

# AI and You

Transcript

[A TEDx Journey: What It's Like Getting to the Red Dot](#)

[Episode 27](#)

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Hello, and welcome to episode 27. For this episode, I thought I'd do something a little bit lighter and of more general interest. I'm going to talk about what it was like for me to do TEDx talks because there's a bit of mystique around them. And so if you're wondering what it's like behind the scenes, or you're thinking about applying to do one yourself, then this is the episode for you.

Now, public speaking is not a natural activity for me. As you may have heard me say before, I discovered I have Asperger's syndrome. That kind of thing is not an easy thing for me to do, and it's certainly not something that had occurred to me to do, to begin with.

My first exposure to public speaking was probably an assignment in high school when we had to give a talk to the class and the teacher pronounced it to be the worst he'd ever heard. That put me off doing that for about another 10 years. And that was about the only time that that came up. And I think we really need to see a lot more practice of public speaking in schools so that it doesn't occur once a year or three years, but every month, at least. I think that having Toastmasters type activities in schools so that kids can learn public speaking as an activity would be valuable for them. And it certainly would have made a big difference for me to have that kind of training at that age rather than so much later as it turned out to be in my case.

Now, I was still drawn to do some kind of teaching in public because of my genes, I guess: my parents were both teachers. So I was giving computer classes and talks at conventions, and it was that one in about 2009 that I had really prepared for more than any other kind, and I had my notes all ready and knew exactly what I was going to say. And it didn't work, the audience wasn't responding. And afterwards, someone in the audience did me a really great favor by coming to me and saying that was terrific content, but it was delivered in this terribly flat monotone and that's why it didn't work. And that was the point where I realized I needed some kind of help. And as luck would have it, the following year, I saw a sign on the local firehall that a Toastmasters club was starting up nearby. And that meant I wouldn't have to go much further to get to a Toastmasters club. I live out in the country and so going to just about anything requires going a long way. But this was in the local town, so I went there, and that was the start of my involvement with Toastmasters.

And I must say that it has changed the expectations I had to begin with because I thought at first that it was a group for people who did after-dinner speeches, that they sat around just doing that kind of formal speaking and nothing about inspirational or specialty type of

speeches. It turned out that Toastmasters is actually a transformational organization. It changes lives. It changes people's abilities, and their perceptions of what they can and can't do and opens up new possibilities. More than once I have seen people break down in front of the room as they realized what they were capable of, and what they had thought they would never be able to do. In my case, it took quite a while before I got to the point where I realized you know what, I think I just might be able to stand in front of people and do this, not for practice.

And this is around the time where I started working on artificial intelligence, and what you see me doing in the book and this podcast and my talks. And it came to me - those teaching genes were asserting themselves - that my mission was to bring this message about artificial intelligence to general audiences. And one way of doing that was going to be talking in front of them. As difficult as that was for me, as unlikely as it seemed, as little practice as I had had in doing that, that was what it came to me that I had to do. And in retrospect, the feedback has borne out that I am able to do it, and people are listening. So here we are.

Anyway, it was a chance association that led to the red dot, because I was sitting next to a fellow parent at an event at my daughter's school, and was talking about what I was doing. And he said, "We are having an event at our college," which was the Lester B. Pearson College that is one of the United World Colleges, and is nearby. They host students from all over the world, bring them together to fulfill a vision that children can be educated together from all kinds of environments, cultures, and countries and languages, and learn not only what they need to learn academically, but learn how to get along with each other, and learn about these different cultures. And they were having an innovation day. So he invited me - this is Samuel Perez, one of the teachers there - invited me to come and speak there. And my experience there was really validating because I got on the stage in front of 140 kids and some faculty, and they are just out of high school and this is their first experience of post-secondary education. I just experienced a tremendous amount of energy coming through me speaking to them about this topic, and they reacted accordingly. It was a really engaged audience. They were talking about this months later. And at that event, a couple of them came up to me and said, "We are putting on a TEDx next January and we would like you to come and speak at that," which I did. And you may look for the video for that, but you will look in vain because there was a problem with the audio for that. The recording from the headset got lost. So the only recording of the sound was the ambient room mics and that was nowhere near good enough. We didn't know that until afterwards, of course. And so at the time, I realized I need some coaching, I need some help to get on that red dot.

And as another stroke of coincidence, luck, the universe and fate conspiring to put me on a path, someone that I knew from Toastmasters, who had made it to the semifinals of the World Public Speaking Championships, was now in the business of training TEDx speakers, and she lives very near me on the southern tip of Vancouver Island. And in an amazing stroke of luck, she is the best coach at public speaking for TEDx, especially, that I've ever encountered. And I've experienced a lot of the top ones in places like Los Angeles. So if you want coaching on

public speaking, and she does this remotely, obviously for a great many clients, Tania Ehman at [taniaehman.com](http://taniaehman.com), she is the trainer for you because she's amazing. And the first time I saw her about six weeks before the talk and went in and she had read my script, and she said, "We should have started six months ago. I do not have time to be nice." And I said, "Bring it on." Because as you've heard me say before, I'm an engineer. We are used to giving presentations at reviews where no one is trying to be nice. No one's trying to be nasty either, but they are going to try and pull your idea apart to attack the idea as much as possible and test it. And if it survives, then it's good enough for operational use. So I had no problem with whatever feedback she was going to give me, and there was a lot of it. And it's an indication for me of just how much difference that made when I look back on some of those first scripts and my ideas about what belonged in front of an audience and think, "Who on earth came up with this? This is terrible." So that led to that first TEDx. And as I said, that is not out in the wild because of the audio issue.

Well, after having done that and seeing that work not make it to the wider world, I realized I need to do more. So I looked around for more TEDxs. I found one in Richmond, British Columbia, and I took the same talk to them because the other one had not gotten any public exposure. And this was TEDxBrighouse, and you can find a link to that video on my website. The amusing thing about that as a speaker was that there were about 100 people in the audience, and that number will become important for reasons I'll explain later. And this was put on by a school for the children of Chinese immigrants of which there are a lot in that area, which meant that most of these speakers were those children. I and three other adults were the headline talks for the event. Because the attendance was capped at 100, again, for reasons that I will reveal later, that meant the audience consisted solely of the parents of those children who had come to hear their child speak. And those children spoke very well but as I said, they're the children of Chinese immigrants and those parents, by and large, didn't understand English. They'd gone there to support their child, but when I and the other speakers were up there, there was just no reaction. So I had to look at the camera and pretend that there was an audience that was reacting the way that I thought that they should while I was doing this. I think if that had been my first exposure to public speaking, rather than the event at Pearson College that I described, I might have had second thoughts about the viability of doing that. Anyway, you will find the link for that. That video was uploaded. However, the curse of the audio equipment struck again and the audio for that is rather substandard and it is hard to listen to. Their equipment was fine but probably what was going on was the battery in my headset was giving out. I was near the end of the day.

Now after that you can imagine I was motivated to take that effort and get on a TEDx stage where those problems wouldn't happen. You might also ask well, why was I so focused on TED Talks at this point, given that they were so much effort for me and were so difficult. And in getting out this message that you've been hearing through these podcast episodes, the fact is that the TEDx stage is something that provides a platform with accessibility to a great many more people than I might have reached without doing that. So it was one of the many things

that I focused on as a way of building an audience for what I'm talking about. And it's also a great stretch for me, and I do like stretching, helps me feel more alive. I have, for instance, a great fear of heights. I really do get quite distressed just looking over the roof of a tall building and I realized a long time ago, decades ago, that I didn't want that fear to run me. And so I went skydiving, and then I did it again. And I did it in total eight times until I had proven to myself that fear of heights didn't have to stop me from doing something that I wanted to do - skydiving. It's a lot of fun, at least once you get out of the plane. In my case that involved climbing out through the open door of a Cessna and balancing on the strut before letting go. It wasn't even a matter of just throwing myself out the back door of something. So I was able to generalize that to say that a fear of nothing need stop me from doing what matters. That, by the way, is an example of *transfer learning* - taking a lesson from one thing and applying it to other situations, which is something that artificial intelligence is very bad at at the moment.

So this is what brought me to TEDxBearCreekPark, which takes place in Surrey, which is south of Vancouver. And I went to an audition for them with a new idea, a new talk, and I didn't pass. I'd made it through the first selection process, but not through the audition. I spent time then, some months looking around for other TEDx events. There was one at a small university nearby that was well managed, well curated. And I remember being in the audience waiting to get in the room and they had their coach up there telling everyone what to expect when they got in. He was basically warming the audience up and telling us how much work the speakers had put into this, and to show our appreciation through our applause and attention. And I remember asking him questions about the TEDx process, and what does it take to be a speaker for this? And he looked at me and said, "Well, you have to have an interesting personality." So I thought, Message received," and I went on to ask other people about this.

So eventually, a year had rolled around, and it was time for the next TEDxBearCreekPark. audition. And compared to any other TEDx event that I had seen or taken part in, their standards were off the scale. And crucially, they were going to have an audience of 1000. Now, the difference between that and the events that I had been at before was that they were capped at a 100-person audience. TED has levels for their franchises, which are the TEDx events. To have more than 100 people in the audience, you have to pass a screening process as a TEDx organizer. For one thing, you have to attend the big TED event in Vancouver, which is obviously not that far away for the TEDxBearCreekPark people, but it costs many thousands of dollars to attend. Plus, you have to fill out a multi-page application form just to attend. And as I said, the production values of TEDxBearCreekPark were just off the scale.

I had to attend an information event that was prepping us for what the standards were and how to apply. There was a long application form, there was a shortlisting process, and then there was the audition. And this time I passed. And that was the easy part because now they started a rigorous coaching process. There were three coaching sessions for the content alone, and then the script would get locked down. And then there were another three coaching sessions on the delivery. Now if you've ever seen a TEDx or TED speaker that looked so natural

that you thought, "Well that's spontaneous. They are just saying this as it comes to them." And maybe it occurred to you, that's very fortuitous that it happened to fit in 18 minutes, although now they are rather shorter than that. Well, that shows you how much they worked on it. Every word of a TEDx, and especially a TED Talk, is approved in advance by the TED organization. That script has gone to them weeks in advance. It has been screened, and they have rigidly defined rules and processes about the event. Not leaving the red dot is one of the more obvious ones. And they are their rules, right? It's their game, they get to make the rules. And if you deviate from them, then you will just end up not being seen and you will have wasted the time of not only yourself but many dedicated volunteers. And TEDxBearCreekPark had some amazing volunteers. It just humbled me to see how many people were there with the goal of helping us speakers be our best. And they weren't getting anything out of it monetarily or career advancement or exposure. They were just there to be of service and support. And as I said, that really humbled me to get that kind of support.

So these first three coaching sessions were working on the content, adjusting what was being said so that the message comes across. Let me tell you, that is harder than it looks. And I got to the point where I thought I was ready. I thought it was done. The response from the curation team and the TEDxBearCreekPark leadership was positive. They understood it. They knew the idea. There were some questions about a metaphor and a visualization that I had in there that I was especially proud of, and had worked quite hard on, but when I explained it, they got it. But Tania, who was my coach, was not satisfied. And this is one of the things that makes her great. So she read my talk to her sister, who is her go-to guinea pig for these sorts of things, and said, "What do you think?" And her sister gushed and said, "Oh, I loved it. It was great." And Tania said, "Oh, good. What did you like about it?" And her sister said, "Oh, I liked this, this and this." "Fantastic. What about this metaphor and visualization part?" And the sister said, "Oh, that was fantastic. I loved that part." Tania said, "What did you like about it?" "Oh, I liked this, this and this." Tania said, "What did you learn?" And her sister said, "I learned this and this and this."

And then Tania said, "*That's not what he's trying to communicate.*" And she relayed this to me. And I realized that that part was failing. And that was an incredible lesson because I realized that you can have a talk that your audience responds positively to, that they like, they like you, they're engaged, they are learning something from it, and you can still fail because they haven't learned what you came there to teach them.

Now, sometimes people think "Well, that's okay. They learned something different but maybe that's the right thing for them to learn." Well, let's think of an example. Suppose someone is giving a talk on drugs at a high school because they got caught and part of their punishment is to go tell other kids "Don't do this." And they describe their experiences in this. And we ask the kids who were listening to them, "What did you learn from this?" And the kids say, "Oh, yes, I learned from this." "What did you learn?" "I learned that I should hide my stash where my parents are not going to find it." So that's not the learning that that speaker came there to

impart, right? And in my case, I'm on a mission, I have a message and if that message isn't received then I've failed.

So I went back to the drawing board. And that was a painful trip because as I said, I really liked what I had there. And I ended up saying, "Let's get rid of the whole second half of this talk and reimagine it from there," and that's what happened. And if you're curious, and you watched the talk, that juncture is right after I say, "As technology grows incomprehensibly faster, what will become of our pace of work? What will become of our place at work?" Everything after that point, the whole second half, got completely changed right at the end of the content-deciding part of the process. And then we went into the next three coaching sessions, which were about delivery and making that congruent with the message, and making it as appealing to watch and listen to as possible. As a speaker, I owe that to my audience, to make that communication as easy to assimilate, and as pleasant to listen and watch as possible. That's why there's so much editing that goes into these podcasts that you don't hear.

Okay, so after that there was a ton of practice. Every TEDx speaker will tell you about this. They're doing that talk over and over and over again, dozens of times a day. It is burned into my brain. When I'm dead and they open up my skull to donate my brain to science, they will find imprinted on my cortex the words of that speech. I'm doing it in the car, at every moment, pulling random parts of it and working on all kinds of nuance all the time to try and get that better. Ask anyone who's done one of these talks, and they'll resonate with that part immediately.

So we got an exposure to the venue itself in the dress rehearsal. And that was the Bell Centre for the Performing Arts in Surrey, British Columbia. It's a full auditorium, seats 1000+ people with balcony and tiered seating. And then a week later, we got to the event and I was the first speaker up. The act before me was a marching band and I could hear them through the stage down in the Green Room where we had a little monitor to watch people on. And I came up and I was quite conscious of the fact that I needed to get mine right, and not jinx it for the speakers who were coming on after me who might think that there was some kind of curse on the stage and make mistakes. You get this little lightweight microphone that's on a wire headband that sits around your skull and pinches a little bit and sits off to the side, so it looks as though there's a fly buzzing around in your peripheral vision. And I bounded onto the stage and got on the red dot and let the training take over.

And the benefit of having that much training was that I was able to look at the audience and experience that connection with them while I was doing the talk and not have to worry about "Am I going to forget it?", which is the biggest fear of public speakers. When you've got to fit a talk in 13 minutes tops, there is no room for making things up. As I said, you've got to stick to the script that you have sent to them. And if you were trying to improvise at that point, well the odds are that you would just lose the thread and come off thinking. "Oh no, there was something really important I needed to say and I totally left that out. Can I have another chance?" "No, sorry, you can't." And I said 13 minutes, and I know that you might be aware that

the standard for TED is 18 minutes, but they've actually been shortening that now. And in the TED Talks and especially the TEDx Talks, the new standard is 13 minutes at the outside. If that sounds like it's really too short for the amount of effort that goes into it, and how are you ever going to fit your message into that, well, a lot of the greatest speeches in history have been much shorter than that. You can change the world in a lot less than 13 minutes.

So it worked. I didn't jinx it. The next speaker up after me was Tom Dutta. And he has a podcast called The Quiet Warrior Show where he talks about how business people need to be more vulnerable and protect mental health that way. And I was actually a guest on his show. And one of the latest speakers on that TEDx event was Ryan D'Arcy and he has been on my show. He is a neuroscientist. And we're all quite close speakers at that event. We spent so much time going through so much together that we're really family now.

The event was live-streamed, but the video that counts is the one that they edit together and then upload and then you wait for TED to publish it. And I remember a few weeks later, getting the email from speaker, Aida Sanjush who was there, and she was saying excitedly, "They're out, they're out!" She alerted us to those videos being published. We had about 900 people in the audience there and we were sold out at 1000. Some of those people didn't show up. Now, this took place on February 29<sup>th</sup>, 2020. And when you think about what was happening at that time, COVID was making its presence known in the West but nothing had happened in terms of protective measures yet. So I believe that some of those people who didn't show up were not coming because of what they had read and heard about coronavirus. But as hard as it is to remember right now, February 29<sup>th</sup> was actually still at the point where people had no problem hugging, shaking hands in public. And so we got in just under the wire because about a week later, things changed radically.

Now I am a curator for the next TEDxBearCreekPark for their technology track. I know, big surprise, right? That event will take place in April 2021 and will be online because certainly at the point where we were planning the venue - and right now it's the beginning of December 2020 - there's no expectation that things will have changed to the point where that event could be held in person again. So we're planning - as so many other TEDx events have for the last six months - a virtual event. Being a curator and vetting candidates also has the benefit to me of more exposure to the kind of standards that are appropriate and needed for TEDx events. And that in turn, helps me become a better speaker because those standards are there for a reason and they create better talks. Now when I look back at even the first version of the script for my TEDxBearCreekPark Talk, I think, "Oh my goodness, what was I thinking?" So there's progress there and it's all very helpful.

So what do I look for, in terms of how would that assist you if you're thinking of applying to a TEDx event? Have one idea. Everything hinges on the idea. This is the tagline, right? Ideas worth sharing. Have one good idea. Now a big mistake that many people make and certainly I did, to begin with, was thinking, "This is my chance to get on the stage. This is my one chance to be on that red dot. I have to get everything out and somehow squeeze it all down to 15 minutes."

That's not going to fly. In fact, the first feedback that Tania gave me about my Pearson College talk, after telling me that she didn't have time to be nice - she really is a nice person, by the way, but I'm just telling you what coaching is like, check the ego at the door - all right, she said, after looking through the script, "You need at most three concepts in this talk," and that was a longer one than a TEDx. She said, "I've counted eight." So for a TEDx, one idea, everything that you say hangs around that idea, which should be not necessarily novel. We can't all have unique ideas, but a way of presenting it that grabs people's attention. Something that most of the people there will have little to no experience of and you're piquing their interest. You should be committed to this idea, have a passion for it, care about people learning that. And that should extend beyond this TEDx. If your goal in life is to give a TEDx event, you are thinking too small. You need to be beyond that. The TEDx needs to be a stepping stone to a much, much greater mission. And not the only one, and not a necessary one, so that if you're not selected for a TEDx that you have other plans for other ways of getting your message out there.

You should have an ability to speak. There will, of course, be coaching on how to do this but you need to have some ability to connect to an audience so that you can get up on a stage and deliver that. This is not years of coaching that you're going to receive. It will be - in the case of TEDxBearCreekPark, and not in the case of probably most events - weeks of coaching, but that cannot compensate if you don't have a certain amount of ability to get up on that stage and keep it together. You must have the ability to make a connection with the audience and be energized by doing that. Looking back on this whole experience, if speaking in public is something that serves whatever your mission is, then doing a TEDx is an incredibly valuable experience on that journey. It pushed me to my limit, and then showed me whole new vistas of goals beyond that limit. I know there's a mystique to the red dot and just because my mission improbably led me to get on it doesn't mean that yours should. Yes, we all need to communicate. The better we get at that, the better off we all are. You could know the cure for cancer, and it won't do any good unless you can get it out of your head and into someone else's, right? And communication is incredibly hard, especially to a large and diverse audience that you don't even know. So how do you tune it for the listening of some average person who's going to be watching you on YouTube? Communication is one of the great frontiers that we will have to cross for artificial intelligence to get along with us. Right now, we pat ourselves on the backs for having computers that can do natural language processing to any degree. But when it comes to understanding whether they've conveyed an abstract high concept adequately, we haven't even taken the first steps. So no way AI is going to be on the red dot anytime soon, except as a sidekick in a demonstration.

In today's news ripped from the headlines about AI, artificial intelligence experts at the University of Massachusetts Amherst and the Baylor College of Medicine report that they have successfully addressed what they call a "major, long-standing obstacle to increasing AI capabilities" by drawing inspiration from a human brain memory mechanism known as "replay". They "write in *Nature Communications* that they have developed a new method to protect - "surprisingly efficiently" - deep neural networks from what's called "catastrophic

forgetting” which means upon learning new lessons, the networks forget what they had learned before. You see, unlike AI neural networks, humans are able to continuously accumulate information throughout their life, building on earlier lessons. An important mechanism in the brain is believed to protect memories against forgetting and that's the replay of neuronal activity patterns representing those memories. Hava Siegelmann says that the team's major insight is in “recognizing that replay in the brain does not store data. Rather, the brain generates representations of memories at a high, more abstract level with no need to generate detailed memories”. So she and colleagues created an artificial brain-like replay which stored no data but instead, the network generates high-level representations of what it has seen before. Now, this really sounds like it's a lot more like what's going on in the human brain than a lot of what AI has done to date.

This proved extremely efficient, and the team showed that replaying just a few generated representations is sufficient to remember older memories while learning new ones. This not only prevents catastrophic forgetting and provides us new, more streamlined path for system learning, it allows the system to generalize learning from one situation to another. As an example, they say, “If our network with generative replay first learns to separate cats from dogs, and then tries to separate bears from foxes, it will also tell cats from foxes without specifically being trained to do so.” And notably, the more the system learns the better it becomes at learning new tasks.

Finally, they said, “Our method makes several interesting predictions about the way replay might contribute to memory consolidation in the brain. We're already running an experiment to test some of these predictions.” And that shows one of the many ways in which learning more about artificial intelligence, developing more in artificial intelligence helps us understand more about our own brains and ourselves.

In next week's episode, I will be talking with **Katie King**, a business partner of mine in the United Kingdom. She is an entrepreneur helping businesses understand and adopt AI at all levels of their organization. She is the author of the book, [Using Artificial Intelligence in Marketing](#). She has traveled to clients from Dubai to Singapore and is also on Britain's All-Party Parliamentary Group on AI, a government committee I testified before earlier this year. 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.

<http://aiandyou.net>