



31. 5G Networks

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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: 5G. Well folks, as all of you out there who are listening to the show probably know, 5G is on track with many disruptions, which is probably a good thing as we look at this. There's the precautionary principle—is it being applied to this sort of technology?—but around the world, the idea is that this network of 5th generation EMF carrier radiation will create a new world. There will be something like 20,000 small satellites, 12,000 that have been launched by *SpaceX* which you'd be familiar with, and the other by various other the large companies. But 5G has not been tested ... or has it? Where has it been tested? It has definitely not been tested on humans because it hasn't been rolled out yet, and there are big concerns about EMF radiation and this new generation, basically looking at the wavelength of this radiation—the smaller, shorter millimetre wavelength—and saying this is more dangerous. Let's just put it very simply right now.

On my Friday show here, I had a couple of guests from the local anti-5G network, which was good. There are so many issues to look at that we can only just take a bit of a scope with this show, I guess, on the meaning of it—not so much the good or bad of it, but the meaning of it and how we may best approach this particular issue on the planet—because it is clearly a very big issue; it is going to be very transformative.

What do you reckon, Steve? Where are we going to start with this?

Steve: I think one of the problems with 5G is that it's very much still under development and it's very complex technology. My impression, having done a relatively short amount of research into the technology and how it's being rolled out, is that the early stages of rollout will be very much a part of the development process, and so we're not going to

know exactly how it functions and its performance until they iron out the initial problems during rollout, and that also makes it difficult to know what the end result is actually going to be in terms of how it will operate.

Nyck: Yes. One of the concerns, obviously, is the proximity of these very small but very prolific—everywhere and ubiquitous—stations, which will update the signal in your neighbourhood, and the satellites which will do the same for outlying regions, for regional areas and so forth, across the globe. The question is whether this form of radiation actually is as serious as some people claim. There's certainly been claims about the effects on wildlife and I've seen some of those reports. Again, we're looking to deal with all those that I just want to point you to them. Again, do your research. Curiosity, doubt, they're good places to start from with this.

What's true; what's not true? This is the question, and the question about this new technology is, are these waves, are these electromagnetic frequencies more dangerous than other frequencies that we already use? I guess that's the one question that is interesting to me, because it would appear that maybe not, but other people would certainly claim that they are more serious. What do we think, Steve? What do you reckon about this?

Steve: I think we don't have the answers yet, Nyck. I think, if we could summarise this short section of 5G, it really comes down to 'we don't know'. We do know a little bit about how the technology is going to work, we know that there are going to be more transmission towers, we're told that the power of the transmission emerging from these small towers is going to be lower than the power that comes out of a 4G tower, but I also see that being contradicted in some articles online as well. Certainly the scientific articles that I've looked at are saying that the transmission power is lower and it doesn't need to be as strong because there are more towers and the towers are closer together. The scientific papers I've looked at are telling us that there is a greater radiation hazard from your handset—your actually phone being held to your ear—than there is from those transmission towers.

Nyck: Yes, well, phone radiation is interesting. The phone next to your head, if you're using it next to your head, is transmitting at a maximum of about 200 milliwatts, which is 23 dBm for those who understand those terminologies. That is at least 10,000 times more than the signal received from a tower. These are obviously 4G towers at the moment, but nevertheless, 10,000 times if you put your phone next to your head as opposed to the towers. There's one right next to *BayFM* here that we'd be receiving some radiation from, as we do from the Sun and from the cosmos, of course—various forms of radiation.

"Typical transmission power values of phones are a lot lower. The base station at the tower controls the power of the phone. It sets phone transmission power to a level so that all phone signals are received at approximately the same strength" (<https://www.grandmetric.com/2019/03/26/5g-health-issues-explained/>), the point being that the power of phone transmissions has gone down since the first generations of mobile communication. "In GSM phones were allowed to transmit up to 1.0 (sometimes even 2.0W. You may remember 20 years ago, the typical heavy user was holding the phone against the head and making voice calls all the time. With today's smartphones, a typical user hardly makes a phone call anymore, and instead is holding the phone about 1m away from the face for screen interaction." If you hold it that far away, it significantly decreases the amount of EMF radiation you're getting into your head; and of course, it also depends on the thickness of your skull.

This is also a fairly good science. If you're a small child under five years old, the thickness of your skull is actually about 0.5mm; by 10 years old, it's 1mm; as an adult, it's 2mm, and according to some diagrams that we've seen in front of us, obviously with the thinner skull of a younger child, if you hold that phone or you get radiation close to you, mobile phones are much more dangerous and much more likely to enter the brain. That seems likely to be true.

Steve: And this could have evolutionary implications because it means that people with thicker skulls might survive.

I'm joking. I'm joking, folks.

Nyck: I mentioned this off-air earlier this morning when we were discussing what we're talking about today. This is a bit of a jump folks, we're in the last half hour here, but we've talked on the show about the light body, the human light body, the body that is not physical, and the beginning of deeper understanding and experience of people who are working on the activation of the light body, and I do wonder whether the EMF networks, as they are becoming more and more sophisticated and ubiquitous on the planet, either contradict that light body or perhaps in some bizarre way may support the activation of that body. I mean, this is a complete extrapolation and it's my idea, no-one else's, and it's probably bunk, but I do wonder, if this is the technology that we are evolving on the planet, whether we like it or not, if we can do it from a different layer—not the Layer 5 that we've been talking about today from the Modern era—if we can do it from a different place, perhaps there is a supportive way that this can be implemented somehow.

Steve: I think that's quite possibly bunk Nyck, but the truth is, I don't really know. I don't have the answer.

Nyck: I'm sure it's bunk, and most people won't want to hear that.

Steve: No. What I would say, though, is that it seems interesting if you look at the development of our technology and consider it as training wheels for the development of innate capacities. If we look at the evolutionary transition that's going on at the moment for humanity from the Modern Scientific-Industrial human to the Postmodern humanistic, networked human, what's clear is that the hardware technology seems to be pre-empting the way of being that's going to emerge out of it, right? If it wasn't for our connective technology at the moment, we wouldn't actually, I venture to say, be in this paradigm shift, because it's the complexity created by the connected technology that is driving us to change the way that we are.

As we move into a new way of being human, that way of being human is very much about connecting deeply human-to-human, not via technology, although technology plays a role. It's like the technology design has pre-empted what's emerging in us innately, and I think if we look forward over the next couple of paradigm shifts, this move that we see now, to try and immerse the entire world in this radiating technology, could be seen as training wheels for the emergence of what Pierre Teilhard de Chardin, the Jesuit priest, called the emergence of a global mind—the noosphere—which, in his reckoning and in my reckoning, won't be artificial radiated stuff. It'll be stuff that happens through us, through our material being.

Nyck: Well, of course, Terence McKenna used to say exactly this. I can't remember his exact quote but he said that the technology was like an exoskeleton, so to speak, an externalisation, as you're saying, of those innate capabilities that we're just beginning to rediscover—things like telepathy, you could say, or an advanced form of that connectivity without the technology—and I think that's a really good way of looking at this. But we are a little way away from this of course, and we do have to go through this process of the rollout of these kind of technologies which are still coming from the old paradigm, so there has to be questions about that. I think that's a sensible place to go, independent of health hazards, yes or no, and I think the jury is out on that—and I'm happy to receive anything about this.

I'm certainly not someone who wants to have 5G by the way, folks, but I think we're trying to determine what is actually real here for us, what's valuable and what is actually honest and sensible, and what is actually fake news about stuff, because in that reaction to these paradigm shifts, a lot of people, out of fear will go to all lengths to try and prove that things are not good for us, and that's not necessarily the best and most intelligent way to go about this.

Steve: No. A couple of things come to mind for me. The first thing is that from the science of the radiation, of the electromagnetic waves, the power of the transmission

drops off fairly radically with distance, so you don't have to be too far away, even from a strong transmitting tower, to be in a relatively safe zone of transmission, according to the science that's existing at the moment. The mathematics of it is that with an unobstructed signal, it's something like the power drops away relative to the square of the distance.

Nyck: Inverse proportion, that's right.

Steve: Exactly. If the current 4G system was really that bad—and I mean, you think about how many people are walking around spending much of their day with their phone to their ear, particularly in high intensity jobs where they're buying and selling stuff and that kind of thing—if it was really that bad, then we would all know a whole bunch of people who were having health problems from it, and I can't think of anybody that I know at the moment who has a head-based cancer, for example, from holding the phone.

Nyck: Although, I will point to a *Daily Mail* article from the U.K—it's the *Daily Mail*, a Murdoch paper, no doubt—from last month: "A cell phone tower has been shut down at an elementary school after eight kids have been diagnosed with cancer in a mysterious cluster" (<https://www.dailymail.co.uk/health/article-6886561/Cell-phone-tower-shut-elementary-school-eight-kids-diagnosed-cancer.html>). The key points here: the kids all under the age of ten; they each have different types of cancer—brain, kidney, liver and lymphoma; there's scant evidence that cell phone towers pose a real risk to humans, however, even sceptics say the number of cases in this cluster is unusual; *Sprint*, which owns the tower, has shut it down despite insisting the radio frequency levels are 100 times below the federal limit; and a private investigator for the patients mums found the levels were higher than reported—and as we said before, whatever figures fit the story, then they can be found, one way or the other.

Steve: Yes, and it's encouraging to see that the tower operator actually shut it down in that case, which is quite good, I think. Without having any scientific proof of whether it was causing the issue or not, they've shut it down, which is wonderful, and that's more the kind of thing I'd like to see—that sort of pre-emptive, careful approach.

One of the downsides to the way that 5G is being rolled out is that, like most things in the Scientific-Industrial era, it's being driven by this desire to make money and the desire of the people who are rolling out the technology. Their desire to make money is being aligned as best as possible with people's need for faster internet to justify it, but at the end of the day, what we need is a system that puts people first and safety first and health first, and so if there is any doubt and we can't prove that it's safe, then it really should be delayed until we can prove it's safe. That would be an ideal solution.

Nyck: Yes. There are major people involved in countering the unmitigated rollout of 5G, including a barrister named Raymond Broomhall, who's rather interesting. It's important to these kind of people—he works with Michael Kirby's rooms down in Victoria, I gather, although he's working in Perth—how best to utilise Australia's government legal systems in the people's fight against the telecommunications industry and the 5G system. What he's done is actually to do with health and safety. You've got that piece there, haven't you? I can't find that particular piece.

Steve: Yes, I've got it here (<https://www.5gexposed.com/2019/04/27/australia-barrister-ray-broomhall-pathway-to-protect-people-from-smart-meters-and-towers/>). This barrister, Ray Broomhall, was involved in the fight against the Wilsons Creek tower in our local area here.

Nyck: Yes, hello Steve Toneguzzo if you're listening out there.

Steve: And he was also involved in another legal case in Sydney around the Coogee/Randwick area where they were fighting *TPG* about the installation of 5G systems there. Basically, what he's done is he's found a loophole in the legal system whereby if a claimant can obtain written medical advice that electromagnetic emissions may be harmful to their health—the problem it raises for the telco companies is that they are not health experts; they don't give medical advice—and if there is professional evidence in writing that this is a threat to someone's health, then if they go ahead and construct the tower, in legal terms, it can be defined as an assault on a person's safety, which obviously has huge implications. As I understand it, this is how Ray has managed to win a couple of cases, including the Wilsons Creek case. He's got medical advice, he's found a doctor that has looked at the science and is prepared to write and say, 'look, this is going to harm people's health', and then the telco companies have got no choice then but to back off because otherwise they make themselves liable for what is legally classed as an assault.

Nyck: Indeed.

A couple of texts here that are relevant: "People need to move away from thinking radiation is a bad word. All life on this planet is here due to radiation."

Steve: That's very true. A simple example that I raised with Nyck over coffee this morning is if you go out on a hot summer's day in Australia and you sit in the sun unprotected for eight hours, you're going to be badly damaged, so that, straight away, is going to be way more harmful than going and sitting next to a 4G or 5G tower, just in terms of its immediate response, so it's good to keep those things in mind. The threat

posed by both solar radiation and cosmic radiation—in other words, cosmic rays coming from other stars in space—is actually bigger, I would suggest, than anything from our current phone networks, at least.

Nyck: Second text here: "5G is sounding very similar to when the people that smoked tobacco in clubs and pubs etc had more rights than the non-smokers. It was simply forced onto non-smokers."

Steve: Yes, and that analogy is a classic outcome of the Modern Scientific-Industrial way. Whoever's got the money drives the agenda, basically—that's what it comes down to—and those who don't have money come second. It's as simple that.

Nyck: And on that note, for those who are interested in this topic, and I know many of you are, there's a very interesting article I came across. It's quite deep, so I'm not going to go into too much today. It comes from a website called Rhizomatica.org (<https://www.rhizomatica.org/talkin-bout-my-5th-generation/>). The general co-ordinator of that site is a guy called Peter Bloom, and he talks a lot about the financial; sets aside all the health concerns—in fact he doesn't even mention them, I don't think, in this article—but really looks at the technology. He's an insider, and when he was at the 2018 Mobile World Conference called *GSMA*, which is to do with all of this mobile technology and EMF technology, he said: "I was struck, worried even, by the change in discourse from connecting people to connecting things." I thought that was very interesting, given we're talking about this moving into the 'connecting people' era, that on the other hand, the technology is still stuck back in that expression of the previous era of 'let's connect things up'. Even though *Facebook* and social media are always like 'let's connect people, that's our purview, that's what we're going to do', in the end, it's turned out to be a purely financial marketing venture, really, you could argue.

Steve: Yes, and what we're calling the previous era here is actually still the dominant paradigm globally. It's just that we're in transition, right? So things are dominantly driven by individually-oriented technology, which is, by nature, disconnecting. Even the internet and all of the social media, although it gives us access to people all over the world, ultimately it's disconnecting us from human-to-human contact, and that's because it's come out of an era and a mindset that is all about disconnection and going deeply in narrow spaces.

Nyck: It's amazing. From this piece from Peter Bloom, I'll just read a short part here: "The makers of these networking chips" in this 5G technology and all of the associated parts—as Steve said earlier, it's a very complex technology and there are many pieces to it—are companies like Qualcomm, Intel, Broadcom and Samsung. These are huge

companies and they know how to throw their weight around. The point being, when they set their mind to it, they are able to spur industry-wide changes to benefit their bottom line ... There was a ton of hype around 5G because it creates more business for the whole supply chain, but the apex predators remain the chipset manufacturers for now." I think that's interesting. We have to remember to follow the money—that old equation.

Steve: Yes, exactly. The technology has many parts. You mentioned the smaller wavelength, and these millimetre-length waves allow you to stack more data onto a transmission, so that's why they're using that. You've got the small cell arrangement where we've got smaller towers packed closer together, you've got what they call massive MIMO (multiple input, multiple output), and something called beamforming, which is concerning. In one of the papers I read, I saw an image of these small towers in an urban environment. The way that they're designed is to be very, very smart and sometimes they'll intentionally bounce signals off other buildings in confined spaces in order to reach dead spots and those sorts of things, and this, obviously, from a technical point of view, is seen as an improvement because you get better coverage; you've got much faster downloads because of the millimetre wavelength and the more data it can carry. I think, if I remember rightly, I saw in one of the things I read that it might take you 5 or 6 minutes on 4G to download a HD movie now, and it could take ...

Nyck: One second. It could take one second, possibly.

Steve: Much, much faster.

There's this thing called beamforming, which is potentially a concern, and that is that the technology will have the power to address signals and focus them very intensively on an individual device, and so the antenna can reconfigure itself—not in a hardware but in a software way—reconfigure itself to transmit in such a way so that instead of creating a broad beam, it narrows the beam right down like a torchlight or a spotlight to direct signals in a very particular place.

As we know now, these days, almost everything has been weaponised. Look at the superpowers and what goes on, and the stuff that goes on that doesn't fit the old definition of what war is—it's not soldiers digging holes and firing things at each other—it's creating conflict in ways that are very subtle and hard to see sometimes. We know for a fact that the 4G telephone network has been instrumental in modern warfare. The location signals which come out of a mobile phone have been used for drone targeting—we're very, very clear about that—and we can be guaranteed that while the dominant paradigm is still the Modern Scientific-Industrial way of thinking, then whatever is available is going to be used to progress those sorts of agendas.

I'm certain that the 5G technology will provide more detailed targeting advice for military-style use, and also there are questions around exactly what it could be used for if they wanted to target a society, a group or even just a single individual on the 5G network through transmitting something in a very focused way that could have a number of different impacts. It might not be about the direct impact of the electromagnetic transmission from the tower, it might be about what your phone does. For example, maybe they could take control of your phone and make it transmit a harmful frequency or a harmful sound and those sorts of things. I'm pretty confident that sort of technology exists.

Nyck: I think so, and I think it also indicates that we are entering the era of frequency, vibration and resonance, and in the beginning, with the dominant paradigm still dominant, it's going to be utilised and misused in various ways, potentially, and that's the danger. But I think the trend—the general direction we're moving in—is a good one, and that is towards vibration, frequency, resonance, as these kind of concepts become, in a sense, understood as the core foundation of life itself.

Steve: That's true. They say physics is the new medicine and that's very much about resonance.

Nyck: Physics is the new medicine. I like that.

Quick text here: "If 5G frequencies are dangerous, why not infrared, which are of much higher frequency?" True, you can't have too much infrared, or x-rays for that reason. All that is true. In small doses, supposedly, these frequencies are okay, or useful; healing at times.

Steve: Yes, and unfortunately it seems that because the technology itself is changing, it seems to be changing so that even up to the point when they're starting to roll it out, I think they're going to be tweaking and changing things, so it's very hard to do a scientific study on the impact of it until it is actually rolled out.

Nyck: The last few minutes of *Future Sense* here with Steve and Nyck on *BayFM*. Let's summarise a little bit about what we've just been talking about.

Steve: Yes, I think at this point it's very difficult to discern what the threat is, and indeed if there is a significant threat from 5G technology. Certainly we can see a number of areas where there is a potential threat, but there doesn't seem to have been any

collection of detailed scientific studies, and that's made problematic by the fact that the technology itself has been shifting and changing in terms of how it will operate. It looks to me like even up to the point where they're starting to roll it out, they're still going to be testing and changing things in terms of how the technology works.

We can say that we've identified what looks like a couple of legal cases here in Australia where a successful block has been erected—a legal block to the construction of transmission towers in communities—including one in our local area here in the Byron Shire.

Nyck: Wilsons Creek, yes.

Steve: It's comforting to know that there is a legal loophole there, which, if a community is concerned, they can take advantage of. This is really an ongoing conversation and we'll be looking for results from areas where the technology is being rolled out early, and we'll be reporting back to you and making this an ongoing conversation.

Nyck: Absolutely, and any information that you do have, please, you can send it to us. I get a lot of this, myself. You can email me, actually, I'm quite happy for you to do that: Nyckjeanes@gmail.com with any information which we'll use; and as I said, you can always text when people are talking on these shows about these kind of issues on our text line, 0437 341119.

It is a big thing. As I said a little while ago, personally, I'm not particularly enamoured by 5G, but I also feel that the resistance to it is quite young and adolescent at the moment. It's not really a criticism, it's just that it needs to mature to really find where the issues are and how to really address and to face this digital and electronic ecosystem that is being put in place on, over and around the planet—and that, itself, is a fascinating thing as we enter this very amazing period that we are—well, we are in this amazing period of transformation right now. Somehow, this is part of it. Good, bad or indifferent? We don't absolutely know, but do your own research. We like to encourage everybody here to do your own research, find out what works for you, wade through all the information we talked about before.

I personally find it relatively easy these days, or easier, to use what is really a sense of intuition when it comes to information that's out there—all sorts of stuff in front of me. What actually feels that you're drawn to that doesn't just support your point of view? What is it that you can see—some other angle that you may not have looked at before? Don't be closed to what doesn't agree with you. Have a good look, yeah?

Okay, bye. Thanks. See you next week.

Steve: Cheers.

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