes a little bit more mainstream.

Caitlin McDonald:

Mm-hmm (affirmative). So do you think it will take a test case of some kind to come forward-

Ivana Bartoletti:

Yeah, it probably will. I mean, we're waiting that there will have to be cases. I mean, we've seen with eight levels situation. The good thing with the eight level situation is that we know that the decision was made by an algorithm. But the problem is that in a lot of cases you don't even know. And so to an extent in that case, we know what the enemy was. In normal situation, in a lot of other situations, we wouldn't realize it. So these things were completely happening in a totally in unaccountable way. But I think test cases will be important. There are lots of things they need to be tested in the courts. Even things around explainability, the human intervention. And to me, one it concerns me a lot, because a lot of companies that will continue to claim that there is human intervention, whether that simply means choosing one of 10 automated outcomes, and choosing one of them.

Caitlin McDonald:

Yeah. And how empowered does that human actually feel to make a decision that contravenes what it's being recommended by-

Ivana Bartoletti:

Exactly, exactly.

Caitlin McDonald:

... the algorithmic outcomes?

Ivana Bartoletti:

Yeah. Plus a lot of studies. So they're really interested. I don't know if you've seen, but I've come across them sort of from a psychological perspective around how we humans get influenced by a decision made by a machine. Yeah. Really interesting, so yeah.

Caitlin McDonald:

But I think Cathy O'Neil's Weapons of Math Destruction has some great stuff on that specific issue, and on the kind of broader issue of people feeling as though if it's represented in a numerical fashion, that means that the data is somehow more right than when you introduce some of those qualitative-

Ivana Bartoletti:

Exactly, exactly.

Caitlin McDonald:

... factors and explanatory contexts.

Ivana Bartoletti:

Yeah. I mean, that book is amazing, isn't it?

Caitlin McDonald:

It is such an amazing book.

Ivana Bartoletti:

It's incredible, yeah.

Caitlin McDonald:

And it's so well written, especially for people who perhaps are not [inaudible 00:22:57] with the math side of things.

Ivana Bartoletti:

Exactly.

Caitlin McDonald:

But certainly, all of these decisions are impacting all of us in every part of our lives in every way. And as technologists, we have greater responsibility to understand the depth of the math, but as everyone we have a responsibility just as we do in every other area of citizen life to understand what kinds of impacts are being made on us and how to influence those decisions.

Ivana Bartoletti:

Exactly. Exactly. Totally. It's an interesting one because the problem I encounter always is that there is a total lack of understandings of many different parts. When people think about AI, they immediately think of sort of the terminator, the sort of [inaudible 00:23:43], and this is still to mismatch. And then you say, "Well, actually it's with you already. And-

Caitlin McDonald:

It's just spreadsheets. Yeah, exactly.

Ivana Bartoletti:

Yes, exactly, exactly. It is with you already, and it's telling you a lot about what you have to do when you browse the internet. Even when you navigate-

Caitlin McDonald:

There's the demystification element as well. There's just kind of mystique about AI that makes it seem like it's this completely impenetrable thing and-

Ivana Bartoletti:

Absolutely, totally.

Caitlin McDonald:

... totally omniscient. And in reality, what we're talking about is some number crunching that causes certain things to happen-

Ivana Bartoletti:

Exactly, exactly.

Caitlin McDonald:

... which isn't really that different than other kinds of opaque processes. I mean, if you look at something like credit scoring or other areas where previously these decisions were being made by humans, they were procedural, but they weren't automated. Actually it's not really that different from that. It's just that it's now happening in an automated way.

Ivana Bartoletti:

Exactly, exactly. And the way that being automated, the way that this can scale up a number of things. And I mean, you mentioned credit scoring, that is a real concern, isn't it? I mean, there are areas where these [inaudible 00:24:43] are so problematic, that you just feel, do we need a licensing agency? Because it's like giving them not alone education, housing, there is such leverage of equality, and sort of equitable outcomes in law that these areas are so important that this is exactly where you don't want to-

Caitlin McDonald:

You don't want to exacerbate existing inequalities precisely.

Ivana Bartoletti:

Exactly.

Caitlin McDonald:

Yeah and I think that's one of the big risks as we've talked about through this episode and also through the series. And I'm curious Ivan, in your experience, I know you work with a lot of different companies on digital systems. What are some of the key strategies that technologists are using? So you've

mentioned ethics boards for example, but what other technologies, or strategies, or mechanisms are companies starting to bring into play? Or design techniques to try and really make their ethical processes robust?

Ivana Bartoletti:

Yeah, so there are a variety of things. And first of all, I think a lot of companies are starting to say, we need to find a common vocabulary. Because they've realized that there is a problem here around for example, take the concept of fairness, the way that the code of the mathematician, identify that concept is very different from the HR person or the lawyer is a very... So the privacy lawyer is even different from a consumer lawyer. So I think that a lot of this is around spending time together to try and say, "Okay, let's develop the common vocabulary that allows us to deal with these issues as an organizational strategy rather than just this single department." So that's the first thing that I'm seeing, which is I find really, really important.

Ivana Bartoletti:

The second thing that is happening I think is around how does real solid strategy on how domain experts can intersect or interact with each other. So for example, how does product management interacts with legal, but at the same time with sort of the ethics board, but at the same time with... So it's how they can ensure sort of solid strategy so there is an ethics and privacy by design approach to what they're doing especially in product management. The other thing that I find that is happening that it's rather interesting is around sort of the ethics boards. So we've seen quite a few of oversight mechanisms that are happening. And the other thing which is happening is reviewing. So there are things that companies cannot do themselves. So having independent eyes come whether it's a private company like mine, whether it's right in academic, whatever it is. But having somebody else to say, and look into what they're doing and ask the right questions.

Ivana Bartoletti:

So this is sort of the other that I'm seeing, whether it's assurance mechanism, model reviews of systems, but really asking external experts to evaluate and give some advice on the way they're-

Caitlin McDonald:

I think that's a space that we're going to see growing a lot is the auditing and assurance mechanism.

Ivana Bartoletti:

Yeah. The model reviews. Yeah, exactly. Exactly.

Pip Ryan:

Yeah, yeah. Cool. So we've got a common terminology, working with subject matter experts, the development of boards, and also this growing sector in terms of assurance mechanisms, model review, and that kind of thing.

Ivana Bartoletti:

Yeah. These things. I mean, I have to say that the most interesting one I've seen of apart from the model reviews, the assurance models, companies are starting to get training in and say, how are we going to train people in this concept. And that goes in the direction of creating that vocabulary. Because to me

that is very much of an obstacle. I don't know if you feel the same because people don't look into things [inaudible 00:28:38]. They're not looking at things sort of in the very same way. And [crosstalk 00:28:42].

Caitlin McDonald:

And you can get really far down a path and realize that actually you're talking about different things that are both perhaps important, or all the things that you mean by fairness, or bias, or whatever these terms are. They might all be very important things, but unless you actually are on the same page about what you're specifically trying to achieve, you can get very lost very quickly.

Ivana Bartoletti:

Absolutely, totally, totally. I completely agree. And in fact, even talking about explainability for example, transparency, [inaudible 00:29:07]. I remember at the beginning, people mixing up the words like transparency, explainability. I said, "Well we're talking about completely different things." And what does transparency mean, because I see this aligning in the medical sector for example, around explainability where people say, obviously technical people will have a different approach from sort of patient's perspective. And so it's just the creation of common language and then getting everybody on board with this that is a big thing. That and the assurance I think are the two. So that direction of travel I'm seeing at the moment.

Caitlin McDonald:

Yeah, yeah. Excellent. And then I suppose, final thoughts, what would you like to leave our listeners with? Is there a key message you'd like to leave behind with you for our listeners today?

Ivana Bartoletti:

Yeah. I mean, one of the things, I mean, I wrote a book because I wanted to do two things. First of all, I wanted to bring three dimensions together. One was the policy and the politics, which I like very much. The second is being privacy. So being a privacy professional, and the fact that I want to really challenge the way that we've seen privacy so far, but the third element to me is a feminist. And to me, feminism is really all about power and allocation of power. And a lot of what is happening at the moment is really about power. Isn't it? It's really about where there is data... We've seen it with a recent shrimps to European court of justice ruling, validating the privacy shield. There is an element of soft power of European side. And sort of a soft way to introduce data localization, I think. But in any case, there's politics and geopolitics, underpinning data, underpinning artificial intelligence that showed this power dynamics. They're absolutely important.

Ivana Bartoletti:

And they are so visible now to us. And the power is not just that, the power is also about the way that theSE systems become more and more complex. Why we as individuals, we haven't changed much over the millenniums. We still have the same human feelings you say. And this asymmetry of power is something that I really would like to challenge. And I think this is why politics matters. We've got a challenge that asymmetry of power that we've gotten right there. So my message would be around this, that this is... We're not talking about technology, we're not talking about... We're really talking about power, and this is something that belongs to everybody. And the redistribution of power is something that should be in everyone's interest, not just the technologist or the philosophers of the ethicist, this is us. And the way that we're living our physical and digital world.

Caitlin McDonald:

Super. Thank you so much Ivana. Really appreciate your time.

Ivana Bartoletti:

No, thanks to you. Thank you. Thank you.

Pip Ryan:

Thanks for listening to the Growing Digital Ethics in Practice podcast. You can find out more about Ivana's work, including her book at ivanabartoletti.co.uk and you can find out more about the Leading Edge Forum perspective on digital ethics, just by googling the phrase stemming sinister tides, where the first link should be our 2019 position paper: [Stemming Sinister Tides: Sustainable Digital Ethics through Evolution](#).