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S1 00:00

Hello, and welcome to this final episode of the Moxie Podcast, the companion web show to the Moxie Sessions, an Internet economy discussion group held once a month in Auckland, New Zealand. This is episode 50 recorded on the 4th of April, 2017. I'm Andrew Patterson with you here in Auckland. I'll introduce our panel shortly, but first let me outline our final topic we'll be considering in this session. Is there really such a thing as the tech sector anymore? Given the proliferation of technology these days, shouldn't we be doing more to encourage citizens to become creators of technology than simply consumers? And how does society control technology when it's moving so fast? Well, joining me to discuss this, Vaughan Rowsell, founder of Vend, a successful point-of-sales software company and also founder of OMG Tech!, a charity that works to engage kids in creating technology rather than just consuming it. Julie Berry, who's worked in a zoo, also worked for the US Navy, most recently worked in user interface design for Intuitive Surgical and has also spent time working with autonomous vehicles, currently a freelance designer. And Vaughn Davis owns advertising and social media company, The Goat Farm, content director for TEDx Auckland and was a speaker at the very first Moxie Session. Welcome to you all.

S1 01:27

Well, this session was supposed to focus on tech careers and how the simple stereotypes of coders and computer science geeks no longer seem to work in reality. But instead the discussion at the session itself focused more on what the tech sector has become these days and even the fact that the term tech sector may have become something of a redundancy. Vaughan Rowsell, if I can begin with you, compared to when your farsighted mom bought you that very first computer as a kid, how do you characterise tech these days and the way the sector has evolved to compete when you first joined?

S2 02:03

Yeah. It's something that I try to wrap my brain around every single day, because tech is changing in every aspect of life. Back in the '80s, when my mom brought home a PC, and this was completely unheard of, having computers in the home, everybody thought that that was crazy. Whereas today, we carry around computers in our pockets. So the reason why I think about it is because of the work we do at OMG Tech!, where we're trying to connect the 11-year-olds of today with the equivalent of the PC in the '80s. What's the crazy bit of technology that's just going to become so key to their future that they need to really understand how to use it? So I think things are moving so fast that I've kind of given up on trying to predict where things are going to go in the future. I think your energy is best spent in just trying to prepare yourself and the next generation for how would they adapt to a future that's just so full of technology.

S1 03:10

And that's the cool thing about what you're doing, it's because you're working at both ends of the spectrum, you're running a technology company and you're also trying to support the next generation, particularly those kids who aren't often able to access that technology easily. What are you seeing about what that generation is bringing to the equation?

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S2 03:31

Yeah. Well, I kind of describe-- there's kind of three big ideas that I'm really passionate about. One is obviously an idea I had roughly seven years ago, which was that you can build a technology company in New Zealand and try to demonstrate that with what I did at Vend. The other big idea is what I'm doing with OMG Tech!, which is that the next generation, the companies that they're going to create and the technologies that they're going to use, we can't even fathom today. So if we want to build a high-tech economy in New Zealand, then the best time to plant a tree is 30 years ago, and the second best time to plant a tree is today. So we're having to plant some trees today and get the next generation of kids fully prepared for the careers that they're going to be entering in 10 years time. And then the kind of the third dimension which is, I guess you could say it's a diversity thing, because you mentioned the stereotype of the tech sector, sort of pale guys sitting around, staring at the screen.

S2 04:39

The reality is that the tech sector is evolving really quickly and the demographics that make up the tech sector is no longer fitting that stereotype, and it shouldn't. But we've still got a long way to go. Because if you can imagine a future where technology touches on every part of our lives, then we need to have everybody in the community participating in that economy so that boys and girls from all sorts of backgrounds-because the other risk is that having access to technology is a privilege thing or having access to technology to understand and be able to create futures with technology is a privilege thing. Then we're going to run into some pretty big problems as a society because I can tell you today, there's not equal access to technology in our community. But that's another dimension that I like to focus on as well.

S1 05:36

All right, let's come back to that. Julie Berry, you perhaps typify the varied career path that is increasingly characteristic of those in the tech sector, as I mentioned in the intro, you've worked at a zoo, you've spent time at the US Navy, worked in medical robotics, autonomous vehicles, and now you're a freelance designer. How much do you think that sort of varied career path is almost mainstream, and what do you think it's done to you in terms of what you've been able to bring to the various roles that you've had?

S3 06:07

Well, I think as tech becomes more ubiquitous in all industries, you need people that are able to understand kind of the layman as well as the super technical person in order to-- I find a lot of what I wind up doing is translating between nontechnical people and technical people in terms of how a certain product should function. If you have products designed by people that are just engineers, they wind up missing a lot of the details or kind of the used cases that a nontechnical person would have in using a piece of technology. So as technology becomes kind of more present in our daily lives, when you have people that aren't engineers and aren't "technicians" using a product, you need to make sure the understanding for how a nontechnical person sees a piece of technology is incorporated into that technology when it's created.

S1 07:16

Now, Vaughn Davis, you were there as a speaker at the very first Moxie Session, but these days your new career goal is to create a personal network that is as complicated and interesting as possible, which I guess almost sums up the world itself these days. You're a tech sector skeptic, why is that?

S4 07:34

Well, that's probably a fairly extreme characterisation, Andrew. But I'm picking up on what Julie said, I think I'm very much a fan of the user and celebrating the user as much as the maker. You hear a lot about the maker movements, and we're celebrating coders, creators, engineers, designers, but they're only going to be a section of society going forward. No matter how technical we get, the people who use

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these tools are going to be the people who I think we should be focusing as much or more on. And certainly when we discussed it in the room, I got to thinking about great guitarists. I know a lot of great guitarists, and I know a lot of great songs, but I can't think of any lutenist. Well, maybe that guy Fender, but he's dead now. Do we celebrate The Bone People and Keri Hulme, or do we celebrate Bill Gates for making the software that it was written on? So I think it's a balancing act. And while we do need more creators of tech, and we do need them to be more diverse, and we do need that to span more sectors of society, I think we don't want to diminish anyone who chooses the path that is purely just using the box, using the iPad, using the laptop, or whatever. And that's perfectly valid, and it's a really important thing. I mean, there was a couple of-- it's become fashionable in business these days to say, "We're not a bank. We're a tech company. We're not an airline. We're a tech company," and I think that's really sort of seductive and dangerous. If I was flying on an airline, I want it to be a company who sees themselves as a get-me-somewhere happy and looking forward to my destination company, not necessarily defining themselves by the tech. It's important but not fundamental.

S1 09:24

All right. We'll come back to that too. Vaughan, you raised the point-- Vaughan Rowsell, in your opening there, about this idea of diversity and also the fact that the focus is too much on consumers rather than creators. Have we got that balance too far one way? Particularly, if you look at sort of that younger generation that you're working with, I mean, many of them are vast consumers. They're not necessarily creators. Is that something we've got to think more about the way that's balanced at the moment?

S2 10:01

Yeah. Just [getting on?] [inaudible] Vaughn's point, where at some point the technology just becomes the tool. And then they may not necessarily understand how the technology or the tool works, but they understand what it can do and how they can manipulate that technology to go and create new things. Like I don't understand how my NetBook Pro works, but actually I kind of do because I took one apart, but I don't need to. But it certainly helps understanding how the bits of it that make a bit of technology work can help when it comes to imagining how you would extend that technology to do something different. And so that's what I mean by the differentiation between a consumer of technology and a creator of technology. And it's really up to the individual as to how far that they want to go with that, how much do they really want to understand about how a piece of technology works in order for them to feel like they can go and create something. So for some, it might just be giving a kid an [ultimate?] reality light wand for them to go and create threedimensional light sculptures work, to be creating something. But for others, it may be down to the fundamentals of actually understanding how that bit of technology that they've got in their hand is working and understands where it is in space in order to be able to create and draw. And so in a sense, we will all become, I guess, creators with technology because the tools that we use will just become more and more advanced. But there is the risk if everybody just become dumb consumers that we really lack the opportunity for the individual to decide that they want to become a creator and create something different.

S1 12:07

Julie, thoughts in that space?

S3 12:11

I was thinking a lot about-- I've been delving more into straight art recently, and some of the really wonderful artists now aren't working in physical medium, they're working in digital. Because a lot of-- whereas in the past, a lot of artists were supported by the government or churches and created all this amazing physical art, now a lot of the really good artists are working in the game space, because that's

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where a lot of their support comes from. So you find artists that are becoming more and more technical and more competent at a 3D graphics programs and 2D graphics programs all on the computer. So they're becoming proficient with technology, and they're becoming kind of co-creators working with the companies that create these graphic tools to create these artistic tools that they can use to do things that have never been done before. So I feel like that is pushing the need for technology into a space that normally or previously hasn't been hugely technical. When you think of artists or designers, you don't necessarily think of people that are really hopping in technology. You kind of think of more fussy people that are into like how things feel and how things look. So I agree there's kind of a responsibility for now the artist and technological people to kind of be co-creators in the creation of new tools, to let them move the area of designer art forward. I'm not sure if that kind of follows the question, but that's what I think of when I think of how people can interact with new technologies and tools to create new things.

S1 14:00

I came across a great example of that just in the last week. Two brothers, both qualified as mechanical engineers who are working with their father, who happens to be an artist and they're designing this sort of holographic product, which they're running out of Tauranga. And the whole thing just was really a very good example of the point you're making that this kind of fusion between engineering technology, art, altogether. Vaughn Davis, in the circles that you're working in and within the tech sector more broadly, are you seeing this kind of crossover that Julie spoke of, increasing more and more where the tech sector is becoming characterised by a whole diverse range of skills?

S4 14:53

I am and I'm seeing companies that wouldn't really describe themselves as tech companies actually being matched with tech companies when Julie was speaking about art. I just got to thinking about Weta Digital. That's a company with more computing horsepower and more developers and more guys with ironic T-shirts over their fat bellies, just to trot a stereotype, then perhaps most of the so-called tech companies in New Zealand. And that's a great example of where they're focusing on the art, they're focusing on the outcome, and they're using the tech as an enabler. And they're building tech as they go but they're not just building tech for its own sake, not that anyone knows. But you were talking about understanding of tech as a user, and it got me thinking about not just users understanding tech but other decision makers understanding it. A great example is government. We're giving examples all the time of policy and operational decisions being made that kind of reflect a poor understanding of the consequences of tech. And one story that came out about a month ago now, was just astounding to me. And this is an unexpected example of the digital divide that Vaughan and I was talking about, was the imprisonment right in Northland. Have you heard this story, Andrew?

S1 16:12

No, I haven't heard it. No, but I guess it obviously ties back to the high crime rate which exists in the region.

S4 16:18

No, no, no, it doesn't. It doesn't, you see. What it ties back to is poor data coverage from mobile devices, so they can't provide home detention as much in Northland. So you make a policy that says, "Hey, we're going to move towards home detention. We all have these bracelets," but without thinking about the sort of the common tech infrastructure that sits under it and suddenly you've got a societal outcome. And I think it's a really good example of how the people that make decisions that matter in our lives need to be across this stuff.

S1 16:48

Well, that segues nicely to the next kind of topic I was going to touch on, because the session also looked at this issue around how we can control technology, I mean,

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control very loosely in inverted commas. But it seems the pace of change, as you've just illustrated, Vaughn Davis, is moving faster than our ability to, and particularly typical institutions to deal with it, particularly the political system. How concerned are you that we've seen Uber, of course, the way that they want to accredit their drivers and this constant butting of technological progress, butting up against the political system to be able to deal with that. How do we make progress in that area? And is that going to become increasingly an impediment to technology being able to gain a greater presence than it has already?

S4 17:43

I think this has always been the case, and you constantly refer back to that terrible old story of the cars in the early 1900s requiring a person with a red flag to walk in front. Legislation has always lagged behind technology. And in the online abuse space, the Harmful Digital Communications Act eventually came into being, but no one's ever heard of it so it hasn't had an effect and online bullying is still going on. Well, one thing we got to chatting about in the session was putting it back on the sector, which is sort of circular, because I'm now saying that I support the idea of there being a sector. And this is what medicine has always done. It's what law has always done. It's what trades have always done. And this is the idea of sort of self-regulating guilds and we don't really have that. So that's an interesting possibility. We didn't really talk it out, but it certainly got me thinking.

S1 18:36

Vaughan Rowsell, are you seeing this increasingly becoming a problem, that the country is wanting to progress its technology faster than the political system is able to deal with it?

S2 18:51

Well, no. The problem I see is when you go to dinner parties and the conversation inevitably goes to the point where we're discussing whether or not AI and robots are going to take over the world [laughter] and whether or not we have a place in society. Yeah, look, change is going to happen, and you're just not going to be able to stand in the way of change. So I come back to my earlier point, which is that the best tools we can give ourselves and our kids is to understand how the technology works, and not just from a technical point of view but also from an ethical point of view. Is it good that these technologies could make this job redundant, and actually think about the consequences of technology. Because when you get to that dinner party conversation, people end up inevitably at one of the two ends of the spectrum, which is either the Terminator robots walking across the sea to crash human skulls, or Nirvana where we're all sitting around becoming artisans and not really having to work for a living. I'll tell you what, people struggle with trying to wrap their head around either end of that spectrum. So I don't really know where it's going to go. I kind of hope it's more towards the Nirvana sort of thing, but I think it will probably end up somewhere in the middle. It's just that we can't possibly imagine how technology is going to change our lives. And that's where the ethics become super important, because that's some of the-- I'm reminded of a short story I read a short while ago, I think it was Ray Bradbury.

S2 20:52

It was just a little short story in one of his collections which was called The Toynbee Convector, and it was all about a scientist who invented the time machine and he could travel 100 years into the future. And so he did that and he came back with all these photographs and recordings of how amazing the future was, how we solved all of society's ailments. We solved war and saved the whales and had unlimited energy and all this amazing stuff. And everybody was just so in awe of this amazing future that they had to look forward to, they forget about creating that future because they were so excited about it. Anyway, the story was about a journalist who was going to interview him on the 100-year anniversary of when he magically appear in the future



and say, "Hello, I'm from the past." And at that point, the scientist confesses that he never actually got the machine to work, and it was just a big con. But he encouraged his civilisation to lean into a future of positivity, and it worked. And that's kind of how I feel about our approach to technology. If you resign yourself to a view that technology is going to create more ails than it is cure, then that's probably going to become a self-fulfilling prophecy. For me, I mean, anybody who knows me knows that I have a bottomless pit of optimism, that I think that's what we need. We need to think carefully about how technology will impact our lives and then take a positive outlook. The robots are here to help, they're not here to kill us.

S1 22:31

Julie Berry, I was interested to read I think the latest Vanity Fair that Elon Musk has become the champion of suggesting that AI is going to be the-- or sow the seeds for our own future destruction, which is kind of an interesting turn from his perspective. Where do you sit in the debate?

S3 22:53

I try to be optimistic about the role of technology, but I'm also a realist in that I think it's very important that the people who make the political decisions about how this kind of technology needs to be regulated and incorporated into society. They need to be technically proficient and technically literate. And I have some concerns that people aren't technically literate enough to understand, if you have-- I mean one of the big pushes in the industry, you've got tons of vehicles and companies looking into autonomously moving material across the country on big trucks, one of our big things in the States. When you have a large proportion of your population that is employed in the truck driving companies and materials transport, what happens to those jobs when they're now automated? And I think some of that stuff is going to happen sooner than people really expect. And the question is, is the society ready for what's going to happen when you have large proportions of people that aren't able or that have been replaced by robots or AI? So I think the big question is, how do you look forward and not put your head in the sand about these innovations happening? It's really easy to say, "Oh, we want the world to be like this right now, so we don't have to make changes." But the fact is technology's going to keep advancing forward. And if you have people that just say, "Oh, we don't need to worry about that right now," they're kind of missing the opportunity to put plans in place to help huge disruptions that are going to happen in the future. So I'm positive about technology but in the sense that I think [inaudible] great things in our lives. But we have to be prepared for huge disruptions that are going to happen when that technology becomes mainstream.

S1 24:54

Indeed. And Vaughn Davis, final word to you, and I'm interested in your perspective. You do talking on the circuit, I do as well, and I'm often staggered, actually, in New Zealand, just how out of touch people are. People that you would expect to be better informed about where things are moving in the space, is your sense that if other parts of the world are underprepared, then New Zealand might be in the category of being fairly, very underprepared?

S4 25:23

Yeah, and sort of deliberately ignorant of the future. So I saw a research report recently that said that us people, which of these careers are likely to be replaced by robots or automation in the next 10 years. And about 60, 65% of the jobs were slated as being on the chopping block. And then they ask the same thousand people, "How many of you think you'll be out of a job because of automation in the next 10 years?" It was only about 10%. So we have this theoretical belief that change is coming, but we have the strong, strong belief that it won't happen to me. The fundamental word, the heart of all this, the problem really is job. I haven't got a job, haven't had one in six years. I'll never have one in my life again. And as long as you think about jobs being



replaced by machines, it's a scary future. But if you think of a life that's augmented by machines, it's pretty positive.

S1 26:17

I like that. That's a good point to end the discussion. Thank you for joining us for this final episode of the Moxie Podcast. And over 50 episodes this podcast has been running. We've sought to explore a range of topics related to technology, as well as considering ways that we can use technology more effectively to expand the engineered economy in New Zealand. My thanks to all the guests, contributors, and session participants who've given freely of their time to make the Moxie Sessions possible. Our biggest thanks, of course, go to convenor and curator of the Moxie Sessions, Hayden Glass, who conceived the idea for this group. Big ups for Hayden, whose tireless efforts over the last five years organizing the Sessions, the speakers, and then diligently being the scribe to ensure the Sessions were properly preserved for prosperity. Thanks to you, Hayden.

S1 27:05

And thanks to you, our audience, for joining us. We hope these podcasts have helped you to feel more informed and helped you perhaps to surface and take on some of these myriad of opportunities that technology offers. My thanks today to our panelists, Vaughan Rowsell, founder of Vend and OMG Tech!, Julie Berry, and Vaughn Davis, as well, for being part of this final podcast. I'm Andrew Patterson, signing off. Thanks for being part of it too. Who knows, we may be back again at some point in the future, perhaps entirely produced and presented using Al. Bye for now.

TranscribeMe 7