

CREATIVE INTELLIGENCE

WITH JAMES INGRAM

EPISODE FOUR: CREATIVE INTELLIGENCE, DEMOCRACY AND POWER

WITH GUEST DR PIPPA MALMGREN

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James: Hello, and welcome to the Creative Intelligence podcast with me, James Ingram, host and CEO of Splashlight. This is a series of conversations exploring tools and technologies that fuel creativity and inspiration. In this episode, we'll be talking to Dr. Pippa Malmgren, Dr. Pippa for short, the former financial market advisor to President George W. Bush, economist, and founder and CEO H Robotics. Pippa's also the bestselling author of two books: *Signals, How Everyday Signs Can Help Us Navigate the World's Turbulent Economy* and the newly released *The Leadership Lab, Understanding Leadership in the 21st Century*. Dr. Pippa has been ranked 15th in the Top 100 Most Influential Economists. Welcome, Dr. Pippa.

Dr. Pippa: Thank you for having me!

James: I mean, just considering your background, it's like, "Where do we even begin?" But we really are going to try to narrow it down as best we can towards some of the things you're doing with technology, this new company that you're starting. Why don't you tell us a little bit about your work at H Robotics? What's happening here?

Dr. Pippa: Yes, so bottom line, as an economist I got tired of just talking about the world economy and decided I should be part of building it, especially if I've had such confidence, which I did. And over the last decade that we were coming into a period of truly dramatic growth and innovation, which I still stand by. So long story short, I started talking to all my clients about my view on this, and one of them, who's now my business partner, said, "I agree and I have an idea." And we agreed, robotics was going to be the future. He had been a chopper pilot, and he had grown up in a family that was running a construction company. So he knows how to build stuff, and used one of the first Apple computers in Australia, where he's from, because the parents looked at the computer and went, "Oh my God, what do we do with that? Give it to the kid."

James: Right.

Dr. Pippa: So at 12, he started coding. And anyway, we decided to build drones that are for industrial use. Most of the drones you know about are fundamentally toys. They're built for a retail consumer and that's the space we entered.

James: So you left politics, you saw that opportunity while you were in politics?

Dr. Pippa: Well, see, no, I didn't leave.

James: Okay.

Dr. Pippa: So, as an economist, I try to express what I do in different ways. So one way is, build the economy with a robotics company. One way is to advise governments, and I'm currently an advisor to the British government on trade policy, Brexit, and I've been an advisor to the US government. I also try to explain the world economy, and that's why I write books. And that was the origin of this last book which I co-authored with Chris Lewis, called *The Leadership Lab*, because I'm talking to the world's leaders, political leaders, CEOs, business leaders. All of them said, "Look, I've been totally blindsided by what's happened." Missed Trump, missed Brexit, missed the slowdown in China, like pretty much everything. And second, I'm overwhelmed by technology. I don't it. I can't get a grip on it. Third, I realize that they all don't really understand the landscape and their whole business model of being a leader is very 20th century. It's very analytical, drill down into detail and you'll find the answer there, and you the leader, will tell everybody what they're going to do. Yes, no. In the 21st century, it's not analytical, it's parenthetical. By which I mean, it's about your ability to look across, connect the dots, see the landscape, lead from the heart, tell the story. That is as important, or more important, than the analytical side. So to do that, Chris and I said, "Let's write a book that just explains this to people."

James: Right. That is great, and these leaders and corporations, they're definitely challenged with just technology, with this big term technology. And something that is of particular interest in this is how it's affecting the artificial intelligence, affecting even the creative process.

Dr. Pippa: Totally.

James: And do you see that in your robotics company? How are you trying to use machine learning and artificial intelligence to enable or to solve a problem? Is that what you're after?

Dr. Pippa: You know, we don't even have to go that far, to be honest. What we're doing is even simpler than that. Which is saying, first of all, you should

have a robotic tool that can pretty much fly itself, and so you get the data comparable because it's all on the same pathways. Seems such a simple idea, but nobody does it. And then you should be able to access all those analytics and all that data on your mobile phone anywhere in the world, and collaborate with your management team based on that data. That doesn't even require artificial intelligence. That's just about delivering the content in a way that's easy for people. And so, that's been our main focus. I think the machine learning will come. Mainly, you know what it's great for? Pattern recognition, so that you can see, "Oh, over the last three years, look at what's happened to this offshore oil platform. Now we can see why we keep getting gas leaks here."

James: Interesting.

Dr. Pippa: Which you couldn't see if you didn't have that data over time. I think that's what AI is great for. But right now, actually, AI still is, more or less, it's either in a lab or it's for processing huge amounts of data.

James: Right. Even in the economist world, right, are you seeing a growth in using machine learning and AI in that role, of what they're trying to analyze to come up with answers?

Dr. Pippa: Well, totally. I was talking to the head of one of the biggest insurance companies in the world recently, and he said, "We used to ask all these questions when went to insure a driver. Is it a man, is it a woman? Are they old, are they young? Are they experienced or inexperienced? Now we have all this data, and we have all the AI-led algorithms running over the data, we've realized all those questions are totally irrelevant! The only thing that matters is, is this stretch of road you're driving on inclined to have accidents? Or is this stretch of road you're driving on not very susceptible to accidents? And your insurance policy ought to change depending on how much time you spend on which part."

James: Know your routes.

Dr. Pippa: Yes, so this is the whole point.

James: That's fascinating.

Dr. Pippa: Let me describe it this way because I think moving away from strictly artificial intelligence, let's go back to just data.

James: Okay.

Dr. Pippa: So, we're entering, literally, a new dimension of reality. Imagine we have ubiquitous sensors, whether it's cameras at the shopping mall, or your mobile device in your pocket, or the screen, or the camera that's in your refrigerator at home, all of them are gathering data. Now you collect all that data in a kind of holographic space of data points, billions, trillions, quadrillions of data points. It produces almost like a holographic crystal ball. That crystal ball is going to give you a clearer picture, a more precise picture of reality than looking at reality itself. And it's a place of radical transparency where it knows more about you than you know about yourself, or about your company, or about your entity, and equally it reveals you. So now to AI...

James: It's a digital persona.

Dr. Pippa: It's like a digital... yes, it's like a doppelganger of all of us. So the most valuable startup today is called SenseTime. It's worth like \$6 billion last time I looked, but that was two weeks ago, it's probably more than that now. Chinese company, and what it does is it uses AI and facial recognition. It can identify not only one person out of a crowd of 10,000, it can identify the exact emotional state of every person in that crowd. And if you take it and you train it on a chief executive who goes on, say, CNBC Squawk Box, it can identify the micro facial movements that indicate when they start lying, and set the algorithms to short the stock before the guy's even left his seat.

James: Wow.

Dr. Pippa: So when I say radical transparency, a lot of our leaders, and people generally, they don't even get it's a two-way thing. You can see reality better, but it's going to see you too. And we have to learn to navigate in this new environment. By the way, especially since governments are turbo charging this crystal ball, the new space is for the computational power that backs this. So in the US, we've announced we have something called Summit, which is the world's fastest traditional computer. It can do in one second, what it takes a human being 6.3 billion years, with a B, to calculate.

James: Wow.

Dr. Pippa: One second it can do it.

James: Summit?

Dr. Pippa: It's called Summit. It's made by IBM and NVIDIA and we keep it at Oak Ridge, which is like the nuclear facility with the United States. It's how valuable it is. The Chinese are building a facility right now in Anhui

province, which it is said when it's completed in 2020 will have one million times the computational capability of *the entire planet*. So when we talk about this data sphere, not only do you have to get your head around that, you got to get your head around this thing is about to get turbocharged.

James: Right, right. This is so incredible, and this is what we wanted to dig into. Because we see in these dialogues... I've been talking to digital anthropologists and talking to car designers, architects - and access to this kind of information is changing the way they think, changing the way they create. Do you see that as a good thing? Do you see that as a negative thing, a neutral thing?

Dr. Pippa: Oh no, a very good thing, and what I really love about technology, and a lot of people take issue with me on this, it's highly democratizing. The view right now is, you have to have a PhD from Stanford or Berkeley or MIT to play in this game. I totally disagree. You may need it to *build* the technology...

James: Yes, the infrastructure.

Dr. Pippa: The infrastructure...

James: The plumbing.

Dr. Pippa: To create the plumbing, but to use it? No. It's incredibly accessible to regular people. As an example, I was at an event the other day, women entrepreneurs, female entrepreneurs. One woman who's running a fashion blogging business, and she's managed to create a platform that somebody else built. But she has all these people all over the world who are writing about skirts or blouses that they like, and through the platform they can now take a commission for the sale of that thing.

James: A referral or something.

Dr. Pippa: Yes, so she has people who are making half a million bucks a year doing something they used to do just for fun. Now that is incredibly empowering.

James: That's empowerment, yes.

Dr. Pippa: And great for the economy.

James: That's incredible.

Dr. Pippa: That's real business, that's jobs, that's income. That's what I see. And same thing, like the robotic tools that I make, we've designed them so that you

don't need to be a technician or technical expert. You don't even need to be a pilot. Basically we designed it for any idiot and I was the idiot, right. I'm the beta tester cause if I can handle this thing, trust me, anybody can manage this thing because you want to empower regular people. I think that's the wonderful thing.

James: We love that.

Dr. Pippa: That's the wonderful thing and the amount of innovation that comes out of this is truly mind-blowing. Because once you start to hand it to people who are not engineers, because by definition engineers tend to not be that creative, like it's beaten out of them.

James: A little more analytical.

Dr. Pippa: They're analytical. We want to get this technology in the hands of people who are not creatively constrained.

James: Who can be inspired.

Dr. Pippa: Yes, and inspiring.

James: Yes, yes. We couldn't agree more and I think the dialogue we're finding when you talk to them is it's increasing this toolkit that they have to think about how quickly they can find if their designs are commercially viable, the collaboration behind. So AI is really an inspiration tool, is how we're seeing it.

Dr. Pippa: Absolutely. Did you see, by the way, the first artificial intelligence painting?

James: I heard about this.

Dr. Pippa: It's so incredible. So, and it went for something 40 times the estimate at the Christie's auction. It sold for something over 400 grand. And what I found most interesting about this story was, of course it's all driven by code. In fact, they had two competing codes.

James: These two competing algorithms.

Dr. Pippa: Two competing algorithms. Someone described it as a bouncer at a bar who keeps throwing out his drunken friend and won't let him in the bar until he gets it right, until he's stable and seems sober. That's what these algorithms do with each other. They throw each other out until it's right. And it produced a painting, but what was really interesting is the code was initially created by a kid who was 19 years old. A high school recent

graduate called Robbie Barrat, who just put it up on the net as open source. But three young guys, 25 years old, in Paris, decided... they created a company and they said, let's use Robbie Barrat's code to actually deploy it to make an actual painting...

James: There was like a robotic hand or whatever.

Dr. Pippa: Yes, put with a robotic hand and call Christie's, get them to actually action it. And so the question is, who created that painting? Was it Robbie Barrat and his algorithms, was it the three Parisians? The honest answer is code is cut and pasted, right? Nobody creates code from scratch really very much these days. So where's the value, where's the creativity? Is it in the application? So I kind of think of it as maybe Robbie Barrat is the Steve Wozniak, who actually created the Apple computer, and the guys in Paris...

James: Yes, the marketers.

Dr. Pippa: Are they the Steve Jobs, you know? But it's interesting, this open question of where is the creative value, where is value created by AI?

James: Wow. I went to this one creative conference in May up in Montreal called C2 Montreal.

Dr. Pippa: Oh, yes.

James: And they were developing their AI to make a sculpture. And they were training it by having all of us grab a piece of clay and squeeze it, they took a picture of your hand and they squeezed it, and then that clay, how much it squeezes and things gave it its ability to begin to learn, to understand how to work with the clay. And I can't wait to see what it ends up creating.

Dr. Pippa: And I don't know if you know, but one of President Obama's former speech writers, a guy called Goodwin, is creating the first artificial intelligence novel. And the way he's done it is so clever. He's basically bought a cool convertible, and fitted it out with all kinds of sensors, cameras and data gathering devices, and he's driving down the same road that Jack Kerouac drove down when he wrote "On The Road," but now he's going to let the sensors tell the story of what it sees as it's driving across the United States. And I think that's going to be released at some point in 2019. We will have the first AI novel.

James: See, this is what I'm talking about. There is a change in the creativity landscape because of artificial intelligence. It's changing.

Dr. Pippa: I think even beyond artificial intelligence, it's also even...

James: It's data. The data. You're right.

Dr. Pippa: It's the data, you know. AI is one piece of what you do with the data, and the level of the data acquisition is so mind blowing. I have a friend who's running an amazing company called Nanovision. And what Nanovision is doing is, they're going to plant nanochips into the human body. So they're so tiny that you won't even know they're there.

James: Okay. Did you get your yet? Did you get yours?

Dr. Pippa: No, but you know, these things are coming.

James: I know.

Dr. Pippa: And it will observe me at the level of my DNA, my molecules, my cells, and my organs. Now why does this matter? Number one...

James: I would take that chip.

Dr. Pippa: Well, it's interesting. So proteins develop before cancers start, so you get warning. But we have no way of seeing it right now. But now you're going to get a message saying...

James: The precursors.

Dr. Pippa: You've got proteins developing, and let's fix this before you get the cancer. But even bigger than that, you take all that data from all those humans and you create a kind of blockchain structure. By the way, nobody knows what blockchain actually is. Let me just say blockchain is just a timestamp. It's just a timestamp on each piece of data so you know the sequence.

James: Exactly. A big ledger.

Dr. Pippa: It's just a big ledger. But if you have a block chain type structure for all that data, what you really create is what he calls a cure chain. It's a place where you can develop cures because you have so much information that previously was never in one place to discern what is the causality. What is the sequence.

James: Wow.

Dr. Pippa: So now, there's a dark side, too. You know, I'm very nervous about things like people being microchipped. I'm very uneasy about people not understanding that emitting data also makes you controllable. So for example, in China they have this new thing called the social credit system,

and that's where the government takes all this data from your mobile device, from the camera that you pass at the shopping mall, and puts it together to give you a score, which reflects your level of social compliance. So, if you jaywalk now, not only will it spot that you're doing it, and you don't even need to have an identifier on you, like your mobile phone.

James: It just finds your face.

Dr. Pippa: It'll find your face through this sense-time facial recognition. You will get a text message before you're even halfway in the street with the fine for jaywalking, and your name goes up on some huge OLED screen at the nearest intersection.

James: Wow.

Dr. Pippa: But your social score drops, and if it drops low enough, you can buy a ticket for a train or a plane, but you won't be permitted to board it. So you can create digital prisons in this way, and I think we in the West need to really think about the governance. Because I think this whole data environment is changing the balance of power between states and citizens, between nations.

James: Sure.

Dr. Pippa: That's why Putin says artificial intelligence is the new frontier of geopolitics because whoever has the best capability basically can break the other guy's codes whether they're nuclear or bitcoin codes.

James: Yes. And quantum computers even make it, you know, yes.

Dr. Pippa: Yes. So we're going to have a new governance environment. We have to re-think what is the right balance of power between companies and customers, for example.

James: Yes. It just changed. I mean, who is it, was it Foucault who talked about that in his book back in the '70s, about surveillance, how it changed. Look at when the Senate put cameras up.

Dr. Pippa: Yes.

James: The CCT and all of a sudden certain debates didn't happen on the floor anymore.

Dr. Pippa: Exactly.

James: So how we're observed, it does change behavior.

Dr. Pippa: Well, what are we going to do when we put sense-time on politicians speaking from the floor of Congress and it identifies the lies?

James: Yes!

Dr. Pippa: Whoa. Okay.

James: That's going to be a problem.

Dr. Pippa: That's going to be... that's a whole different...

James: Or it could be a good thing.

Dr. Pippa: It could be a good thing.

James: Yes. And then, I want to go back to one of the things that you talked about, is who actually is credited with the creation of the painting. So as you're writing the book, is it him? Does he put the sensors? Or is it the machine? Is it a collaborating, co-authored by "X", AI component? And then there's obviously, and any time there's a rapid change, you have the purists who like the way things used to be. Whatever it is, whether it was a scroll that became a codex that went to a digital pdf, you know, I can't... I won't read a book unless I touch the page, you know, it's all these changes, always... now it's unless it was painted or unless it was authentically how I got my inspiration, it really isn't valid. I mean, how do you see cultures dealing with this rapid change?

Dr. Pippa: Well, and yes, it's such crucial point, even. What is art? You know, it's... All of this is forcing us to go back and ask the most basic questions. It's going to force us to ask the question, you know, what is it to be human versus what is it to be a machine. I've been recently re-reading, and I really recommend to everybody interested in this subject, there was a guy called Norbert Wiener who wrote in 1949 a book called *Cybernetics*. He was the first person to say we're going to have an interface between humans and machines, and it will create a new environment, and we have to understand this inter...

James: The cyborg.

Dr. Pippa: The cyborg. He identified cyborg in 1949. And he did it in such plain, elegant English, it's so easy to understand. You realize actually...

James: What a visionary.

Dr. Pippa: What a visionary, and what an important skill it is today to be able to explain stuff in plain English. But that's one of the biggest problems in fact I see with technology and science and all the things we're talking about. These people are so at the cutting edge of their space and so deep in the detail, they can't explain it to the general public.

James: No.

Dr. Pippa: And I wrote an article a while back with a friend of mine who had the best title I've ever heard of in my life.

James: Okay.

Dr. Pippa: She was the chief storyteller for NASA.

James: Nice.

Dr. Pippa: I'm like, okay. That is so cool.

James: Okay, right.

Dr. Pippa: And we wrote a piece, I've got it up on LinkedIn, about why scientists need to be better at storytelling. But really, it's a bigger story.

James: It goes back to your leadership book.

Dr. Pippa: It's back to that. And it's for all of us. We all need to be better at, how do we explain our experience of this change. How do we explain what we're building, what we're doing? And it's funny because the technology is actually causing us all to have less conversation. This is one of the things we found in the book, *The Leadership Lab*. We're much more connected and far less conversation. And that's having psychological effects, because it's making people angry and feel atomized and separate and different...

James: Yes. Not acknowledged, and...

Dr. Pippa: And not acknowledged, and unable to converse, because you don't have to. You can just swipe, or like, or you don't have to actually speak to anyone. But if you can't speak and converse, you can't negotiate. And then you're further left out.

James: No. Even building relationships.

Dr. Pippa: Well, and this is why we see actually rising numbers of particularly young men under the age of 25, who are not having relationships with anybody

because of that loss of the ability to converse. So technology is amazing on the one hand, and very dangerous on the other end. It's causing us to become less human in ways that matter.

James: So I think that's what we're trying to challenge. Is that going to remove some of the human side of creativity. That's what's going to be very interesting. So we've been talking to others, and this one study was being done, kind of getting ready for in the creative world, the particularly graphic designers, designers, the more fine art type of, you know, photography, things like that. And we're finding that there is an openness to have more inspiration, to have better tools to do things differently and explore and create new mediums. But we wonder when it shifts from a tool that you use to the computer doing it on your behalf, right, that's where everyone starts questioning. Sure, you're giving me inspiration, but don't paint it for me. Don't write the book for me. And that's going to be a very interesting convergence of mentality and how people think. And I guess as generations are growing too, if that's what they're accustomed to, they're not afraid of it.

Dr. Pippa: Yes, I think that's true. But for me, that also comes down to the comfort level and facility with the power of technology. So you know, the amount of power, computational power that we have in the smartphone in our pocket is more than NASA needed to get a man to the moon. It is more. So my 14 year old daughter is naturally much more conversant with that capability than I am because she's had it all her life. And she knows how to utilize it. She is far more empowered than I am to pull the juice out of this machine and make it do stuff...

James: Yes, and how to leverage it.

Dr. Pippa: How to leverage it, how to create with it. She's an artist, so she does use it for the creative process in ways like I would never have imagined. So that's another thing, is the age bracket starts to matter. The level of comfort. And that's why I'm always saying, look. The fastest growing part of the work force in the industrialized world today is the over 55s. They are re-entering mainly because their pension isn't going to cover...

James: Right, exactly.

Dr. Pippa: You know, the fact that technology is going to let us live to over 100 now. So they have to go back to work. But I actually think it's a great thing because they're going to bring all their skills and capabilities. But the one thing is, they've got to get much more comfortable with the technology and learn how to harness it.

James: That's very true.

Dr. Pippa: And they're a little reluctant with it, they won't play with it, and I'm like, it's actually, it's play. It doesn't have to be work. You don't have to go and you know, do a session with someone teaching. Just play with technology.

James: Right. I love this.

Dr. Pippa: And you learn more from that than anything. And talk to your teenagers, because they'll teach you stuff.

James: Yes. And so is that maybe tying back to you what you said about some of the leaders because of their age?

Dr. Pippa: Yes.

James: Where they are in their comfort zone of leading these technology initiatives inside a traditional company?

Dr. Pippa: Yes, totally. I mean, most leaders that... certainly the ones that Chris and I are advising around the world, they're in their 50s and 60s, principally. They are totally uncomfortable with... they don't really even know how to send... you know, they don't want to get this, right?

James: Right.

Dr. Pippa: You send a gift to them, and they're like, that's amazing, you know? You show them Shazam, and they're like, "That's incredible!" It's like 15 years old, you know? So they are, they're behind, and why? Because they're so busy doing what they're doing.

James: Right. Running the company.

Dr. Pippa: They don't have time to get into all this stuff. And yet the danger is, all these young people who know perfectly well how to turbo charge the company or the political message or whatever it is, using it, they won't let them do it. They're like oh, no, no, I'm very afraid of you using social media or using this technology, I'm nervous about it. So I kind of feel like, when we wrote the book, it's a bit of a knife to the throat of the current generation. Either get with the program or you're going to get moved out of the way. And the next generation, hurry up and bring all your stuff. And when I say bring all your stuff, back to your question about creativity. Again, 20th century leaders were so analytical in the way they were trained. It's all about numbers and data. But now the parenthetical is more

important that's this storytelling. It's the creative, it's the fun part. And they're not so good at that.

James: Yes. And you're saying the data's still helping with the parenthetical.

Dr. Pippa: Sure.

James: It's not that data makes you...

Dr. Pippa: It's like one or the other.

James: ... force you into analytical. It's just how they viewed it whereas if I'm understanding what you're saying, these fuller contextual pictures that you can use with data will enable you to tell a different story.

Dr. Pippa: Absolutely.

James: That's really interesting. There's another... you're reminding me of a book that I read called "New Power." I don't know if you've read it.

Dr. Pippa: No, tell me.

James: I absolutely recommend that you read it.

Dr. Pippa: Okay.

James: It goes along with some of the things you're talking about, about the 21st century leader. And these two activists, I believe it's out of New York, wrote it. And they were highlighting for leaders and things that the way business and power used to work it was contained together, and then distributed when they felt the need to distribute it. New power, you can't contain. It's more like electricity. All you can do is just channel it.

Dr. Pippa: It's like this holographic thing I was describing.

James: Exactly.

Dr. Pippa: It's like it's ether.

James: They were saying that you have things like the hashtag, #MeToo, that's the new power on the darker side. ISIS is an example of new power.

Dr. Pippa: Yes.

James: Then it said, so you can have this 23-year-old come into your office, and she has 50,000 followers. She has influence, so what she says, what she eats, where she goes, she gets rewarded with... she has influence, but she walks into the office, you put her in an entry level job, and you tell her she has no influence. Her voice does not matter, and that you're not relevant because you're too young. It causes this frustration for them, because they're like, "I am relevant. I'm totally relevant," because the world has made them more relevant, the way the tools work.

Dr. Pippa: Correct.

James: The modern leader has to realize everybody's relevant. How do you empower and create these movements to use everybody?

Dr. Pippa: The way I describe it in the book is, leadership in the 20th Century was about the leader, the cult of the infallible, kind of Jack Welsh-style leader.

James: Right.

Dr. Pippa: Leadership in the 21st Century is about the ship.

James: Yes, the empowerment.

Dr. Pippa: It's the empowerment of the people in the ship, and this is a whole different approach. It's also true...

James: Who do you think is doing great? Who would you say, "Wow, you know, there's a contemporary leader, maybe he's in his 50s, but you know what? They've adapted." Have you seen one where you were really impressed?

Dr. Pippa: You know, it's not so much a person right now, it's a company.

James: A company that's impressive?

Dr. Pippa: I think one company that's really interesting is Nike.

James: Okay.

Dr. Pippa: What they just did with the Kaepernick movement, so you know, young guy, football player who initiates the bending down on one knee as a sign of protest against the treatment of the African American community, particularly by the police community, but more generally in society, and he says, "I'm not being disrespectful of American or the flag. I'm protesting in favor of what America should stand for," and other people who think quite the opposite. He's being disrespectful, so Nike makes the decision to make

him a brand ambassador as it were, and back what he's doing. They were advised, "Look, some people are going to burn your sneakers and your tee-shirts," and sure enough, some did, but way more bought them. Why? Because that is an example of heart-felt leadership of saying, "What we're going to stand for is a guy who stands for something."

James: Correct.

Dr. Pippa: It's not that they're standing for his particular take, they were standing for someone who took a stand, and that kind of willingness to express what do you stand for, because the thing is, followership requires you to have a sense of trust and faith in whoever it is that you're following. How do you demonstrate values, because that's where that comes from?

James: Right.

Dr. Pippa: That's why Chris and I say so many leaders have a to do list, and what they actually need is a to be list.

James: Yes.

Dr. Pippa: You can't do values, you have to be values.

James: You have to be to have.

Dr. Pippa: You have to be to have, and what Nike did is they were, "We're going to be this value."

James: Wow.

Dr. Pippa: That was a great example of that. Whatever you think about the issue, the specific issue, that's what they stood for, was standing for something.

James: I love that.

Dr. Pippa: Interesting.

James: Yes you know, a little quick story along the same lines of what Nike did. When my daughter got accepted into Stanford...

Dr. Pippa: Amazing.

James: They have the admittance weekend, and you're there, and the president, who was a new president last year at Stanford, is getting up on the stage, and now he's going to talk, and out come walking these other students

with cardboard things. Because you're new, you don't know is this part of the program? Are they going to show, and is it a protest? You really didn't understand what was all happening, but he didn't start talking, and clearly, now you're realizing this is a protest, and it's an awkward one because it's against the administration of Stanford, for what they had stood for around these campuses to harbor the immigrants, and whether you're going to allow that or now allow that.

Dr. Pippa: Right, right.

James: It's building. They didn't want to stand down. They kind of commandeered the stage, and he stepped back, kind of let it go on, and you're wondering, "Okay, what's going to happen here?" This is a demonstration of a man who understood new power. He stood back. Finally they calmed down a little bit, and he looks them, and he says to everyone in the audience, "That is why you should come to Stanford."

Dr. Pippa: Yes.

James: "Because we encourage them to have a voice."

Dr. Pippa: Yes.

James: "Even if we agree or disagree, they have a voice. They should be heard and we accept that." They sat down.

Dr. Pippa: Diffused the whole thing.

James: They diffused the whole thing, and everyone was like, "Yes, that's why we should come here. We matter."

Dr. Pippa: Well, this is also something even bigger.

James: It was so powerful.

Dr. Pippa: It's very powerful, and an even bigger element of this is technology and empowers individuals.

James: Correct.

Dr. Pippa: We're going to have a lot more voices, a lot more cacophony.

James: This is what we're talking about.

Dr. Pippa: What we're doing as human beings is actually shutting down. Right now the standard procedure people seem to have is, "Either you agree with me or you're either an idiot or evil," right?

James: Yes.

Dr. Pippa: That atmosphere is pervasive, and I think it's because they're so overloaded with so many different ideas and different thoughts, which are all challenging to your core belief system.

James: Right.

Dr. Pippa: The easiest thing to do is make it go away by dismissing them, but technology is going to force us to learn how to deal with this diversity. The thing is, diversity of thinking is the single most important thing you can be doing, no matter what you're doing.

James: It's so powerful.

Dr. Pippa: That is the core message of our book, is diversity of thinking. Diversity of people goes a long way to get you there, but it isn't always the answer. You have a room full of totally diverse people, who all will say, "Well, Trump will never win."

James: Right.

Dr. Pippa: Right, so that's one reason we say, the moment you have certainty, you are already grounded in mediocrity because what technology is doing is creating a much more ambiguous, uncertain world.

James: Right, it's living and breathing environments, yes.

Dr. Pippa: Moving, and also weirdly, you can have two things happening simultaneously that are opposite. For example, you can be both right and wrong simultaneously, in this new technology environment.

James: Which has got to be so uncomfortable for a leader.

Dr. Pippa: Yes, so I can give you lots of examples, but like companies that say, "We have totally complied with the tax law, and our tax payment is zero." Yes, but it's zero. That doesn't feel right. That's wrong.

James: It's wrong. What did you just contribute?

Dr. Pippa: You say, "But I'm correct, technically." Yes, but it's also right... it's both at the same time, and again, technology empowers this kind of paradoxical...

James: Transparency.

Dr. Pippa: Transparency of right and wrong.

James: Yes.

Dr. Pippa: It's ambiguous, and we have to learn to embrace that uncertainty, that ambiguity, and again, it's easier, I think, if you're younger than if you're older.

James: Yes. Do you see it shortening the learning curve?

Dr. Pippa: Definitely.

James: Let's say an economist, you know here, 25 years of experience, and I've seen all these things and so I have this experience in my mind to draw assumptions on. I'm a five year economist, I don't have anywhere near that experience, but with, potentially, artificial intelligence and machine learning, I may actually have a vantage point that can be competing with someone who has that much experience, right?

Dr. Pippa: Well definitely, I mean...

James: That happens in the creative world, in the science world, in the leadership world.

Dr. Pippa: Well diversity isn't only about gender.

James: You're right.

Dr. Pippa: It's also about age and experience of life. There's a wonderful short story by Henry James called, The Tiger in the Carpet. It's about a man who looks back on his life and realizes he had been in love with someone, but he missed it. He didn't see it, and he realizes, when he looks at a carpet he's been looking at for every day for 40 years, and he never saw there's a tiger in the carpet.

James: Wow.

Dr. Pippa: There it is, right in front of his eyes, but he didn't see it. This is the thing, are we in fact surrounded by all kinds of things that we're just not perceiving, and so this is something technology is now empowering

different eyes, and different voices who perceive something that maybe you missed.

James: Wow. This is a fascinating conversation. I want to throw one more thing at you.

Dr. Pippa: Okay.

James: Then we've probably got to wrap it, but one more thing. There's another movement or thinking that we're trying to, on this podcast, really try to get people thinking, and it's around the power of digital anthropology. It is very, very tiny universities that are trying to create PhDs in digital anthropology. It's almost non-existent, and yet, we're relying on data science to interpret the data, when really what we have is these digital villages, and a digital ecosystem that needs digital anthropology.

Dr. Pippa: Yes.

James: We are trying to get a movement around this. Do you see any reality in that? A data scientist viewpoint, analyzing data, versus a trained anthropologist, just a social type thinker, to look at data?

Dr. Pippa: Well look, yes I'm all for it. Again, diversity of approach to any subject. Look at Estonia. They've announced digital citizenship, so you don't have to live there.

James: Right.

Dr. Pippa: You can just register to be a citizen of that country and now you are a citizen or look at the dark net. It's a kind of a citizenry with their own code, their own kind of constitution of behavior. The connectivity between people definitely affects...

James: It creates a village.

Dr. Pippa: It creates a common set of morals and values.

James: Yes, right.

Dr. Pippa: Perceptions of what's appropriate, not appropriate, and why should that be any different than if you did the same thing in a bunch of British nightclubs in the King's Road.

James: Right.

Dr. Pippa: In the 1960s, you would have detected the punk rock movement.

James: Right.

Dr. Pippa: If you were an anthropologist, you're going to detect the modern version of it that's occurring in a digital space.

James: Who's studying that? Who do you think is paying attention to this right now?

Dr. Pippa: I don't know, but I think there's an awareness that there are all these communities, which don't have borders or boundaries anymore.

James: Yes.

Dr. Pippa: They don't even really have time definitions.

James: It must affect economics.

Dr. Pippa: Of course, and a lot of these places are very productive.

James: Right.

Dr. Pippa: They're generating, you know, jobs and income, and they're not... I was at a thing this week actually, talking at KPMG...

James: Okay.

Dr. Pippa: About the future of techs, and what does tech look like in a digital world, and I think, more and more, we're going to move towards a digital VAT approach because you can't identify where the value was created in the environment we're talking about.

James: No, you can't.

Dr. Pippa: All you can identify is where was it consumed, and I think that probably we'll move more towards that, but nations are going to compete with each other.

James: Sure.

Dr. Pippa: Because we're all broke, right?

James: Right. How to become a buyer.

Dr. Pippa: They're going to go, "Oh, how much of Amazon's business happened in my nation versus your nation?"

James: Right.

Dr. Pippa: "I think more was in mine," yes.

James: Kind of the sales tax, sales tax is very similar.

Dr. Pippa: Yes, I think they're going to have to move to where was it consumed.

James: Yes, right.

Dr. Pippa: Yes.

James: I mean it's totally side bar, but I think the NFL does that, right? The players have to pay the state tax when they play, wherever they play.

Dr. Pippa: Interesting.

James: That might be a point to take a look at.

Dr. Pippa: Interesting.

James: I'm pretty sure that wherever they play, because that's where the event happened, so that's where the revenue is generated, so a portion of my income, I have to pay state tax in that state.

Dr. Pippa: Yes, probably so.

James: Yes.

Dr. Pippa: I think that, again, this is an area that requires a lot of new thought. It's about governance.

James: Correct.

Dr. Pippa: In this new environment, and every aspect of governance, we've taken for granted because we're like, "Well you know, we got the Constitution."

James: This is old power. It's old power.

Dr. Pippa: It's not new power. You're not going to read this book that you recommend.

James: This has really been fascinating.

Dr. Pippa: Thank you.

James: We've covered so much ground.

Dr. Pippa: Yes.

James: I just want to keep talking!

Dr. Pippa: Amazing.

James: Really, I know you've got other places to be, so this is really, really special. If there was like a recap, one thing you wanted to really kind of give to the listeners here, but the theme that we're talking about, or something that you really want them to take home, that's really close to your heart, what would you tell them?

Dr. Pippa: Well, it's probably speaking to the converted for your audience, but I'm always saying to all these leaders, when they say, "I'm not comfortable with technology," I'm like, "Here's the bottom line. If you don't do technology, technology's going to do you."

James: It's so true. I love that.

Dr. Pippa: End of story.

James: That's exactly what it is. Again, we really appreciate you being here, Dr. Pippa.

Dr. Pippa: Thank you for having me.

James: The things you're talking about, so where can we find you, if we want to track you and follow what you're putting out there?

Dr. Pippa: My most active social media is Twitter, where I'm under @drpippam, and LinkedIn. I put stuff up on LinkedIn.

James: Okay, great. You've got to post this podcast!

Dr. Pippa: I will.

James: Okay. If you want to find out more about this podcast, please visit our website at creativeintelligence.fm, and follow us on Twitter at the cq podcast. You've been listening to Creative Intelligence podcast. Thank you

for joining me, James Ingram, and my guest, Dr. Pippa, and for what's been a stimulating, and really informative, and dialogue is fantastic.

Dr. Pippa: So much fun as well.

James: Thank you very much.