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Making sense of digital complexity with Dave Snowden, The Cynefin Centre

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[00:00:00] It's a good job. I don't have a technical job, isn't it? Really? Yeah, exactly. Thank God.

Welcome to Cloud Realities, a conversation show exploring the practical and exciting alternate realities that can be unleashed through cloud driven transformation. I'm David Chapman. I'm Sjoukje Zaal, and I'm Rob Kernahan.

In this week, we're going to be talking about leadership in different real states. A critical but under Discussed element of digital transformation.

Joining us this week is Professor Dave Snowden, director and founder of The Cynefin Centre, an author of the FIN Framework, flex Curves and Esge Iron Mapping, and we'll see in today's show how you apply them to help decision making. In modern businesses, welcome Dave. Amazing to see you. Do you want to just introduce yourself and [00:01:00] tell us a little bit about the work of the connection center?

Yeah, real pleasure to be with you. The connection center exists to apply natural science as a constraint on social systems. So we develop methods, we develop tools and we work with an extensive network of independent consultants to make those tools practical and sensible for companies across the world.

So my first encounter with The Cynefin framework was at a leadership team meeting in BP and at the time I was running the cloud transformation program there and we were at a point in the program where it was getting really sticky, like really difficult. We had a lot of reaction going on in the business units of BP.

The central cloud transformation team were building a platform and we were, we had demands in terms of our backlog on that platform from what we needed to do for the central migration cadence, but also all of the business units that had different perspectives on how we wanted to use the cloud were all putting in their own [00:02:00] requests, and had very specific views on how they wanted the platform to evolve.

And we were sitting as a leadership of the program trying to work our way through a problem of not enough time, not enough budget, and actually right on the edge anyway of what was possible at that time. This was probably seven or eight years ago, so the cloud has matured. Hugely since that period. And we were very much working our way through a huge amount of ambiguity.

There was very little pattern that you could that you could leverage. And at the time, by coincidence in that session, I had a coach of mine at the time a chap called Alistair Kidd. As this meeting was getting increasingly fractious, I turned to Alistair and said, yeah, Alistair, is there anything, any advice you've got?

Because we're at a complete log jam here. And he said, I think you're looking for a complicated solution to a complex problem. And I'm like that's a, that's an interesting comment. Do you want to, do you want to dig [00:03:00] into that a little bit? So that, just that little phrase was something that then created a breakthrough in that.

Program. We changed quite a bit about how we made assessments on what to do and when we shortened all of our decision making sort of time periods. I think we went down to like weekly stand ups as a leadership team from that perspective because it was more about dealing with things in the moment. And testing what the business units really needed versus us trying to hit a plan that was actually 12 months out and 12 months in this program felt like an eternity, maybe just by way of getting into the connecting framework.

Dave, I'd love to hear your thoughts on that. Is that the sort of scenario you had in your head

or does that sound like a really strange use of it? It's not uncommon. And you should really write that up as a case for the little green book, because we could do with more like that. Oh, I will definitely do that.

I think I wasn't the first to invent the distinction between complicated and complex. You can see that Barbara got it from me, Stacey got it from [00:04:00] wherever, I got it from Killias and so on. I think I was the first to say there's nothing wrong with making complex complicated.

I started to argue heavily for dynamics or movement between domains, and I think that was important. And I think I was the first to argue it was phase shift and it was about reality. It's interesting, that came out in the lecture I gave at Hull University last night. Is most people in the systems school think systems are based on how people perceive them.

Whereas I'm coming from a materialist perspective, which says systems are, human perception is a layer on top of that, as is knowledge, but like reality exists, guys, live with it, right? Yeah absolutely, you have to deal with real world constraints. That's it, and I think Stacy's framework is all about perception, so I think that was a key distinction.

But no I think we found this also with a new framework, the estrone mapping. By focusing people on smaller things or focusing people on divisions between types of things, you can radically reduce conflict. And it's not this sort of new age, fluffy bunny, we should all, everybody's views are equally [00:05:00] valid and we should all be okay.

Nice to each other nonsense. It basically says, look, if you start with the ontology, the nature of the system, then actually life becomes a lot easier. If you actually start with how you perceive or what you want, you're always going to get conflict. And maybe for people who have not yet come across the framework, can you just give us a 60, 000 foot view?

Yes, it's basically there it takes three of the five states of nature if you go back to physics, yeah? And it talks about ordered systems, complex systems, and chaotic systems, for which use the metaphor of solid, liquid, and gas. I may get superconductors in it, I'm thinking about that at the moment.

But it basically, and it basically says, look, there are phase shifts between these things, so it's like latent heat. If you heat water up to 100 degrees, it doesn't become steam till you put more heat in. So the boundaries between those domains are actually phase shift boundaries. So if you relax the constraints and make something complex, you release energy.

If you want to make something [00:06:00] ordered, it takes a lot of energy because you put more structure into the system. And then the link between order and chaos, which is unique to Kinevin, basically says an excessive focus on order will create the conditions for catastrophic failure of the system. So that's a catastrophic shift, if you go back to Renneton catastrophe theory.

And then we add two more layers to Kinevin, so the central domain, which everybody forgets, and I just did, which I shouldn't have done, which is critical, is like the triple point, if I go back to solid, liquid, and gas. It's the point where it's equiprobable, yeah, whether something, it's a balance of temperature and pressure, where it's equiprobable whether something will become solid, liquid, or gas.

And Kinevin, that's the central aporetic domain. An apparatic means an unanswerable question. You have to think about things in a different way. You can't just go with the flow. And then that next level on Kinevin divides order into complicated and clear, but that's an arbitrary boundary, it's not a phase [00:07:00] shift boundary.

And then the third level where it gets really sophisticated is where we draw the liminal line. Which creates four liminal zones. Yeah. On top of that, is there a bit in there? It's that human. We've speak a lot in the show about the human operating system, which is, we're hardwired to behave in particular ways.

It's very difficult to rewire all of that in chaotic systems, and you get that chaos. People naturally seek order, but it's a huge amount of energy to get it back to an ordered state, which actually then creates that failure. That feels, or I've seen it a lot where it creates those failure scenarios in quite a common way.

Is that a. A natural way that we try and behave to try and get control and then it cascades out. Or is it something else when you say about catastrophic failure? Let me push back on one thing. We're not hardwired to do anything. We're wet. We're not hardware. So the computer model of human decision making, which goes back to Shannon and converting signal theory into information communication theory, which underpins most of systems thinking is deeply problematic in terms of [00:08:00] understanding how people make decisions, which is not just cognitive, it's social, it's body, etc.

So I'll just push back on that because I always do just to make a point. I think the interesting thing is actually chaos takes more energy than complex in human systems. Human systems don't like, as you say, chaos. So actually, if you leave a chaotic system alone, somebody will impose an order pretty damn fast.

And that generally is a shift to complex. So it's not, to try and force a rigid order again, yeah, that takes a huge amount of energy, so that's climbing back up the cliff. But what actually happens is things become complex very fast as people start to make connections, start to create structure. I felt the move of the world into the pandemic.

Was an amazing sort of giant macro simulation of that to a certain extent. It was very temporary, chaotic. But again, that's something we say in the U Field Guide, which was based on Kinevit, is, as you get to higher and higher levels of leadership, you make fewer and fewer decisions and meet angrier and [00:09:00] angrier customers.

That's the price of promotion. The only time you get to make decisions is in a crisis, and you don't make decisions to resolve problems, or at least you shouldn't try. You need to make decisions to keep options open so that other people can make more effective decisions at a micro level. If you look at what happened in COVID, New Zealand, the Prime Minister, broke her own law to impose lockdown.

But that gave them far more options than, say, Sweden and the UK, who waited to the last possible minute, by which time their options were severely limited and people died in consequence. So I think there are, and again, that's his understanding. I think the key thing in Kinevan is to realize that order and complex and natural states, chaos is only ever a temporary state.

To apply Cynefin then to something we talk about a lot on the show, of course, which is digital transformation organizations during a digital transformation. In my mind, there is a number of things going on in that it's not a simple tech swap out. So when you look at the tech layer, it's a very profound shift.

So it's moving from [00:10:00] sort of client server era into a whole wholly different era of cloud. And that's as profound as swappers say mainframe into client server. So it's like a third major era of compute and architectures happening. And then around that, there is a, again, an equally profound change in ways of working methodologies and most importantly,

leadership style in terms of how you move into a much more fast moving, smaller, agile.

Responsive organization from, perhaps more operating and trying to keep the lights on approach that most the generation I. T. had got to so I wonder in your mind how you frame something like digital transformation and do you see it from a connecting point of view is as a fundamental leadership shift from.

The world of the complicated to the world of the complex. And I think there's a generic problem with anybody who talks about transformation. We should not have said it now. [00:11:00] Because like you get into this idea that we're going to do this magic thing and then everything will be different. And the danger with that is we've been doing this constantly since the 1980s.

And we haven't done a both and solution, we've done an either or solution. So it's we need, everything needs to be business process re engineered. Okay, cool. Works in manufacturing, totally crap in service. And instead of saying it's not sufficient, people then went six sigma, which is just BPR on speed and tried to make it work harder.

Then you have learning organization, blue ocean strategy and digitization and agile are the two current buzzwords and executives are jumping into them because they feel they have to for their shareholders. Hardly any of them understand what it means. And none of them are addressing the issues about long term resilience okay, you need to go into the cloud, you need to digitize, but you need to think about resilience if the cloud is taken down, because we're moving into an area of a different type of warfare, and you may not have that, if you put all your eggs [00:12:00] in one basket, and people are not thinking about resilience within the system.

Do is everything the other thing is and this comes back to what we said a few minutes ago People are still working off a computer model of human decision making and not realizing that digital and analog are different, right? and There's a whole body of things that human beings make decisions on much better than did and digitization can prevent human beings making the right decisions rather than enabling it.

So part of the problem is we're trying to do too much too quickly based on another pendulum swim, another idealized definition of the future. Now that actually is what S stripe mapping is about. It's not what Kinevin is about. Kinevin is about once you have to make a decision, what type of decision is it?

And would you be better in shifting the context before you make a decision, which is a dynamic move? Yeah. So that's what Conevian is about. And so in digitalization, like you said off, this is a complex problem. The last thing you want to do is take a [00:13:00] recipe from a big six consultancy.

You want to identify all coherent hypotheses, eliminate the incoherent, start to run safe to fail experiments, see what works, see what doesn't work, run those in parallel. Yeah? And then start to stabilize the things which prove they will work in your context. And this is actually true agility, which is actually taking a process of evolutionary stabilization rather than the engineering approach, which we're currently doing is assuming every time we do a transformation, we've got a greenfield site that you haven't, you're on a brownfield site to use the architectural metaphor.

And I think you're going to see another trend once digitization doesn't deliver the benefits that everybody says it will deliver. And once the cloud is taken down in, cyber attacks at some stage and people have got nothing to fall back on, all of a sudden there'll be another

fad. Just say a few more about your current ster thinking and how does that help with trying to deal with that?

In ster mapping, there are three major [00:14:00] frameworks in Canavin and now we've got the third, kinda like there, I think in terms of corporate strategy. So what tine mapping does, it identifies the only things you can understand in a complex adaptive system, which are modulators and it splits those into constraints and constructors.

Yeah. So a constraint can contain or it can connect. And that's actually quite an important distinction. A constructor is something in the system which enables transformation once something encounters it. So a machine is obviously a constructor, but also in humans, ritual is a constructor. So the thing doesn't constrain, but it constructs.

So what we do is we identify those, ideally using software over a two to three month period so we can do it in real time, but we're doing a lot in workshops at the moment. It then gets mapped onto a grid, which shows energy cost of change against time to change. So now we've got lots of these things on that.

And then anything top right on that is called a counterfactual. It realistically isn't going to change. Then what [00:15:00] people do on the clusters, of constraints or constructors is they have three actions. One is stabilize it, we're comfortable with it there. The other is reduce or increase the energy costs or the time.

And the third is this will be possible to change when something else happens first. So instead of a, we are going to achieve this and this is a pathway, it's, we're going to do 40 or 50 of these things and then see which are the easier pathways once we've done them. Now, that is also a massive conflict resolution device and it gives you something which is far more resilient and far more sustainable.

Just thinking about the way you map that and going back to your piece around people adopting digital cloud transformation, et cetera. In your view, what sort of timeframes do these operate on? So you talked about the 80s and going through the different phases where do you think we'll be? Or where do you predict a realization will occur about the benefits aren't?

Quite there or that it didn't achieve the expectation set. When do you think that might occur [00:16:00] from a horizon? If you go back, the cycle has been anything between three and five years. And basically, I find it quite amazing that people still fall for this. So every three to five years, there's another major transformation program with the same consultants who sold you the first.

telling you that now they're into the second, the third, or the fourth, or the fifth, all right? And to my mind, this is perverted, right? And it's partly because the consultancies have all moved from apprentice models to manufacturing models. And the minute you have a manufacturing model of consultancy, you're into industrial scale recipes and repetition.

Rather than genuine advice. So I think that's one of the issues, right? But I think the other thing is we're going to go in a bigger phase shift at the moment. What COVID did is it triggered, I think it triggered the final break with systems thinking and its derivatives. And I should taste into our.

The popular end of systems thinking is damaged systems thinking a lot. That's what's been popularized, alright? It's systems [00:17:00] dynamics, cybernetics, the hard end. Just say a word for those who aren't familiar. What is systems thinking, and then return to that. Oh you get systems, you've got three or four different groups.

So you've got systems dynamics, which people are familiar with from Peter Senge, which is Forrester's work, which Senge... hugely oversimplified, all right which basically says you have entities with cause and effect relationships with feedback loops and you get these loop diagrams, yeah? Anywhere from a complexity point of view basically says you just don't understand causality, but that's that side, all right?

You then get cybernetics, which is Beer and others, which is now really focused on pattern language and Beer's VSM model, yeah? So it assumes there are a certain number of patterns which can be discovered and we can choose the pattern we're going to apply. Again, To my point of view, that's completely the wrong layer of granularity.

And again, like all these things, it assumes causality. You get soft systems with Checkland, which I derived a lot of my stuff from. Peter was a great guy, but that's workshop based. It doesn't scale, but at least it handles abstractions. So you, and all of this stuff is put [00:18:00] together under the title systems thinking, which we can like contrast with complexity science.

And that's important because complexity is a scientific background, right? But what we saw happen, what COVID did is it tricked one of these big phase shifts, because what happened in the 80s is we went from scientific management to systems thinking. That was a big switch. And everybody criticizes actually when they're mostly when they're complaining about Taylorism, they're actually complaining about early stage systems thinking.

Taylor was actually quite humane in the way he handled companies. Nobody's read Taylor before they condemn him. I think we're in another phase shift at the moment. I think this is what was called the age of complexity. What COVID did is it made people realize there was a world of unknown unknowables.

And therefore, Any framework based on causality or future prediction was limited in terms of the way it works. So two seconds, what we're now seeing is people have stopped asking us how we do something and they're [00:19:00] asking us what we can do for them. And that's normally the switch when something moves into a different phase of the market.

And I think that, yeah, there's things got rewritten very quickly under COVID to design the way you operate, the way you think, the way you structure yourselves to prepare for anything almost and the ability to respond. There was some great heroic things that happened during COVID that responded very quickly.

A very high amount of energy was required to deliver those. And then we're trying to work out what the post COVID structure and ways of working are. We see that a lot within organizations readjusting to the new reality. Yeah, I actually, I'm optimistic and pessimistic on that. We put a lot of work in the EU field guide into laying out what organizations should do, which is build their employees as a human sensor network, build informal networks, map knowledge at the right level of granularity for repurposing, and that's 101.

But most organizations are just moving into variations of cone of possibilities, scenario planning, contingency [00:20:00] planning. What they're not doing is they're not converting their organization into an ecosystem which can respond to uncertainty. They're still in the planning causality horizon and that won't work.

The next plague, and there's going to be at least one more plague in my lifetime, and I'm 70 next year, the next one's likely to be bacterial. And we're not putting the stuff in place now to understand how to handle it. Cheery thought, Dave. I've just finished watching the The Last of Us, the HBO show on on a fungal infection.

It's, it doesn't look very nice. Yeah, and there's stuff hatching out in Siberia, which is really scary. All right? So back, bacterial fungal infections actually have a... Much worse history than viral in human systems. I haven't watched that yet. I decided this limit to how much depression I can take.

It does have moments where you do think, why am I doing this myself? The point is, we know how to create a resilient system. The trouble is you still got managers, even though they recognize COVID [00:21:00] created uncertainty, that there's a thing called retrospective coherence in complexity. The danger is when you look backwards, you can see what you should have done.

And you assume you could have known that at the time. And the reality is there are too many things that you could have known, and that's the mistake people are making. They are making that fundamental error, and it's the error which is constantly made with royal commissions of inquiries, congressional committees.

Retrospective coherence will kill humanity if we don't watch it. Just going back to the three frameworks, just so we can get the full set, so to speak. So we've talked about Kenevan itself, we've talked about estuarine mapping, the final framework is flexious curves. That's a combination of Moore's crossing the chasm and S curves.

And my bit of originality on it, that is to basically say the reason you get the chasm, i. e. after the early adopters, you get this drop in demand, is because the old paradigm is dominant. So the old paradigm is dominant, but running out of utility. So that's creates a space for novelty, but it also [00:22:00] prevents novelty dominating until it almost fails catastrophically.

So that's Fletcher's curves. And that identifies key points to monitor for when you need to make changes. So that's now an overlay on s stripe mapping, because if the life cycle switches, change will be really easy, but until it switches, change is almost impossible. And if you were advising a chief executive in the world that we're in today with the reality that we're living in, how would you advise maybe just to bring today's conversation to a bit of a conclusion?

How would you advise the combination use of the three frameworks for them to go into this in a way that's eyes wide open? I think astro mapping we can now do on a distributed basis over the whole organization and we can make it real time. And this is what's in military is called combining grand strategy with tactics in a single framework.

And that's actually really important in the next generation corporate strategy. And once you've got the actions out, they get sorted into [00:23:00] Kinevin in order to make the most efficient decision based on which type of domain there is. That's fundamentally how it works. But the three big things, four big things really.

So one is you need to start mapping constraints and constructors on a continuous basis at a micro level across the whole organization. Because those give you early indications of change. All right. It diverts you into something which can actually be managed as opposed to aspirational stuff. But then these three key things in the field guide, which is your employees need to be human sense network capable of giving you real time feedback.

You need to actually Create informal networks so everybody in the organization is within three phone calls of everybody else based on a trusted working relationship. And you need to map what you know at a very fine level of granularity so that you can repurpose it very quickly in a crisis. Because you do not have time to invent in a crisis.

You have to repurpose things you're already capable of doing. So those are [00:24:00] three

fundamental principles, right? And it's laid out in the field guide. Those are the things you do.

So each week I will do some research on what's trending in tech. And this week I want to focus on six tips for CEOs who are leading digital transformations. So a digital transformation is no longer a choice, but a fundamental strategy that must be implemented in every aspect of an organization. And therefore many businesses realize that they must modernize their technology and their infrastructure to stay competitive.

Of course, all the digital efforts must work together, and beyond that, businesses also need to keep pace with changing business environments, particularly in a world where [00:25:00] customer expectations are constantly evolving. So what are the most important things to consider for business leader who start a digital transformation in their organization?

First, have a clear strategy. Align your top team around a clear strategy that matches your industry. Close the technical gap in your leadership team. Have the right team with the right skills. So train your staff and also invest in talent acquisition. And also ask big questions such as how do you see the world evolving?

What do you think it could look like in five years? And how do we want the company to grow to meet those expected changes? You also need to know your current technical level. You need to increase your bandwidth and organizational skills with software outsourcing. And lastly, measure the return of investment.

Because digital transformation is a long established process that will cost you effort, time and money. And if you miss on that [00:26:00] ROI evaluation, no success or failure can be recognized. So a question for you, Dave. What do you think of these recommendations and are there any important steps that are missing here?

There's only one I agree with, which is to understand where you are technically at the moment. The rest is straight out of a 1980s strategy textbook. Okay. Yeah, with very little understanding of uncertainty. First of all, the last thing you should do in a complex system where you have high levels of uncertainty is have a clear vision of where you go and a clear plan to get there because it means you will miss things that you need to spot.

Oh, I'm interested in that. So in terms of them, because that is such a, that is such a normal. I think every leader who's been trained in the last 20 or 30 years is trained to envision the future. That's one of the problems with systems thinking. It assumes there's causality. The point about convexity is the future is unknowable until you engage with it.

So when you engage with it, it will change. If you have a very clear plan, this [00:27:00] is why scenario planning is actually quite dangerous under conditions of uncertainty, because it limits what you scan to what you thought you would see. This is the complexity concept of starting journeys with a sense of direction, but not having precise goals.

And that means you've got to understand where the hell you are now before you think about where you would like to be. And you also need to understand that human, carbon is not silicon. The idea that digitization of everything is a good idea may actually create a disaster. To give you a very simple illustration on this, elite schools in the U.

S. now are removing computers from their teaching, so their kids will have an advantage in intelligence. over people in state schools who are too information centric. Wow. And you could lose your competitive advantage by digitizing everything without thinking first. And so in that scenario, how do you express and map direction without setting the old North Star situation, how do you communicate it?[00:28:00]

It's what we, it's what we focus on astro mapping, by the way, comes from constructor theory

and theoretical physics. What it basically says is you start off by identifying how do you, I'll put it in simple terms, you want to make the energy cost of virtue lower than the energy cost of sin.

Alright, so if the energy cost of what you don't want is higher than the energy cost of what you do want, that's good news. Alright, the trouble is most of the time transformation programs don't recognize reality. And therefore, they consume a huge amount of resource and they don't deliver. Sense of direction is done by saying we'll reduce the energy costs of these, we'll see what happens, and then we'll do this, and then we'll do this, and then we'll do this.

It's what we call the frozen two strategy. Yeah, that song in the middle of frozen two, where she says, all I can do is do the next right thing. In complexity, that's called the adjacent possible. So what you do is you map where you are, you map where you can go next, and there's normally several places which may contradict each other, but you [00:29:00] go to all of them just in case.

Then you look again. And if you over digitize stuff, which actually human beings of human beings in small groups are better decision makers than computers or individual leaders, we evolved to make decisions in extended families and clans are work currently on distributed decision making is distributing significant power to combinations of three roles.

Not to individuals. Yeah, and that's, that is digitally supported, but not digitally enacted. I like that distinction. And I think that difference between, that's a really important difference people are making. To me, that brings to mind something we've talked about on the show a number of times now, and I'm sure we will in the future too, the use of generative AI, and how that's used as a tool, and how, you can burn yourself with it.

I remember 20 years ago when it was sat on the... I won't say where near Washington and John Poindexter was on the stage [00:30:00] with me and so was Clapper and a few others. It was a heavyweight intelligence thing and somebody said, what do you think about AI? All of us said nobody's paying attention to the training data sets and we said it more or less simultaneously and 20 years later we've been vindicated.

And the whole problem with, large language processing, the whole problem with, if you've read Scholastic Parrots by the ex Google employee, she became an ex employee as the minute she wrote that paper. Basically, the training data sets are what matters, not the algorithms.

Now, all the open stuff is trained on what's available in text form online. Now what can be written down is about 10 percent or less of what human beings know. So the danger with AI is not that it becomes more intelligent than us, but that we become as dumb as it. And that's actually what's happening at the moment there.

There's a really interesting point you made there, which is an interesting security problem, which is T with AI attack vectors change. And you attack the data sets, the training sets. I know. And you affect that. And [00:31:00] then you let the system create the result. the change result that you're after. I've been involved in this for 20 30 wargaming.

Yeah and people don't see it but actually it's dead because a lot of data is sourced openly and it can be easily manipulated and people don't quite get that bit yet which I think we'll wake up to it much faster now that AI is becoming much more accessible. The TikTok debates are starting to show that in Congress yesterday.

I don't think they've been well handled but they are starting to show that. And I think that's

my point, but elite schools are realizing removing people from technology increases their judgment, right? I'll give my favorite illustration on this. When I went to school every week, we walked to the front of the class on a Friday.

The whole Friday morning was devoted to this in each class. You walked to the front of the class, you were given a small record card, and it gave you a motion and a side you had to speak on. So the first one I ever got was, you support capital punishment. And my mother was leading the anti capital punishment campaign for the Labour Party in Wales at the [00:32:00] time, so that was a TGP malicious.

Tough moment. No, because actually, the rhetoricism changed us for that. We had to speak for seven minutes without preparation for something we disagreed with every week from 11 to 18. Now that was an absolutely outstanding training, because it made you critical, it made you a generalist, it got you to understand audiences.

And we don't do that with kids anymore, they spend far too much time on computer screens, we're activating the autism gene, they're information centric. Rather than knowledge centric. And if you're information centric, you can be manipulated. Yeah. Yeah. And that's what's happening. It's the feedback loops in the bubbles that the system gives you back the information you want to consume.

And then you're not doing the counterpoint, so you're not learning the benefits of potentially the alternative. Yeah. We have this, I was on the think tank in New Zealand once and this one guy he was really excited. They created an AI bot, which was really helping mental health people in New South Wales.

So it was, you had a conversation with the bot, it reinforced good behavior. And I said what's going to happen when this is used on the internet to [00:33:00] actually cause mental breakdown in people? And the guy looked at me and said, Oh my God, would people do that? And I said I've just done a quick phone call to people I know in the intelligence community.

It's already happening, right? And how have you got no idea what you're doing here? The guy went away and he got quietly drunk that night because I don't think he knew. That's, but that's the Google thing, isn't it? They created the algorithm and they had great intentions and they never thought it would become corrupted or used for other purposes.

When I was in the MIT bookshop, just before COVID, there was this really depressing book, which was said, correlation is causation. And there's a whole people of people in high T, I think if they just get enough data, their algorithms can do everything. I want to return briefly to the point Shalkia raised, because I just want to go through and get your takes on the other ones.

So just to just as a bit of a reminder, it was have a clear strategy, ask big questions, know your current tech level, increase your bandwidth and organizational and then. Measure the return on investment. So you just want to let's return to those for a second [00:34:00] and just get your other. Just get your views on the others.

I think increasing organizational resilience is what I would say. And that means you need to increase variety in the system. Now having clear goals actually contradicts that you need fuzzy girls because then you're more open to different. You think it makes the organization more brittle when you've got?

You get those incentives. Yes. Okay. And you also, you only hear, there's an old thing in anthropology. The minute you write your values down, you just lost them. Because everybody now knows how to write their business plan. They'll use that key language,

alright? And we had that in IBM. I worked on the on demand strategy, which replaced E everything.

And I still remember sitting at a board meeting and somebody said what do you think about the strategy? And I said we should be using it to fire anybody who changes their slides in six months. Because they're obviously corporate politicians. If they really thought about it, everybody around the room had done precisely that, because they're all corporate providers.

Everybody. Yeah, and a third of them thought it was very amusing, took me out for dinner, and the others got highly [00:35:00] indignant, all right? But yeah, it's this whole process, all right, the effective strategy. And if you, entrepreneurs do this all the time, yeah, they're constantly monitoring the present and they're exploiting weaknesses in the present to move things in and move forwards.

And that's what big companies need to do. So you need to have a clear ability to map where you are and what you can do. And you need to have a clear ability to make exploratory forces and see what happens and then adjust your plans. All right, so you can do rigid planning for some things which have safe, four or five year Investment cycle on infrastructure.

Okay, but I did a project with somebody in the North Sea will remain nameless. All right Where they have she hadn't? Discovered oil in about two or three years and it was all terribly embarrassing and I went in and did to some field Ethnography and I ended up removing the artificial intelligence, which was helping the geophysicists [00:36:00] Because if the AI said drill, they could drill, and it wasn't their fault if there wasn't oil.

If they thought there was oil and the AI said there wasn't, it was too risky. So by removing the AI, within weeks we'd found oil again. Because actually, human beings were able to sense patterns that even the best IT couldn't, right? And I think, that's, you need to be really careful of this stuff at the moment.

You use an interesting word in there, which was sense. Yeah. Is that a distinction from full logical understanding? Yeah, it is. And I think this is the other problem. If when computers came in, we got captivated by the idea of computers. I remember my daughter's a level textbook in psychology and I removed it from the course started off with saying the assumption of psychology is that human brain is a limited capacity information processing device.

Actually, it isn't right. But. We now know that human consciousness is distributed. So if your brain dies, you die, but your body and your social interactions are part of what Andy Clark calls [00:37:00] scaffolding a distributed form of consciousness. We don't understand all of this yet, but we know that when human beings work, say, in extended family groups with high trust or high reconciliation, They have decision making capability, which isn't explained by the capabilities of the individual actors.

It's in a, this is a quantum layering or emergent property. And that's why I'm getting quite interested in superconductors, because if you look at electrons, superconductors are impossible. When you clump electrons together in sufficient mass, all of a sudden you have superconductivity. And there's a strong metaphor for that in what we need.

We need to be aware of the possibilities of emergent systems. And we need to design systems which will create emergence early so we can reinforce the stuff we want. And disrupt the stuff we don't. It's interesting you thought about a completely unmeasured thing going on between humans. No, I didn't say unmeasured.

Sorry, that was another point. If you have ROI, it assumes [00:38:00] causality and

knowability. Alright? We focus on what are called vector measures. So vector measures measure direction and speed of travel for energy consumption. And so you can set KPIs based on that, and you can have clear measurement systems based on that concept of vectors.

And if you have vectors in complex, you have outcomes in order. So you know there's something there, we just haven't been able to explain what is there yet. Is that a better way to describe it? Yeah, and therefore you need to be more open, you need to be more exploratory. And this is what we call theory informed practice.

Natural science gives you solid theory to base practice on. Yeah. Practice gives you feedback to know how to apply that theory. What you never do is you don't derive theory from practice, but that's what every social scientist does and all the management scientists do. And that you never capture enough data for that.

And if the world is shifting, the last thing you want is theory based on past practice. Perfect point to end the conversation, I think. Okay. So we end [00:39:00] every episode of the show by asking our guests what they're excited about doing next. Could be a movie you're going to go and see at the weekend, or maybe picking up the last of us, or it could be something that you're excited about in your professional life.

So Dave, what are you excited about doing next? I'm looking forward to getting back into the mountains in May. I've been away from too long, beautiful. What do you do up there? Are you a walker or are you a climber? I'm a climber. So last year I completed all the weighing rights in 40 days.

Wow, that was an average of 18 miles a day and about six or seven thousand. So I'm about to do them all again. But this time I'm doing 45 days with different routes. I like a challenge. Yeah, that's amazing. It is about to start up. I would have thought doing it using Wainwright as well was heady as well as physical.

You got the, the Wainwrights there, I'm a member of the Wainwrights Society. So that's what you're focused on. I finished the Southwest Coastal Path last year as well. So I'm looking for another project like that. So that's fun. I'm back out in Australia, New Zealand and Singapore in July and August.

I'm really enjoying traveling again. Yeah, beautiful, yeah. Because you meet different people and the big stuff. Estro, normally [00:40:00] it takes me seven or eight years to create something on the theory side. in four or five years to get the practice right. So astro mapping did that in theory but the practice in four months, it's gone further than Cynefin did in eight years.

Oh, wow. I think we may have something big on our hands there, which we're focused on. And we're now actually about to start using it for personal... Psychological safety are amazing and we're the big one. The other big things we're now working on is reporting of microaggressions yet within organizations.

So those are things which are exciting, Dave. Thank you so much for joining us today. An incredibly thought provoking conversation. And we look forward to talking to you again soon. Yeah, pleasure. Always good to be with you. So a huge thanks to our guest this week. Dave, thank you so much for being on the show.

Thanks to our producer Marcel, our sound and editing wizards, Ben and Louis, and of course, to all of our listeners.

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See you in another reality next week

[00:41:00]

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