



10. Hidden Drivers in Complex Systems

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Future Sense is a podcast edited from the radio show of the same name, broadcast on BayFM in Byron Bay, Australia, at www.bayfm.org. Hosted by Nyck Jeanes and well-known international futurist, Steve McDonald, Future Sense provides a fresh, deep analysis of global trends and emerging technologies. How can we identify the layers of growth personally, socially and globally? What are the signs missed; the truths being denied? Political science, history, politics, psychology, ancient civilisations, alien contact, the new psychedelic revolution, cryptocurrency and other disruptive and distributed technologies, and much more.

This is Future Sense.

Nyck: Yeah, and good morning to you. You're tuned to *Future Sense* here on BayFM 99.9 with myself, Nyck Jeanes and my co-host, Steve McDonald, back after a week away last week. Good morning, Steve. How are you doing?

Steve: Good morning, Nyck. I'm really well, thanks.

Nyck: Lovely to see you. Lots of stuff on the show today. We're going to be talking about today? A few things we're going to touch into.

Steve: Overall, the theme of today is the hidden drivers of complex systems. So we're going to look at a couple of different examples of complex systems and then dig deep and get a feel for what's actually driving the dynamics under the surface—things that we can't necessarily see or sense.

Nyck: Beautiful.

Nyck: You're tuned to *Future Sense* here on BayFM, and today is the New Moon. We might come back to a little bit about the New Moon today and also the beginning, today and tomorrow, of the Year of the Pig in Chinese astrology. Also an interesting shift

there. Before we begin today, I'll also just mentioned that you can text in with comments or questions about what we're talking about here on 0437 341119. Also, we are podcast now, and you can listen to *Future Sense* wherever you get your podcasts, including *Apple podcasts*, *Spotify*, *Stitcher* and *Overcast*, and there are many others, too, especially if you happen to be on *Android* or *Google*, and I think there are different ones. We have a website, too, which is www.future sense.it.

Now, we've got a lot to seek to cover today—we often don't get through everything we try to cover, but we're going to do our best—but we're going to start with, in a sense, a bit more about the foundation of this show generally, which is to do with the work of Clare W. Graves. Perhaps I'll let you expand and move into the part of that work that we're going to look at today.

Steve: Yes, so what we're going to look at is a process of deep analysis, which is really what this show is all about. It's looking at global dynamics and local dynamics and their connections, and a deep analysis of the drivers, and of course, making sense of it all, which in turn can help us make sense of what's coming in the future.

Steve: So I want to talk about something called the 6 Deep Strata Concept, which has come out of the work of *Spiral Dynamics'* author Don Beck and colleague of his and mine called Christopher Cook, who's a wonderful expert on this topic. Christopher is based in the UK at the moment, and Christopher came up, together with Don, with something called the 5 Deep Strata Concept, which looks at looks at layers of drivers and also evidence of particular behaviours and dynamics, particularly within human consciousness as a complex system and human values. Then I extended that to a sixth level and called it the 6 Deep Strata Concept.

In a way, it's kind of like looking at an iceberg where, when you see an iceberg, you see what sits above the surface and that's clearly visible and describable, but then most of the iceberg is actually underneath the surface. In the same way, when we encounter human values and we come across people's behaviour, we can watch their actions, we can listen to what they say and get direct clues about their values from those things, but most of the driving dynamics sit underneath the surface and aren't easily detected. Those things that sit underneath the surface at a shallow level are things that people are conscious of, so the people who are doing the behaving and the speaking, they're conscious of things like their own thoughts and feelings and mindsets.

Nyck: Belief systems and the like.

Steve: Those sorts of things, yes. And so in the 6 Deep Strata Concept, the first layer is the surface level behaviours and actions, and these are influenced by, underneath the surface now, systems, structures and artefacts. This applies not just to human values,

but to more complex systems, this particular layering I'm describing now, and those systems and structures and artefacts are designed by mindsets at a level below.

Nyck: So when you're saying mindsets here, is that to do with belief systems, for example?

Steve: Yes. Mindsets are what people would be able to describe for you, whereas the deeper layers that we're going to get to in a minute, if you ask somebody about them, they would talk about their mindset rather than those deeper layers because they're not aware of those.

So the mindsets are at the third level here and they're derived from, in the subconscious zone now, deep values—what are described as subconscious intelligences, which are adaptive intelligences—and these equate to the layers that we talk about in Clare Graves's work, which show up in distinct sets; and then those subconscious intelligences adapt to something deeper, which are our internal and external life conditions. Our internal life conditions are everything that we source internally, like our psychology, our history and how that impacts our behaviour and those sorts of things, and then our external life conditions can be physical things and our encounters with other people; and basically together, internal and external life conditions describes everything that we sense and are influenced by so it's all-encompassing. Then the sixth layer here is what I've called the evolutionary impulse, so that is wherever all this stuff comes from. If you are a Taoist, then you might call it the Tao, the way—it's the way things are—and if you were a conventional religious person, you might call it God, but whatever it is, there's something there which gives us a direction and creates our life conditions, both internally and externally.

Nyck: I've never actually thought about the notion of some, for example, conventional religions being an evolutionary impulse—an idea deep in the consciousness that actually drives the purpose of life in a sense.

Steve: Well, the religions themselves aren't, but the religions talk about this omnipresent source, which some of them call God, some of them call other things. It's not the actual religions, but it's what they're pointing to.

At that deepest level, I guess there is the potential for us to tune in, in some ways, to that. Although we can't necessarily experience it directly, at least not all the time, we can certainly pick up cues in our conscious world, which can be signposts pointing to what this evolutionary impulse is bringing.

So what are we going to do today is we're going to look at some examples and we're going to use the political world at the moment as an example of how surface level

behaviours and actions can sometimes suggest that a particular value set is at play, but if we dig deeper and we look at the mindsets and we go below that, and by looking at the mindsets, analyse which subconscious intelligence is at play—in other words, which adaptive systems are showing up here or which layers in Clare Graves's terms—then sometimes we can detect a mismatch where perhaps there's an attempt to hide someone's real values and obscure their actual drivers for what they're trying to do or trying to achieve.

Nyck: Great, we're moving to politics, obviously, right now.

Steve: Yes, exactly, and then later on in the show, we'll also have a look at climate science and we'll dig down deep there and look at some of the deep drivers which are not easily apparent to us.

Nyck: We'll also look a little bit at the thing called surveillance capitalism, which I guess is another expression of this very thing.

Steve: It is in the commercial world, absolutely, and in both politics and the commercial world we'll be specifically zooming in on Layer 5 in Clare Graves's work, which is the Modern Scientific-Industrial mindset.

Nyck: Still the dominant paradigm, but moving out.

Steve: Exactly, and which has peaked and is now in decline and consequently is seen by many people as doing damage, and it's becoming more and more apparent that it needs to shift, which is one of the evolutionary drivers of change at the moment.

Nyck: We're seeing today, for example, the release of the *Banking Royal Commission Report* from Kevin Hayne. The government has had it since Friday, but obviously they've been scrambling on the weekend to figure out a way to respond to it. So there's that piece there, and not unrelated is the number of stories about political donations and missing money in political donations and the large amount of money, for example, donated by the gaming industry, the poker machine industry in Tasmania, as revealed by Andrew Wilkie, the independent MP down there. So those three points all point to this, or are good examples of this day-to-day political social basis.

Steve: They are good examples, and this stuff is showing up at the moment as being significant and creating a lot of tension for a lot of people because human values are shifting right now. In very general terms, we're shifting from these old Scientific-Industrial values towards the sixth Layer in Clare Graves's system, which is a very humanistic, network-centric, relativistic set of values, which is characterised by transparency and the strong desire for transparency. Basically, we want to know and we want to be able to see what people's values are; what's driving the behaviour. We want people to wear their heart on his sleeve so we can see.

Of course, when we look at the Scientific-Industrial values at Layer 5, they are characterised by—I often use the analogy of a poker game where you're dealt a set of cards, no-one gets to see what your cards are, you hold them close to your chest, and it's that secrecy, that hiding of the information, which actually empowers you as a player, and it actually makes the game. In fact, if everybody just put their cards down on the table and it was all transparent, there would be no poker game so you couldn't play poker like that at all. So in order to play poker, which is very much representative of these Layer 5 values, you've got to hide your own information and then that gives you the opportunity to bluff people and suggest that you might have better cards than you actually have, which can increase your chances of success in the game.

And so life, work, your personal success, is very much like that poker game, and we're seeing a lot of pushback now because human values are shifting, we don't like that secrecy anymore, and what's really driving that at one of these deep stratas is the increasing complexity of life conditions, which is right down at the fifth layer there. That's not something that people are generally conscious of or talk about, but it has the impact of making our life more challenging and it means that we have to move to more complex values sets which are more capable.

Nyck: Of dealing with that.

Steve: And allow us to cope better in complex environments.

Nyck: In my observation at the moment, it's exactly as you're saying, that in society, the complexity of outer life conditions is one thing—there's not much security, not much safety, not much certainty out there, generally speaking—but internally, I think the reaction response to that is a very complex inner experience that people are now having, trying to make sense of the world for themselves internally and their experience on all levels, and trying to do that from previous places of intelligence and layers of consciousness is not working, so a tension exists there, doesn't it? Tension increases there.

Steve: That's right, and it's pushing many people—and in fact, the entire world—into this change process whereby we wake up one morning and we just feel like things don't work as well as they used to. We don't quite know why that is at the time, we're just feeling uncomfortable, and if you really understand that the change process, then you would realise that that is the first very early sign of the need to change. Most people don't understand that and so their first tendency is to look back to a time when things were better and then to make this regressive search and bring up old values, and we're hearing that a lot at the moment where people are saying we need to get back to our values, we need to make wherever great again, this kind of language. All of these are indicators of a change process. Over time, by latching onto the old values, we actually make things worse; we go very quickly into a chaotic state, just like any complex system goes into a chaotic state when it's going through a phase shift—transformational change—and it's that chaotic state which deconstructs our old values and makes space for the reconstruction of our values into a more complex system; a more complex pattern.

Nyck: And of course, clearly, this is not a linear process. This is one of the main points that I think is not understood enough yet by enough people. We still seem to think in a very causative way—we do 'this' and down the track 'this' happens, it will continue to be that way—but this is not how it is, and I think that's an aspect of human consciousness that now is evolving in many people as they're seeing that, oh, it's actually much more complex than that. It's quite hard to take hold of in the beginning.

Steve: It certainly is and it requires development to higher and more complex ways of making sense in these higher layers and Clare Graves's system for us to be able to really embrace that chaotic kind of nature of complex systems. And to be really honest, that doesn't come until the big shift in consciousness between Layer 6 and Layer 7. It's only really when you're getting to the Second Tier at Layer 7 that people have the capacity to really get the nature of chaotic systems. So at the moment, there are a few pathfinders around who've kind of busted into that Second Tier of consciousness and authored material that's been spread widely. One of them, of course, is Edward Lorenz, who was a mathematician and meteorologist and who is famous for coming up with what's known as *The Butterfly Effect*.

Nyck: A butterfly flaps its wings here, and there's a storm on the other side of the planet.

Steve: That's right. He was really one of the fathers of what we know as *chaos theory*. Yet these things, because of their complexity, are still not really adopted by the mainstream; it's still not really understood by most people.

Nyck: And he based that theory essentially on weather patterns, didn't he? Because that's the most complex system, I guess, that he could observe and find and make some theory from, and it makes a lot of sense there.

Steve: Yes, and he was no average climate scientist. He was a qualified meteorologist, but he was a mathematician, which is the key thing, so he was able to do some pretty sophisticated maths to produce that butterfly pattern in his graph, which is where the name came from.

Nyck: Very interesting.

Nyck: You're here on *Future Sense* with Steve McDonald and myself, Nyck Jeanes, and we're talking about the 6 Deep Strata Concept as part of Clare W. Graves's work as applied to the evolution of, well, everything really; and some of the indicators and signposts around that.

You mentioned the word 'transparency' before—as we move to Layer 6, that one of the important things for those people in that layer of consciousness, or moving towards that, is transparency; and we're seeing a huge amount of things being revealed on the planet—the hidden agendas—and yet we haven't seen it all yet. Clearly, the *Royal Commission into Banking Report* coming out today is one of those things where some degree of transparency has been discovered, but only so much, because the Morrison government certainly made the parameters of that Commission rather narrow overall; Morrison's already talked about us not overreacting to it. All those seem to be symptoms of this notion of 'let's keep the true agendas hidden' somehow.

Steve: Yes, absolutely. They don't want to show their cards and of course, Morrison was one of the major obstacles towards actually getting the Commission. He was very vocal in opposition of the Royal Commission going ahead and now that it has gone ahead, he's already downplaying the outcomes by saying we shouldn't overreact and we shouldn't act too quickly and all of this kind of stuff, even before the actual recommendations have come out this afternoon.

Nyck: He must have had a hard weekend this weekend, trying to figure out how to respond to it. I imagine all the Coalition frontbench sort of hunkered down somewhere with a few beers or whatever and a bit of cricket on and talking about how they're going to *not* respond to the Royal Commission.

Steve: Yes, I'm sure, I'm sure. One of the interesting aspects of how this plays out in politics is that lobbyist organisations can make financial donations to political parties and then do deals, of course, with the politicians for them to push certain agendas, and what you don't want as a poker player is you don't want people to see what cards you've got, right? So you don't want to say, well, we've had this donation from the alcohol lobby, for example, and as a result, we're shaping our policy this way. That's the last thing that you want to reveal because that would then collapse the game, just like showing your cards in the poker game. And so the kind of behaviour that we see from politicians when they are bound by these hidden agreements is we see them pushing a particular policy, a particular line on an issue, and they seem not to budge regardless of what evidence is presented or who they talk to, and so that can make them look quite stupid. Of course, it's true that we do have some politicians who aren't particularly intelligent, however, when you see a politician who is repeatedly just sprouting the same line over and over again, regardless of what they're told or shown in terms of evidence, then it's generally a good indicator that there is a hidden agenda at play—there's some hidden driver, there's been a deal done in the background, and there's some undue influence, most likely. So I'd urge listeners to look for that in public life these days; look for people who fail to adapt regardless of the evidence they're shown or what happens, they keep just sprouting the same line over and over again.

It also can be an example of Layer 4 values, which tend to be very rigid, so there are a couple of potential explanations here. Sometimes people will latch onto a truth—at Layer 4 values, usually they will do that—and then that can be very difficult to budge because there's like a fundamentalist belief system there, and so they'll hang onto that for dear life because to let go of it means actually changing the values, which is generally a very difficult thing and something that most people don't want to do consciously. So that's one possibility. Another possibility is that people have become closed to external information, so despite the fact that you talk to them and you can logically present evidence, that's not actually absorbed internally. Consequently, they have this broken record of just saying the same thing over and over again. And the other possibility, as we're suggesting, is that there is a hidden agenda. So from Layer 5 values, there's been a deal done, there is a motivator that's offering personal success to the politician that's powerful enough for them to keep just touting the same line, saying the same thing over and over again, absolutely regardless of what they're presented with in terms of logical arguments or scientific evidence.

Nyck: We are seeing some things revealed. I mentioned already in Tasmania the \$400,000 poker machine industry donation to the Liberal Party during the 2017-18 financial year, and as you're talking, I'm thinking that you also mentioned the example of the alcohol industry and with both of those—those decisions that are made via policy from the governments that are supported by those donors to one degree or another, seen or unseen and the things we don't know—there's real lives happening; real lives at risk here. From alcohol, which is clearly the most dangerous drug on the planet, and

from the poker industry. For example, in Tasmania, Andrew Wilkie, the Independent down there, says: "Accepting poker machine industry donations is all the more immoral when you consider that so much of this money is harvested from gambling addicts. Indeed, the research shows that 40% of poker machine revenue comes from gambling addicts and that the Liberal Party are aware of that" (<https://andrewwilkie.org/dirty-money/>). I mean, this is almost criminal, really.

Steve: Absolutely. Absolutely.

Nyck: And I say 'almost'. I'll take the word 'almost' out of it. This *is* criminal.

Steve: For listeners who haven't been following the Australian news recently, a list was revealed of sources of donations to political parties, which has been published in the local media, and most of the donation money cannot be attributed. There's \$56 million worth of political donations that cannot be attributed to anybody because there's a lower limit whereby if you donate below that limit, you don't have to reveal your donation source, and of course, there's nothing stopping organisations doing multiple donations. There are also intermediate organisations which are being used, so a donor will put money into an intermediate organisation which will then donate, obscuring the source, of course. And there are other ways of gathering money, like organising events and selling tickets, for example, and those sorts of things.

\$56 million is an awful lot of money and if you add up all of the donations that have been disclosed, it doesn't add up to \$56 million—it is much, much less than that—so the majority of money that's going to political parties in Australia is basically coming from hidden sources. One of the headlines in the *ABC News* this week was *What is the Government Trying to Hide?* And of course, the answer is it's trying to hide its cards. It's playing a poker game and if it plays its cards down, the whole game collapses, so that's the last thing that it wants to do operating from these Layer 5 values.

Nyck: It's so curious in a way, to me anyway, that if, in an ideal world, politicians from all sides of the spectrum came out and actually claimed this and said, 'yes, we have this'—to me, I imagine they think it's political suicide. I would suggest actually, that level of honesty now might go down very well with a very large percentage of the world's population, in the first world, anyway, because we all suffer from the same kind of disease, really.

Steve: Interesting words.

Nyck: Are you analysing me again?

Steve: Always, Nyck, I can't help it.

Nyck: I know. It's very uncomfortable at times, but other times I really like it.

Steve: Yes, we've got to remember that people act from these deep subconscious intelligences, which Clare Graves describes in his layers of consciousness—deep human values. So people, they are not conscious of what's driving their behaviour and usually they won't change or they can't change those deep drivers just as a result of a logical argument. So in many cases, it doesn't matter what information is presented, like, for example, your statement just then of, 'it would be better if ...', they might be more successful if ...'. People continue to operate out of their deep vales, and it's only a deep transformational change process that will shift those values. For that to happen, there has to be considerable evolutionary tension in a person's life and they've got to go through that whole change process, which takes time. So what we're seeing here is our politicians are showing their cards, whether they like it or not, if you know what to look for.

Nyck: Yes. I have great hope for people like Tony Abbott when he perhaps loses his seat in parliament, that perhaps this will be an evolutionary driver that he can't resist, finally, but I don't know about that.

Steve: Tony hasn't graduated to poker yet, he's still playing marbles.

Nyck: That's not very nice, but true.

Steve: So, hidden agendas, and as I was saying before, one of the key things to look for is a politician who won't budge on their opinion and they start to seem stupid because they're just repeating the same stuff over and over again. Of course, in some cases it may be it is because they just don't have the acumen to pick up on the arguments that have been put forward, but I would suggest in many cases, that it is because they have a hidden agenda that they don't want to reveal, because really, poker is the name of the game and they have to keep those cards close to their chest.

Nyck: Well, winning is the name of the game.

Steve: Personal success is what it comes down to. Layer 5 is an individually-oriented value system, so it's all about 'my success', and that is a kind of isolating individual theme which runs all through that particular value system. We're moving from there to a communal value system in Layer 6 and all of the tension that we're currently seeing in public discourse, much of it is being driven by the fact that people's values are shifting, they're moving out of that individually-oriented theme of Layer 5 and into the communal theme of Layer 6, which is demanding a different world. Some of the things that they used to do before they started the transition are now quite offensive and they want to try and stamp them out, and this is coming out in all of these enquiries and the revelations that we're seeing, and interestingly, very appropriate for the kind of long term Pluto astrological phase.

Nyck: That's what they say, Pluto in Capricorn, exactly. And as you're speaking, I'm also thinking about the current serious controversy around the Murray-Darling Basin and clearly hidden agendas going on there, some of which are revealed and some of which are still obfuscated, I would suggest. I also hear in what you're saying that the need of the communities down the river, the various communities, in small towns, agricultural, environmental and the like, are trying to find a way to come together, but at the same time, what they're governed by is a secretive process overall that has occurred that has clearly screwed over the river and a number of those who depend on it.

Steve: And once again, Layer 5 dynamics. For those of you listening who are not familiar with the river issue, right up at the headwaters of this river, which is up in southeast Queensland, I think you've got Cubbie Station, which is a large, I think cotton-growing station?

Nyck: Yes, cotton, one of the most chemically intensive crops in the world.

Steve: Exactly, and they're capturing a large amount of water in dams there to feed their crops and of course, that water isn't flowing down the river, and this is a very, very long river which flows from southeast Queensland all the way down to the Southern Ocean.

Nyck: It's the largest irrigation property in the southern hemisphere.

Steve: Yes, there you go, and so no doubt there is a financial imperative there which is pressuring politicians, and that particular issue is constantly pushed aside in the discussion. Of course, people all the way down the river are trying to farm, they need water to do that, there just isn't enough water coming down the river, and recently

there have been some major fish kills where thousands of fish have been floating dead to the surface because of blue-green algal bloom in the river as a consequence of the lack of water flow.

Nyck: I'm just reading here that Cubbie Station was created by amalgamating 12 floodplain properties to give Cubbie a total of 51 water licences. That's very powerful stuff there.

Nyck: Thanks for the texts coming in. I'll just remind you, you can text in at 0437 341119, and yes, we are—we were going to bring up the fact that Cubbie Station, which we just mentioned before, at the head, so to speak, of the Murray-Darling system, has 51 water licences and is owned, in fact, by a Chinese company. It's actually a Chinese and Japanese company, it's a mixture of those two, and it's called the Ruyi Scientific and Technological Group Co. Ltd, a clothing and textile company, Chinese and Japanese investors. That's 80 percent and then an Australian company owns 20 percent there, a wool trading and agricultural property management company.

Steve: Let's be clear that we're not making any accusations here and we certainly don't pretend to know what the deep drivers are of this particular issue, however, understanding the 6 Deep Strata concept and the fact that there is a Layer 5 mindset at play in government suggests that there will be hidden agendas. It's without a doubt, really, and most likely, as with all complex issues, it's not just one cause, but it will be an array of issues in combination which are causing the problem, and that is most likely a degree of incompetence, a degree of lack of communication, but also most likely some kind of hidden agenda which is influencing the government's focus and course of action.

Nyck: Staying with hidden agendas, we're going to look at a couple of other issues here relevant to what we've been talking about regarding the 6 Deep Strata concept.

Steve: Yes, let's give another couple of examples of this Layer 5 Modern Scientific-Industrial mindset, it's a deep driving values, and how it's very much like a poker game where you want to be successful, you don't want to show your cards and so that restriction of information provides power and a likely success for you.

Another example that's been in the news here lately in Australia is the issue of pill testing, and an awful lot of medical bodies here, including the *Royal Australian College of Physicians*, the *Australian Medical Association* and many, many others have come out publicly and said we really need to investigate and trial pill testing in order to reduce

harm at music festivals. As an example, the New South Wales Premier, Gladys Berejiklian, has repeatedly pushed back on the idea and is simply repeating over and over again this request for people not to take drugs, and this is a classic example of one of at least two possibilities. One is that she really is so closed and of a rigid fundamentalist mindset that she's not open to any new information, or it could be an indicator that she has a hidden agenda. Of course, there are many organisations out there. We don't know the facts, so we're not making any accusations, of course, but one possibility is that someone like the alcohol lobby stands to lose an awful lot of market share if other drugs become more socially acceptable. The alcohol lobby, we know, in different forms and through different organisations, is a regular donor to political parties here in Australia, and it's possible that there is some financial influence like that impacting her decision-making process and the decision-making process of other Premiers—I think there's also strong pushback in Victoria as well. When we hear these repeated statements over and over again, despite all of the evidence and despite really solid scientific evidence and the urging of professional organisations who really know what they're talking about, we ought to start to consider those options. Okay, well, maybe this is not just apparent stupidity, maybe actually there's a hidden agenda here. That's one example.

Nyck: Just before we move on, I just wanted to point people to the article that you sent me from *The Conversation* from a few days ago by Nicole Lee, which is entitled *History Not Harm Dictates Why Some Drugs are Legal and Others Aren't* (<https://theconversation.com/history-not-harm-dictates-why-some-drugs-are-legal-and-others-arent-110564>). I think it's a very good article.

Steve: It's a great article.

Nyck: There's a fantastic, simple graph there about the harm to users and harm to others of all the legal and illegal drugs, or most of them, and if you have a look at that, you can see quite clearly, and this is a piece of science I would hope, I would think. I'm sure it is.

Steve: It is. This is David Nutt's science. He is a Professor from *Imperial College London* who has been pioneering psychedelic research in the UK, particularly MDMA research and psilocybin research, and he'll be in Australia very soon, actually, on the 13th of February, to launch the new non-profit, *Mind Medicine Australia*. Nyck and I will be there.

Nyck: We will be down there. But this is an interesting article. We won't go into depth with it, just to point you to it, because it talks about, as the title said, that history, not harm, dictates why some drugs are legal and others aren't. In fact, you may know that

sometimes around the world, coffee has been illegal and cocaine has been widely available, for example. So it's not really anything to do with the amount of harm it's to do with, well ...

Steve: Politics.

Nyck: ... with politics and the power of money. Clearly some of the top drugs are alcohol at the top and tobacco not far down there. Some of the other obvious harmful drugs in the top of this graph—heroin, crack cocaine, methamphetamine, cocaine, tobacco—and it isn't until halfway down that cannabis arrives, and way down the bottom, MDMA with very little harm to others and not that much harm to users overall.

Steve: And these statistics from David Nutt's research come from a study he originally did in the UK and he did expand it to Europe as well. Here in Australia, the graph would probably look slightly different. For example, I saw some research that came out recently saying that tobacco was overall the biggest killer here in Australia.

Nyck: There you go. Now we can talk about other examples. Sorry to add that in there, but I thought it was useful for our listeners.

Steve: Yes, it's a great addition. I was just going to talk briefly about US military interventions. I'm recalling a classic statement by President Obama when he was in power, where he came on TV and spoke about the wars in the Middle East and just said, 'these are really complex situations and we just don't know how to solve them'. I think this is a great example of a hidden agenda which is unspoken, and just like the poker game, they're holding their cards close to their chest here, because we do know that the defence industry makes an awful lot of money out of wars, and over recent years it's become pretty apparent that perpetual war has become a business model for the US and so they always want to have one or two reasonably-sized wars going on in order to feed that beast.

Nyck: Well, it goes back even to 1960 when outgoing President Eisenhower actually pointed to the military industrial complex as a dangerous conjunction of forces, and he was right.

Steve: That's right, he foresaw that and warned against it very clearly. And of course, that's not the kind of thing that you can just come out and say: 'well, we're making a lot of money out of these wars and so we want to continue', because that would collapse

the game, just like laying your cards down in a poker game, and so you've got to bluff, basically.

Nyck: Now we see the situation in Venezuela, for example, where Donald Trump, just in the last couple of days, has not ruled out the possibility of military intervention down there, God forbid.

Steve: That's right and of course, Venezuela, I was reading recently, has the world's largest amount of unexplored oil reserves, which is no co-incidence here.

Nyck: Purely accidental.

Steve: Yes, and of course, the Americans love people who get involved in their politics at home, don't they? So it's a bit of a double standard there, apparently.

Nyck: There's a lot going on. The other issue, of course, to me, is the current issue around the nuclear disarmament treaty—I can't remember the name of it now—between the US and Russia, which Trump has just withdrawn from and now Russia has replied and said 'we'll also withdraw from it', which apparently, according to some reports, is allowing for the expansion of new technologies, more militarisation and the possibility that Russia could lob some missiles back down in Cuba, for example. This was actually on *Radio National* this morning. I thought, 'oh my God, seriously, we're going that way again?' So how do we look at that from this perspective?

Steve: This is an example of these regressive values that crop up during times of change. The whole dominant global paradigm is failing at the moment, because complexity has reached a point where these old systems that were designed pre-internet simply don't work for us anymore—I'm talking about our large scale social systems, like our public political systems, our economic system, etc—and one of the key reasons that the complexity has increased has been because of the technology which was produced during the Scientific-Industrial era, which gives us access to far more information. I'm talking specifically about the internet and our devices, which allow us access, wherever we are almost, to all of that information, and so it's kind of like putting up a whole bunch of mirrors around the walls in a poker game and all of a sudden you can see everybody's cards. This is what the internet has created for us. It's created visibility of all of these things that were once held very, very close to people's chests. All of a sudden we can see them all and we can see them because people inside all of these different organisations which are managing these issues, their values are shifting and so they're starting to reject these ways of doing things. They're starting to speak out—

we have whistleblowers, we have organisations like *WikiLeaks*—and these organisations are all examples of shifting values; all examples of this desire to want to reveal the hidden information and play on a level playing field where everybody can see everything, basically.

Nyck: On the other hand, when you use the analogy there of a room full of mirrors around a poker game, I thought, well, of course that's right, but then those mirrors are going to reflect the negative, the opposite of, and there's a distortion there. I wanted to ask you where fake news fits into this.

Steve: That's a really good observation, Nyck, because the distortion is the rejection factor that comes in the First Tier of values—the first six layers of values in Clare Graves's model. Every time we move to a new set of values, we inherently reject, and see as very negative, those values that are reflected back to us from the previous layer, so that's a very apt observation, thank you.

Nyck: You are here on *Future Sense* with Nyck Jeanes and Steve McDonald. Steve, we're going to segue gently towards ... what?

Steve: We are going to segue, and here it is. All of the stuff we've been talking about so far is an example of a reduction of confidence in government that's actually a worldwide phenomenon and it's part of this values shift beyond the Modern Scientific-Industrial mindset. The economic forecaster, Martin Armstrong (<https://www.armstrongeconomics.com>), he has developed a very complex set of computer algorithms which combine numerous cycles, and as these cycles are laid on top of each other you get an overlapping, somewhat chaotic pattern, which doesn't look like any particular cycle on its own, of course, because of the different and compounding cyclic influences, and he marked a turning point in late 2015, which was a downturn in confidence in government which is going to last for quite a while. He described the theme as "a rebellion against the corruption of government", which speaks very much to what we've been talking about this morning.

Nyck: And as you said also, Pluto in Capricorn—if you are an astrologer out there, you know that that describes the same sort of process over this period of time that we are in now.

Steve: That's right. So this is a 309.6 year cycle, what he calls the *Economic Confidence Model*, and interestingly, he noticed after some time that his prediction cycles are actually in sync with solar cycles and climate change patterns. This is very unusual and you wouldn't expect this, of course, but when you think about it, it makes sense that during periods of cold weather, for example, economic activity slows down. Just the very recent severe polar vortex influenced cold weather that we've seen in North America obviously stopped people from going shopping for a few days, and it will have a longer-term impact on things like crop production and all sorts of other industrial output because people are staying home and not being able to work in the extreme weather, and those impacts will accumulate over time and reveal themselves, no doubt. So it kind of makes sense when you think about it, that weather patterns do impact economic activity.

Nyck: We've got a situation in Townsville right now, of course, which is doing the same thing from a different perspective with an immense amount of rain—one metre of rain in seven days.

Steve: That's right, my old stomping ground. I lived in Townsville for ten years when I was in the army. It was a very dry, dusty old place when I initially got up there, but they built a water pipeline from the Burdekin Dam across to Townsville and then all of a sudden they had access to water again. Now they've got a little bit too much access to water.

Nyck: I think Pauline Hanson was recently suggesting a pipeline from the Kimberley, across, which is a pretty long pipeline.

Nyck: That's a long pipeline.

Steve: But I guess if we can run pipelines across the ocean and put Internet cables through them, then we ought to be able to do that as well.

Nyck: If we can run pipelines across the country to transport oil, we should be to do that with water also, but these are different topics.

Steve: That's right. So, as I was saying, Martin's Armstrong's economic prediction cycles are in sync with solar cycles and climate change patterns so that's our segue into talking about climate science. Since our last show together, I have sat down and watched a presentation by Professor Valentina Zharkova (<http://www.thegwppf.org/professor->

[valentina-zharkova-the-solar-magnetic-field-and-the-terrestrial-climate/](#)). She gave a presentation on her *Climate and the Solar Magnetic Field Hypothesis* at the *Global Warming Policy Foundation* in the UK in October last year, and she revealed some of the findings from her research into solar dynamics. She's been making an extensive study of the Sun and its behaviour, and she's come up with some really complex aspects of the Sun's behaviour, which are wonderful, because when we're talking about complex systems, in order to understand their dynamics, you really have to dig deep. If anybody gives you a very simple explanation of how complex system's behaviour, it's probably wrong unless they've dug way, way deep through layers and layers and layers of different dynamics to the very simple drivers that influence the base of the stack. One of the interesting things that she found was as our solar system travels through our galaxy, of course we've got the planets orbiting around the Sun, and contrary to what most of our generations were taught at school—that it's all kind of a static thing and the Sun stands still and the planets circle around it ...

Nyck: Yes, it's amazing, that itself. That's also just an example of what the thought was about these issues 30, 40, 50 years ago—so simplistic comparative to where it is now.

Steve: Yes, so what we're seeing here is a wonderful example of the progression from Scientific-Industrial values. If you go back in history a few hundred years, there was a time when the church said ... you know, because the church was kind of the dominant institution, globally.

Nyck: The Earth is the centre of the universe, basically.

Steve: Exactly, and everything rotates around us. Then, of course, people like Galileo came out and said, 'well, I've been looking at it through my telescope and it kind of looks like we're actually moving around the Sun', and of course, some people were killed for that.

Nyck: Some people were killed for that.

Steve: But that's an example of a values shift, and that particular values shift was from the Authoritarian-Absolutistic Layer 4 values, which are characteristic of structured religions, to the Modern Scientific-Industrial values, which gave us a more multiplistic perspective. What we're seeing now is another shift, again, from the Modern Scientific to Relativistic values at Layer 6, and so you would expect that with this value shift, we're also going to shift our idea about larger-scale systems like our solar system and that's exactly what's happening; and it's happening through the work of people like Professor

Valentina Zharkova. She has observed the Sun's dynamics very, very carefully and what she's found is that as the Sun is flying through our galaxy on its own orbit of galactic centre and the planets are following—and some of you may have seen the wonderful video on YouTube (https://www.youtube.com/watch?v=0jHsq36_NTU).

Nyck: I was going to mention that.

Steve: It actually shows the Sun moving in a straight line, which is not exactly correct, but it shows the planets spiralling around it.

Nyck: Absolutely beautiful. I'm sure most of you have seen it out there. It's fantastic.

Steve: It is quite extraordinary. Now what she's found is that the Sun itself gets pulled around. As the planets are orbiting the Sun, the centre of gravity of the solar system shifts, because sometimes the planets are all on ...

Nyck: Of course, one side or the other.

Steve: One side or the other side, right? So it actually impacts the flight path of the Sun. And so the Sun oscillates. It doesn't travel in a straight line, it has its own little spiral that it follows, and she's mapped this. This is a classic Layer 6 science, actually, because she's mapped it as a flat diagram. She's not showing the dynamic of the Sun spiralling, she's showing a flat diagram with a left to right, up and down oscillation.

Nyck: But nevertheless, it's much more accurate than previously.

Steve: But nevertheless, it's more advanced than the Layer 5 science.

Nyck: And she had a 93 percent accuracy in her findings.

Steve: It's quite extraordinary. So right there, she has revealed that at certain times, because of its own oscillation, the Sun is closer to or further away from the Earth, but this is a pattern that is separate from our own orbital pattern.

Nyck: Fascinating.

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Steve: It's fascinating. So straight away, she's added an extra dynamic to be considered that hasn't been considered before, and of course, she's an astrophysicist, she's not a climate scientist, and this is not the kind of thing that climate scientists study. As we've spoken about previously on the show, the Modern Scientific-Industrial era caused us to specialise our knowledge in very narrow silos where we went quite deep and discovered incredibly deep knowledge in very narrow fields.

Nyck: It has solved a lot of problems, it's had fantastic results from doing that, but the time is for a much more expansive view of science.

Steve: That's right. It's time to connect the dots again and start to connect this deep information across different disciplines, and that's what we're doing on this show.

Nyck: Yes, so she's talking in this about the magnetic fields of the Sun going out of phase. Can you explain a bit about that, and the Grand Solar Minimum—I know that's what you're getting to—because that's something I didn't really understand before. I still don't really understand it, but there are four magnetic fields of the Sun.

Steve: Yes, and again, this is not something that I'm an expert on, so if anybody is really interested, we will post a link through our *Future Sense Twitter* feed today to a presentation, the one that I watched where Valentina Zharkova is presenting the science (see above). It is a complex lecture—she's a scientist lecturing to scientists—and so I'd urge you just to perhaps skip through and look at some of the PowerPoint slides that she has there, which summarise the information in sort of simple terms, rather than the complex science.

Her research has disclosed this oscillation in the Sun's path through space, and also dynamics within the Sun itself, so polarised circulation patterns in the northern and southern hemisphere of the Sun, and there are surface-level patterns and deeper patterns which take place beneath the surface of the Sun. So you've got a surface-level pattern on the northern hemisphere and a surface-level pattern on the southern hemisphere—there are two dynamics there which are polarised—and then you've got deeper subsurface dynamics in the northern hemisphere and in the southern hemisphere, so there's four different cycles.

Nyck: It's a strata system. There you go.

Steve: It is. Yes, it's complex, and those change the behaviour of the Sun and impact things like the amount of radiance that is projected towards Earth and also the strength

of the solar wind. Solar wind blows over the Earth and normally protects us from cosmic radiation by reducing the amount of cosmic radiation here on the planet.

Nyck: Yes, that's changing.

Steve: Yes, and so during periods of solar maximum, that protection is quite strong and during periods of solar minimum, the protection falls away and we're subject to higher incidence of cosmic ray impact. That, according to the researcher, that Danish chap that we discussed on the show previously, has an effect on the amount of cloud cover on the planet so the more cosmic ray impact there is, the more cloud cover there is, which, of course, is another cooling mechanism on the planet.

So we're talking about multilayered influences here, which is typical of a complex system. When people come out and say, 'well, there is one thing that's changing our climate and this is what it is and it's going on a linear trend', then they deny the complexity that is found within systems like our climate system.

It's worth reminding people about chaos theory at this point, and I mentioned Edward Lorenz earlier. Most people would have heard of chaos theory and particularly the butterfly effect, which comes from this idea that a butterfly flaps its wings in South America and it causes a climate event somewhere else. That actually came from a pattern of data that Lorenz plotted and it showed up looking like a set of butterfly's wings with two big strange attractor basins, which are part of a complex chaos system. Anyway, what I was going to say was that it's really important to remember that chaos theory came out of climate science, right? And Lorenz was no average climate scientist, he was a mathematician as well as a meteorologist, and I would suggest that he also had developed to quite a complex level in his own personal development in terms of his values and his perspective on the world.

Nyck: And that's really important, just what you're saying there, because it is the level—and this is not a judgement of anybody, of course—but the level or the layer that people are actually at, no matter how brilliant they are, no matter how well they're educated or who they're connected to, who they're researching with, if their layer, their level of consciousness is at x but what is required is for it to be x -plus, they're going to be stultified in their appreciation of the understanding of the data that they've got in front of them, and what they're going to look at and what they're going to discard.

Steve: That's exactly right, and their level or layer, according to Clare Graves's system, is a direct result of their life conditions and their adaptation to those life conditions, and so it goes beyond the personal; it's really not a personal commentary.

Nyck: So Professors Zharkova with these models that, as I said earlier, have run at 93 percent accuracy, they suggest, with all the information you just articulated there, a Super Grand Solar Minimum is on the cards beginning in 2020, which is a date next year—very soon and we've focused on that quite a bit—and running for 350 to 400 years. That is not the minimum itself, but the full cycle is running this long, and the last time that this happened, there was a small ice age and only two of the magnetic fields that Steve articulated of the Sun at that time went out of phase, but this time she suggests all four magnetic fields are going to be out of phase.

Steve: Yes, so what's known as a Maunder Minimum, which was a mini ice age back a couple of hundred years ago, was a result, as you said, of two of these cycles getting out of phase and this time we're getting four cycles out of phase, so we ought to expect a greater impact this time around. The Grand Solar Minimum is a well-established milestone in solar activity, it's not just one of her findings, but she describes that the impact of that Grand Solar Minimum will begin in 2020, which is very close, and it will last at least to 2055, so we're looking at, what, 35 years there of climate patterns which are heavily influenced by the Grand Solar Minimum. As I was explaining before, one of the outcomes of that is higher cosmic radiation impact on the planet, which has a connection to cloud cover. I'm looking at one of her slides for a presentation now; she's saying this is a unique event in solar terrestrial connection and it has a big impact on the terrestrial temperature, and also, of course, a reduction of magnetic fields surrounding the Earth, and she said that one of the impacts that we can expect is a possible food shortage.

Nyck: A shortage of vegetation between 2028 and 2032 in particular. Very specific there.

Steve: Yes, that's right, and she said there's an urgent need for inter-governmental efforts to make plans for that, to avoid disasters—food shortages, obviously. It's interesting also that Martin Armstrong's economic cycles, his computer programme, has predicted high food prices beginning in 2024, which he links to the climate cycles which are synchronised with these economic cycles, as a result of cold weather. Looking at what's just happened recently in the US, this polar vortex impacting down over the United States, you can see quite easily how crops will be damaged and destroyed by the extreme cold weather, which has been, in some cases, colder than in Antarctica.

Nyck: Also, I said to you earlier off-air, Steve, a thing I read this morning, too, is that the change—I'm not sure if it's happened yet—but the change from this polar vortex, from extreme cold in the northern hemisphere, into (relatively speaking) very warm spring temperatures, is extraordinary in itself.

Steve: Yes, a sudden flip. I looked at the weather forecast just before the show and they're saying that that warm patch is only going to last a couple of days and they're going back to cold weather again very quickly. This is the nature of chaotic systems and of complex adaptive systems. When they go through change, the structure of behaviour has to fall apart. It goes chaotic and so you get spikes in both heat and cold as the normal pattern falls apart. The same thing happens to us when we go through transformational change from one values set to the next, and then as we transit through that transition period, we come to a new stability which plays out in different patterns or different values in the human case.

Nyck: Very good.

Nyck: It is a new moon today at 15 degrees Aquarius, emphasising the need to consider others as well as tending to our own needs; and just so you know, for those of you who are interested in astrology, Uranus enters the final degree of Aries on February the 6th. This is quite a strong thing—Mars conjoins it—so there's a lot of warlike and unusual things going on out there, both globally and personally, motivating us to reinvent ourselves at the moment. I think that's a good phrase at the moment: to reinvent.

We have another text in here, thank you very much. It says: "This sounds terrifying, guys, that we could have a mini ice age twice as cold as the last one by next year??" We didn't quite say that.

Steve: No, we didn't say that at all. What we're saying was that we're moving into a period where the Grand Solar Minimum is going to be particularly influential and that will slowly ramp up over time. It's always very difficult for scientists or anybody to put a specific time period on these sorts of things, because what level of influence do you judge as the place where it becomes significant? You could argue, for example, that the polar vortex shifting to influence North America, as we've seen in the last week or two, is a very early sign of this Grand Solar Minimum pattern, but Professor Zharkova has picked 2020 as a time when it will become particularly significant and then the influence will gradually increase, and, I would suggest, will probably peak at times of solar minimum. During that period from 2020 through 2055, we've got a solar minimum coming at around 2032 I think it is—roughly. There will be another one about 11 years after that. They do vary in terms of their time scale slightly from cycle to cycle so it's difficult to predict or to say exactly what the intervals are because they can change. So, you don't need to kind of rush out and buy a fur coat just now.

Nyck: Especially if you're living in Adelaide or Melbourne at the moment.

Steve: Yes, however, what is terrifying for me is that the predominant discussion globally right now is about global warming and so many people have adopted that as a kind of fundamentalist outlook that simply can't be budged because they've latched onto it, probably from a Layer 4 values perspective—people are regressing to Layer 4 values during this time of transition globally—and so if we spend the next five years preparing for global warming and then suddenly get tripped up by global cooling, that's a big worry. What we really need to do is we need to pay attention to the most complex scientific explanations that we can find about climate patterns right now and then start to act and prepare for what is most likely coming down the track.

Nyck: Well, of course, we're not doing much anyway, generally speaking, about global warming or climate change generally on the planet, there's a very slow propensity for politicians and leaders to move towards that direction, even so.

Steve: And that could be a good thing at this point. It could be a really good thing that there's been no considerable action on global warming, because some of the things that have been suggested, and in fact, there's a study, I think—if I remember correctly, I think it's at *Stanford University* in the US—which is about to start, which is to do with geoengineering of the climate. They're going to try and create a cooler climate in a particular patch of the USA. I wonder if they're still thinking about starting that study after the recent winter weather they've had over there?

Nyck: Can I interrupt for a second? I wanted to mention something I said to you off-air. We use the term 'complex adaptive systems', and I think everybody would understand a complex system these days—it's a complex world. When we're talking about complex adaptive systems, to me, the word 'adaptive' is often the one that is sort of at a low volume there. People don't quite understand what that means. Can you just give a bit of explanation about what that looks like in terms of weather—climate, for example—or any other system?

Steve: Sure, it's a really good question. Let's talk about human consciousness to start with. What it means is that first and foremost, there's an inherent intelligence in the system, and secondly, that the system is connected to and open to influence from its environment. This is something that we often miss when we study anything, and really, that's part of the Scientific-Industrial layer's specialisation and isolationist approach. We forget that whatever we're studying is actually not something that stands alone—it's connected. Even if you stick it inside a glass bubble in a lab, it's still being observed and it's still subject to the light and those sorts of things that go in. A complex adaptive system is a system that is open to input and influence from its environment and has the capacity to sense and act in relation to that incoming data, and so an adaptive system

will shift its own dynamics in order to compensate for whatever's happening around it. You see this everywhere in nature. If you put a plant that's used to growing in the shade in the sunshine, it's going to change, it's not going to continue doing the same thing it's always done because it's going to try as best it can to adapt, and it may not be able to adapt sometimes—there's a certain limit on the capacity of things to adapt in terms of time and change that they can make.

That's basically what a complex adaptive system is. It's a system that's complex, which means that it has many different parts, and those parts are both connected and interactive, and the interactive part is the adaptivity. There's information passed between the different parts of the system and there's an inherent intelligence in the system which allows it to make changes to its own dynamics. So when you transfer that complex adaptive system dynamic to, for example, the climate, it raises some very interesting questions, and it challenges the Scientific-Industrial worldview, because you show me a climate scientist that thinks that the Earth, which is the system that has this climate around it, is an intelligent adaptive system. No-one that I know of, at least in the mainstream, is doing any science which caters for the possibility that our climate is part of an intelligent system.

Nyck: And not just an intelligent system within itself, but part of a larger system of the Solar System and the Sun we've been talking about, and the Galaxy itself and the Universe. This are big takes, but for me that shows the kind of growth in the way we are evolving towards our place within a bigger system. And that's how it always is, from the small tribal systems, to now we're global—we feel global, we understand global, the information is transferred instantaneously everywhere—lots of issues with that, and now we're looking at our home within a bigger system.

Steve: That's right, and the deeper philosophical issues that come out that about: what is consciousness?; where does it come from?; what is conscious?; are humans the only things that are conscious in the universe? It points towards the idea of panpsychism, which is that basically everything has a level of consciousness, and of course, it's part of this convergence that we're seeing over the very long term between science and spirituality, which eventually, on the other side of the big leap in consciousness, will come together. We will actually find ways of cross-referencing and converging and joining these spiritual issues with scientific issues and see how it all fits together.

Nyck: And you may, of course, disagree with this, folks, and we're happy if you do disagree with us. You can text us in, although we don't have much time for today's show now.

Nyck: We're in the last 15 minutes or so of *Future Sense* for this morning, here on *BayFM* 999, and we're talking about Professor Valentina Zharkova's work, and a little bit more about that, because she's retrofitted her theories way back and found some pretty strong correlations with what she's proposing now.

Steve: Yes. Just to be really particular about the terminology, it's a hypothesis that she has. A theory is something that has been verified through repeated studies. So if you come up with a hypothesis that's quite valid, then someone else should be able to go away and do the same study and come up with the same results. Then, once it's been verified so many times, then it's accepted as a theory, but a hypothesis is something new.

Some of the things that Valentina Zharkova has done is she has retrofitted her theory—sorry, I've just done it myself—she's retrofitted her hypothesis to historical climate data and she's looked at climate patterns for 3,000 to 10,000 years prior to now and she's found that this grand minima dynamic that she has come up with in her hypothesis accurately predicts, in retrospect, the patterns over that period. She's also looked at the Earth's temperature recovery after the last mini ice age during the Maunder Minimum, and she's plotted that on a graph. There's a slide in a presentation—and again, we'll tweet the link to this presentation and I'll also post it on our *Facebook* page after the show (<http://www.thegwpc.org/professor-valentina-zharkova-the-solar-magnetic-field-and-the-terrestrial-climate/>)—and she's shown how that projection indicates climate change into the immediate future. She has compared it to the linear global warming prediction from the *IPCC* and it's radically different. That slide will be there on our *Facebook* page and I'll tweet it also.

The other really interesting thing about her work is that this discovery of the hemispheric dynamics—different dynamics in the northern hemisphere and southern hemisphere of the Sun, which themselves have surface level cycles and deeper cycles—also has implications for our climate behaviour here on Earth. We already know that if we look back at the last mini ice age, the northern hemisphere was hit much harder than the southern hemisphere. Europe in particular had a big freeze, the Thames River froze over for quite some time, and there's a lot of art drawings and paintings showing that—standing on the river and those sorts of things—and so when we're talking about the Earth's climate patterns, it doesn't make any sense to say that the whole Earth is going to be warm or cold at the same time. It's never been that way and it's likely never to be that way. Even during that mini ice age, the Maunder Minimum, there were still places in the world that got warmer during that period, even though there was this massive freeze going on. There are different dynamics in the northern hemisphere and the southern hemisphere.

Another thing that we know from history is that after an ice age—and incidentally, the huge ice ages are often associated with mass extinctions on the planet—there's a pattern that's been found in some studies that suggests that life is regenerated out of the southern hemisphere, which would make sense if during a big cold that the

southern hemisphere stays a little bit warmer. There's lots of recent studies that are finding an abundance of life in the Antarctic, and we spoke about one of those two weeks ago on the show.

Nyck: That's right. Actually, Antarctica apparently generates most new life, and this is actually a fairly new hypothesis—or theory—that cold actually generates more life than heat. The conventional wisdom, I think, is that heat or warmer conditions generate life, but actually, new life, new emergence comes actually from the colder temperatures.

Steve: Yes, there's more variation or diversity of species in the Antarctic than there is in the tropics, interestingly, in terms of underwater life.

So we need to start thinking in more complex ways, more nuanced ways, get away from this idea that it's going to be all cold even, all over the planet. It's really likely not to be like that. History shows that there are very complex dynamics at play and the temperature can vary in different ways in different places on the planet.

Nyck: Yes, very good. Well, that's about it for the show. We were going to talk about, and I did post something on *Facebook*, about a very interesting piece that Steve found that we've been looking at—we'll probably get to it next week. It was only published a couple of days ago, in fact yesterday (<https://theintercept.com/2019/02/02/shoshana-zuboff-age-of-surveillance-capitalism/>). It's an analysis of Shoshana Zuboff's book on *The Age of Surveillance Capitalism*, talking about such things like (I love this phrase) "gothic algorithmic daemons", and this book, *The Age of Surveillance Capitalism*, is already drawing comparisons to the seminal socio-economic investigations like Rachel Carson's *Silent Spring* and Karl Marx's *Capital*. "Zuboff's book deserves these comparisons and more", so says the writer Sam Biddle. We'll have a look at this next week. It's basically about social media, essentially, and the, ah, how would you put it?

Steve: Well, it's very much tied into what we've been talking about today. It's hidden agendas, particularly driven by the Layer 5 Modern Scientific-Industrial outlook, which is also the corporate perspective.

Nyck: What she says here is: "You're not technically the product", because people say that with *Facebook* and other social media, you're the product, but she says: "because you're something even more degrading than a product. You are an input for the real product, which is predictions about your future sold to the highest bidder so that this future can be altered." And that's just one of the very deep ideas here.

Steve: It's a really interesting insight and it's a development on this idea that you are the product, which I first came across about two years ago talking to a friend of mine, Guy Garcia in the US who works in the marketing world. The idea that you are now the product—having you present on a network or something—is really providing something that is of value and for sale on a lot of different platforms. A more complex, nuanced investigation there is showing that what the end users, the people that are buying this data about you, are really interested in is what you're going to do next, so they want to know that Nyck Jeanes has been looking at this and this and this on the Internet—here's some photos—and he's really likely to go and buy a pair of shoes soon.

Nyck: They'd be wrong there, I'm not a big fan of shoes.

Steve: He hasn't been wearing shoes for years, but this is a revelation.

Nyck: It's a trend, and we're going to "manufacture his consent" to quote the famous, towards this outcome.

Steve: Exactly, and so what they want to do is they want to be able to trigger that desire in you to create the behaviour and make you go buy a new pair of shoes and exactly these pair of shoes that we're showing you in your feed right now because they look so nice, they're exactly what you've been looking for, and you really want them.

Nyck: I'm convinced, clearly.

Steve: So there you go.

Nyck: I did want to also mention you may have seen folks, on the ABC, a piece called *The Changing Sound of the Hottest 100* which refers to *Triple J's Hottest 100* (<https://www.abc.net.au/news/2019-01-29/listen-to-the-changing-sound-of-triple-js-hottest-100/10742150>). I thought was rather interesting, and you might have to have a look, because what it's saying here is that since 1993 when the weekend countdown began, nowadays the music is much slower in terms of BPM, beats per minute, and much sadder. I think this is rather interesting in terms of some changes in Australian popular culture and how we're responding to life through our creativity, in terms of the challenges that we've been talking about, in fact.

Steve: That's right, and I'd suggest it's part of this regressive search that's going on in this values transition that's playing out globally and here in Australia, whereby we're

realising that the way we've been living in the Scientific-Industrial era no longer works and we are in progress shifting to something new. As part of that shift to something new, we make a regressive search—we go backwards, we look for old things, go back to old ways just to see if they'll work any better—and in the process, you know, it plays on our emotions, of course.

Nyck: Yes.

That's it for the show. Thanks for joining us. We'll be back next Monday.

Steve: It's been wonderful.

Nyck: We have a website that's just pointed to our podcast essentially, at this point, but you can listen to *Future Sense* wherever you get your podcasts, as I said earlier, including *Apple* podcasts, *Spotify*, *Stitcher* and *Overcast* and other places, too, and you can tweet us @futuresenseshow. Thanks, Steve.

Steve: Thank you.

You've been listening to Future Sense, a podcast edited from the radio show of the same name broadcast on BayFM in Byron Bay, Australia, at www.bayfm.org. Future Sense is available on iTunes and SoundCloud.

The future is here now, it's just not evenly distributed.