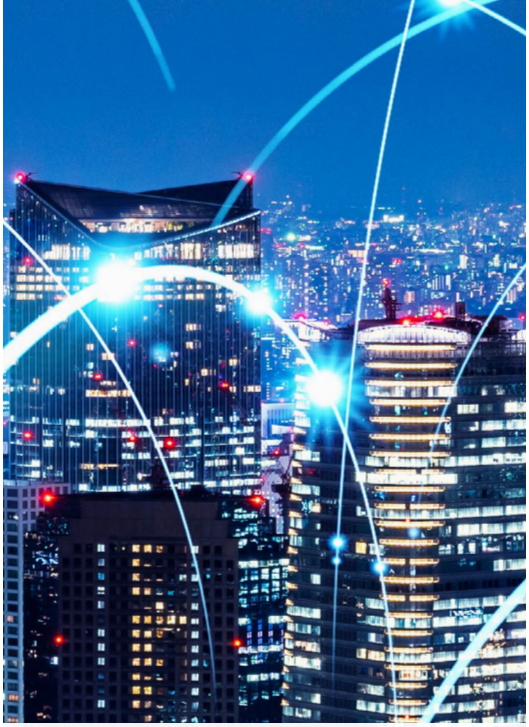

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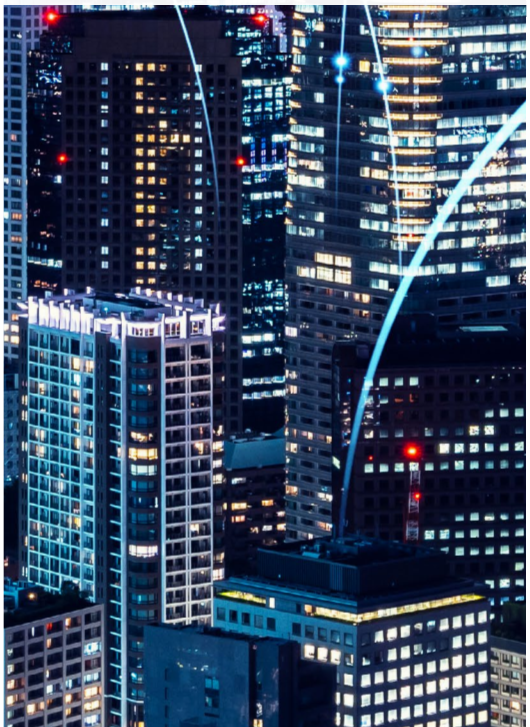

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FEATURED PRESENTATIONS

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GUEST EXPERTS

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  from Dietrich Klinghardt, MD, PhD
  Click here to watch this interview!

- **5G: The Agenda for Total Control**
  from Patrick Wood
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- **How Wireless Causes Harm (Part 1)**
  from Martin Pall, PhD
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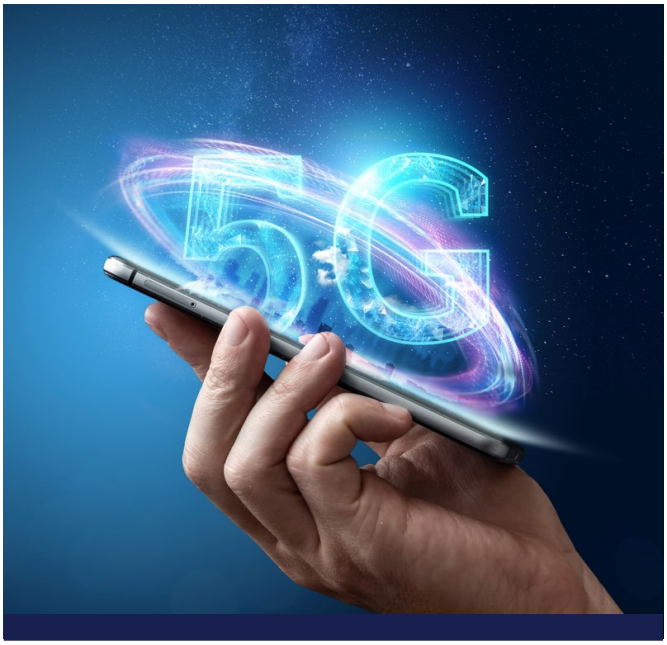

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Best Protection from EMFs and 5G

Dietrich Klinghardt, MD, PhD

Josh: Joining us on the Summit today is Dr. Dietrich Klinghardt, the well-known integrative physician who's been very outspoken in pioneering on a number of issues including electromagnetic radiation and its effects and what we can do to protect ourselves. So, Dr. Klinghardt, thank you so much for joining us today.

Dr. Klinghardt: It's a joy, Josh, to talk to you.

Josh: You too, again. We last chatted, I guess, on camera a number of years ago on Take Back Your Power. So, thanks for making time to catch up with us again. You're currently in the UK, right?

Dr. Klinghardt: Yeah, just south of London with [Nila], who is the co-founder of my work here in Europe.

Josh: Excellent. So, I'll share with our audience your background in brief. And then we will dive in. So, Dr. Dietrich Klinghardt is a founder of the Klinghardt Institute and Klinghardt education in the UK, the American Association of Neuropathy, and is lead clinician at the Sophia Health Institute located in Woodinville, Washington. He's also founder and chairman of the Institute for Neurobiology in Germany. And Dr. Klinghardt has written several books, the latest of which is on Lyme disease called, *The Biological Treatment of Lyme Disease*, currently available in German. And I want to read that in English, so keep me posted. In recognition of his pioneering work, Dr. Klinghardt has received numerous awards in the USA.

So, just diving in, you are recognized around the world for your insights and you're helping to bring the conversation forward. Both in terms of awareness, and specifically in solution, and what's working. So, just diving in. What have you noticed going back to 3G and 4G even in effects on your patients and within the body of science?

Dr. Klinghardt: Yeah, so I mean the main thing, I think that sets me aside maybe from some other more well-known speakers, is that actually see patients every day and follow them and their families for ten years, twenty years. I've been in practice now forty-five years. And so, I have an overview over longitudinal development of children, adults, their children. And in conclusion, I can say 3G was an absolute disaster. And it is very clear from the physics of it that 5G just going to be disaster squared.

But here are some of the facts. It's important for people to understand that it's not just the amplitude, the strength of the signal, but it's the frequency that decides what the biological effects are of the radiation that hits us. And so, many of the listeners will know that arrived technology or frequency specific microcurrent, that any of these technologies you can use for healing. And you can use for destruction. And it is very clear that 2.4 gigahertz was used intentionally for destruction. It

was developed in England to make masses of the population docile.

Josh: With Wi-Fi, 2.4 gigahertz?

Dr. Klinghardt: Used at 2.4 gigahertz to make population docile. And also, before it was mass introduced it was known that over two or three generations of exposure, it would turn an entire population infertile. Which are the effects of that, which we are seeing. That was the research that was related to us by Barrie Trower. He was a scientist from England who was highly involved in this. And is now trying to warn against the effects of this. And I know, you are aware of Barry and his work.

But it is very, very, clear as a medical doctor said, "We have a crisis of infertility." In the time since Wi-Fi was instituted, the sperm count in men has dropped by more than half. And fertility rates have dramatically gone down. There are other factors involved here that we know. That there are certain aspects of the vaccines which I cannot mention here. And certain environmental toxins that are in our food that also contribute to that. But Wi-Fi has played a huge role.

And so, where I come in and do the whole thing is, in 2005 the Karolinska Institute, Will Johansen, published a wonderful research paper where he looked at the incidence of Alzheimer's Disease in populations in Sweden and the exposure to Wi-Fi. And there was clear, high correlation between Wi-Fi exposure and the incidence of Alzheimer's Disease. If you roll it forward, he warned that this is going to cause a mass disaster come 2019. The estimate is that half the population alive today, will die with or of Alzheimer's Disease. That is entirely driven by Wi-Fi, by the exposure to Wi-Fi. And it's a disaster waiting to happen. That is actually is not waiting to happen, it is already happening.

And if you ever work in my office, I invite anyone, any politician listening to this, to come to my office and watch a whole day with children with Autism and adults with Alzheimer's Disease. And when you actually see that you can reverse many cases of autism by simply protecting the children from the exposure to Wi-Fi. You don't need any scientific study you know to see the results of that. And when you see that you can reverse at least many of the early cases of Alzheimer's Disease, by simply protecting the adult from the exposure to Wi-Fi. You don't need a scientific study to tell you that you're in the midst of a huge disaster. The same as with women that are infertile. Some of that is reversible by protecting them from Wi-Fi.

So, in short, the 2.4 gigahertz used in 3G and most of the 3G, was an absolute disaster. That was very well documented in the scientific literature. And we had expected the common sense would prevail that the studies that are out, at least would have led to other good studies that would have shown that this is unsustainable for the human evolution. And that has not happened.

I want to remind the people that are watching this, that several years ago was a court case in Italy. Where a young man died of brain cancer and then his mother sued the company that he was working for, that had forced him to use the cell phone all day long. And so, the judge in his wisdom, did a very simple thing in Court. He had the side that defended the client make a pile of all the scientific study studies that showed Wi-Fi causes brain cancer and is dangerous.

And the other side, the industry, making a pile of papers of the things that show Wi-Fi was safe. And it was a much, much, larger pile. And then the judge, having Italian common sense, said, "Okay, now, let's remove all the papers that were sponsored by the Wi-Fi industry." And that pile went to zero. And the other pile stayed the same it was before. And the judge ruled that the Wi-

Fi industry is at fault. Or that the workplace is at fault for causing brain cancer and that case stands.

I wished American judges would use the same kind of wisdom. That's a problem in America, is that the judges are elected officials. They don't even have to study law to become a judge. And it's a disaster that sometimes people become judges, that never even graduated from high school. So, reading or understanding science or scientific study is not part of their armamentarium. So, America is heading for a big disaster in that way.

Just to maybe say this very clearly, twelve years ago we did some measurements for autistic children. Basically, we had a control group of ten healthy children and ten autistic kids. We went to their homes with a mother was when she was pregnant. And we constructed the same Wi-Fi router, and the same conditions, and measured at the moms that gave birth to a child that was later diagnosed with autism. They were exposed to over twenty fold the amount of Wi-Fi radiation than the mothers that gave birth to a child they gave birth to a normal typical child. More than twenty fold. I tried at the time to get the study published. I couldn't find anybody interested. In fact, I got one threatening letter back until I decided to call it that the time wasn't right for it.

So, since then, however, I've been treating the autistic children to come to my practice very rigorously. That the condition number one, on day one, of the first visit. The parents get the Wi-Fi talk of how they need to protect the child. And they need to get rid of the Wi-Fi router all together in the house. And you just switch off the fuses at night. They need to get a sleep sanctuary. You know, the protective clothing over their bed and the kids need to wear protective clothing.

Josh: And so, what you're seeing results Dietrich, in cutting the Wi-Fi and protecting autistic kids from Wi-Fi radiation, especially in their sleeping areas. What else in terms of protective measures has worked and is working to help their health?

Dr. Klinghardt: Let me be very clear. So, there are daytime strategies. There are nighttime strategies. And there is external protection and there is internal protection. Let me go through that.

So, the nighttime strategy is pretty clear. At nighttime, we request the children have the sleep sanctuary that is like a mosquito net, the silver corded cloth. Now, there are newer materials that are coming out now that are probably more suited to shield against the 5G. We don't know that for sure yet. But the Swiss Shield was a name of the cloth, that the mosquito net was sewn from. It has to be over the child and under the child and make a faraday cage. What people forgot very often is that the shield needs to be grounded. There needs to be a wire coming from that conductive cloth running into the Earth. That was a foul compromise to use the Earth in the electric outlets. For the worst case, that is the only thing we can do if they live in the seventh floor of a high-rise apartment, we could not request that they run a wire from the center of the house down to the ground. And so, we use the ground in the outlet. So, that's number one.

Number two, the Sleep Sanctuary becomes dangerous if you have strong pulsating electric fields in the room. So, we requested at least that room, the fuses that are responsible for the electric outlets in that room and the electric wiring in the walls of the room. They have to be out for the night. Ideally the whole house. That's the nighttime strategy that works.

Daytime strategy is even that with autistic kids, parents have to get a wired connection. The router has to be off. Has to be on a mode that doesn't broadcast. Now, it used to be a simple thing in the computer where you could switch

off the broadcasting option of the Wi-Fi router. Now, the modern routers do no longer have that option. They are intentionally wired in a way that you cannot switch them off. And so, we bag them. You know, we have a company, LittleTreeGroup.com in Seattle, she's a retired woman. She sews these bags out of the Swiss Shield and you can single or double bag the Wi-Fi router to make sure it's off.

So, that's one part. But during the daytime, when the kid runs around. We have two strategies that work wonders. One is to protect the clothing. I know there is a lot of stupid discussion going on. People have a strong opinion that the clothing is dangerous and doesn't work. And people having to repeat that it does work. Well, I have twenty years of experience that it does work. I don't give a hoot about anybody's opinion. The clothing does work. Metal deflects Wi-Fi. And basically, we want to turn the children in the knight in shining armor. Where a lot of the body area that is covered with deflective cloth, the better the children are doing. That solves the main part of the external protection.

But the internal protection is first of all, there are several natural products that hugely enhance the ability of the body to not absorb the waves. And that is rosemary, propolis from the bees, or coriander. And so, there is a British company, KI Science, makes a product called Ray Wave. So, we have all the children on that. And then the more they take, the more stable they are.

A second company has also developed a skin cream that makes the skin reflective of Wi-Fi. It contains saffron and several other really precious herbal ingredients. There is nothing chemical in it. And so, we found when the kids are basically lathered up in the cream in the morning and then they go to whatever they go to, special schools and special kindergartens. Or at home and some electric circuits are on because the parents need to work, and they need to have lights. And the fridge needs to be on. That has been hugely protective. It's called the E-Shield cream and lotion.

I could go into details, maybe one more detail that we found. This is more for adults with electro hypersensitivity. We have found that if you give astronomically high amount of methylated folate, that almost everybody within three to four months becomes neurotypical in terms of their responses to the Wi-Fi environment, being outside in the electronic environment, or being close to a cell phone tower. They no longer have the neurological symptoms. But this is like twenty to fifty milligrams of methylated folate. Which many practitioners are scared of this. The small possible cancer link later in life. But it's absolutely life-saving for a lot of my extremely high percentage of patients. So, that's a little bit on the internal protection.

Josh: Let me just jump in there quickly. Is there a specific brand or type of methylated folate, that you found best?

Dr. Klinghardt: No, no. It's now marketed by many vitamin companies. But most of them have offered point five milligrams or one milligram. There is one company, I forgot what the name of it is. Metabolic something? They produce at least a ten and twenty milligram methylated folate, makes it a lot easier. Especially for the autistic kids. Now many autistic kids are on the methylated and there are certain symptoms, I'm not going to go into that. And then when you actually give them high doses of methylation after a few months it flips that they become hyper methylated. And then you need to stop. But you recognize it that the behavior gets better, and better, and better. Even in electric environments, and then suddenly it flips as if they are having a flare-up. And then you know that they are now over methylated, and you have to stop for a few

months. And it cycles, forth and back between under and over.

But I think these are sort of like a big stroke. But the important thing for me is, that it was absolutely stunning and amazing for me. That it could really say that there are two groups of autistic children. The ones that get dramatically better and the ones that don't. And the ones that are getting dramatically better are the ones that following my EMR protection to a tee. And the ones that are not getting better are the ones that think they are following it. But when I ask them unrehearsed. "Okay, what is it that you're actually doing?" I realize, they are making one mistake or another. They may have the sleep canopy, but they are not grounding it. Or they may even ground it, but they leave the fuses on for the electric circuitry in the room. Or they don't do any of the daytime protection. Or they don't do the methylation.

So, there is usually something missing. But I think the truth is, you know, we've established firmly in my clinical experience that the exposure to Wi-Fi has led to the biggest health crisis of our time. Destroying the lives of children. And you know, when I say autism, yes that's the extreme. But the less injury is the hyperactivity that attention deficit in children that is now the new normal. And the kids instead of getting the advice to limit the Wi-Fi exposure and the radio wave exposure. They are put on Adderall, and Ritalin, and all the drugs. They have come down with the whole list of developmental problems that express themselves later in life. That means these kids are crippled for life. Or really are becoming drug dependent for the rest of their life.

Which you may think sometimes maybe an intent that's going to work in the whole thing. You know, they lose their freedoms. And their medical independence early on in life. Instead of being directed at what's causing the hyperactivity or the attention deficit. But are being directed at here's a pharmaceutical solution. That sort of makes you tolerate the environment better.

Maybe, one more last thing to this. Hope you're also observing, since I've done this long enough. When a parent is exposed to constant bombardment with electromagnetic radiation. I will get into that later. But they have increased food allergies, they have increased brain fog, and a variety of symptoms that they are not relating to the electromagnetic exposure. If these parents have children, they are already negative response of the parents, will be quadruple or increased more in the offspring.

And the offspring will be extremely electrosensitive. And if these children, and I have some in the third general now have children, their children will be autistic. So, there is a cascade of worsening from generation to generation. And we understand now that the Wi-Fi amongst many of its other blessings, is that it damages the DNA. And that is what causes problems onto the next generation. And it goes up exponentially.

Let's say in the first generation you have a hundred genes damaged. In the next generation there will be two thousand. And in the next generation, it would be all the genes. And we only have twenty-three thousand. So, it's not that much.

Josh: Is there a certain threshold which you go past? And then you haven't seen any evidence of repair, possible? The DNA for example, doesn't repair? But like it does up to a certain threshold? What can you tell us in terms of reversibility or irreversibility of these types of damage?

Dr. Klinghardt: I mean this is from clinical observation from people smarter than me. There is a synergistic effect in history. So, the higher the amount of vaccines that the child has gotten,

the more electro sensitivity the next generation will be. So, let's say you grow up fairly normally at the normal vaccine program. If you have children that predicts the level of electro hypersensitivity normally.

We should define that. So, everybody is to the same degree electrosensitive. No matter what. You get the same cancer rates, you get the same grade of food allergies, of headaches, and all that. Electro hypersensitivity is a smaller group amongst us humans that has also allergic phenomena. That means they get muscle activation, they get like in addition to the chronic problems, they get acute problems. So, when I refer to electro sensitivity, I refer to what we are all sensitive to.

And there is a number of environmental factors that we see consistently that makes us more sensitive. And so, one of the histories. One is the presence of mercury, amalgam fillings of metal crowns. The study just came out with children with orthodontic work, that the Wi-Fi environment determines how much nickel is released from the wires that they have in the mouth. And that nickel toxicity causes a severe allergic phenomenon in the system. So, there's a whole host of interactions that we all have with the Wi-Fi environment. That are very well published now. And they're all pointing at the facility in the middle of a disaster.

The wonderful thing is, as you know, the whole disaster could be ended with the switch of one single switch. Switching it off, we would all be protected.

Josh: Yeah. Yeah, so switching off your Wi-Fi router or protecting it with one of those groups, from Little Tree Group for example. Right? So, it can't remit wireless. It's using a wired mouse, wired keyboard. It's getting the transmitting smart meter off of your house. Opting out or whatever you need to do there. Basically, using a cellphone as little as possible. Like zero, ideally. And not letting your kids use it, right? Can you talk a little bit about these types of quick things that people can do? And maybe perhaps add to that list?

Dr. Klinghardt: Yeah. The cell phone use is very hard to control in kids. We have a rule here in England, in the community that I live in. Where the kids have to be at least fifteen years old before they can get a phone. And then the phone use has to be limited by the parents. Especially they are not allowed to use it in the evening because that destroys the melatonin production. And sets up limits to the neurological development of the brain. The memory, the learning, all that gets impaired. So, there are some pretty strict rules.

Of course, kids should only be texting. Most will not follow that advice. The limited use of the phone is, of course, up to the parents to establish that kind of relationship with the kids. That they can push that through. It's very, very difficult now to be a parent these days because of that. But we do know that the cell phone use of teenagers and of children is destroying the humanity of the brain. It is limiting the brain development in a way that certain aspects of humanity, like compassion and considering others, are the first parts of the brain that get disabled. And that is a very scary development.

And so, with the YouTube system, this loudspeaker system you plug in the headphone, but not the usual headphone. But that users get plastic tubes that conduct the sounds in your ears. That is a very good system when you want to make a phone call. But kids and teenagers have not taken to that because they have to fiddle with it a little bit before they can put it on. So, it has failed in our world. The real thing is that people should keep a wired connection at home. And should give the kids their own wire connection in their own room. Where they can make the

evening, phone calls with their friends and all that. It should not be done on the cell phone.

And then of course the strength of the signal diminishes with the square of the distance. So, when people use a loudspeaker, they can't have the phone a foot or foot and half away from the mouth. It's a huge reduction in damage of course with that. There are some obvious details that we require only common sense were people don't really need to have an understanding of physics.

You have become sort of the world expert on the smart meters. And we're very excited about this box from England that reduces the signal from the smart meters by wiring it to the electric system in the house. I'm sure you are going to let people know about that development in your own part. But we look at it as a very exciting development to diminish some of the damage that comes in from the outside.

Josh: Yeah, we are interviewing Terry Stoughton as part of the Summit. Who has the technology that gets rid of the dirty power, the dirty electricity at the root. And there are other technologies as well to block the wireless in the process of solving this greater problem. And getting these things off everyone's houses. But there are some encouraging developments in the past year that even utilities are seeing that there's no return. There's no real benefit that even they're getting from this horrible technology. In light of the risk, and the liability, and the fires, and everything.

So, I wanted to just to dive in more about the comparison. What could you tell us about 3G and 4G? And now 5G? What is your understanding of the differences in these technologies?

Dr. Klinghardt: So, 4G, I can't really comment on because somehow that development was skipped in England. We still have 3G here. But in London, the roll out in certain sections of London with 5G. I never had the opportunity to get clinical experience in the 4G environment. But I can I think quite competently talk about 5G.

So, first of all, the technology behind it is quite complex. And what I said at the beginning, the damaging effect of the cell phone radiation is not just the amplitude of what you are getting. But it is also frequency specific, the damage. When I first got into the 5G discussion, one expert says, "Well, it's 3.4 gigahertz." I said, "Great, we can handle that." And then somebody else say, "No, no. It's ten to thirty gigahertz." And as it turns out, there is actually a wide variety of frequencies used. At least twenty-two, I think Barry identified. And the one that rolled out already in London is twenty-eight gigahertz in several sections. And that's an enormous increase in frequency.

And in general, the biological effects can be predicted to some degree. I know from my mentors in biophysics and this is really what we're talking about at the end of the day. It's all about biophysics. How is this aspect of physics interfering with our biology? And we know that the human bio field uses frequencies in the ranges from ten to thirty gigahertz. That has been measured and established by clever Russian scientists fifteen years ago, twenty years ago.

As soon as there were instruments that could measure it. And this is exactly the range now, where we will broadcast the entire population with man-made frequencies. That are resisent in the same range with a human body is producing its own frequencies that are important for the cell to cell communication. But also, the way our organism communicates with its field, with the plants around us, with other people, with our pets. And so, the expectation that I have from this is that it's going to be dehumanizing us. It may not even have visible, on the surface, clear medical effects that can be measured. But it will certainly have huge effects on the more subtle aspects of

humanity. I'm saying, no question. It's exactly in those frequency ranges were our higher functions of consciousness of compassion of love are.

I cannot go away from the thought that may be intentional. That this has been long planned. Because we had other technologies. We had fiber optic systems which were fantastic. And they were healthy for us. And there was a decision made at some point. You know, kind of go intelligently here or are we going to go to the total destruction of the human condition. The trouble with 5G is that it needs a more dense network of cell phone towers because of the nature of it.

And the idea is that we'll also line country roads and more rural areas so that they can be part of this beautiful development. Elon Musk, you know, is planning on sending twelve hunderd satellites up in the air. I'm invited to actually talk to one of his family members to talk sense into them. Another problem to that, Musk is not a bad person, but just ignorant or misinformed, like most people are.

I think the main point that people need to know is that none of the frequency ranges that are coming towards us. Have been evaluated for the effects on anything living, you know. The FCC and other institutions that are controlling this development. Frequency bands are sold by the government to the suppliers. And so, the government greedy as any government in the world is. And hugely money consuming machine. They used to sell off land when it was available. Now, they are selling off frequency bands. And of course, it's good business. So, there is absolutely no consideration given what these frequency bands will do to us humans.

So, I'm sure you have other speakers say the same thing. But it is just absolutely appalling because in the U.S., we have a special arrangement that the industry can do anything they want. And only if there is evidence of harm, then people can sue, and then the technology can be removed or lessened. In Europe, it is the other way around. That the industry should first show that there is no harm. And of course, they use to stupid standards of cell phone radiation heating up the body. So, they use a standard of biological testing that is absolutely inadequate. But there is a little bit more protection in Europe.

The truth is, with all of us self-appointed experts, the technology is kept secret so far what actually will be used. And what's used in one location may not be the same as it is used another location. And basically, it's a huge experiment rollout. And probably will be found in some locations, everybody goes blind. And in another location, all the insects die. And in another location, all the people die. And then maybe one of the frequency bands doesn't actually do harm. And then, they will eventually, hopefully, be crystallized out. And then they won't be used. But until then, there is going to be a lot of damage. We know that for sure.

Josh: I think that what you said, also, about you're starting to really, you know question the intent of this technology. Something that would lend support to that, you know idea, that perhaps at a high enough level. Even though not everybody perhaps within the industry and government is in on it. Perhaps at a high enough level, this is being done on purpose to you know, perhaps minimize or reduce the population, to strengthen the grip of the pharmaceutical industry as you described earlier with the drugs and how they're being prescribed. But we know that as early as the 1970s. Dr. Klinghardt, as you know, most of our audience knows. But just connecting this dot, thousands of studies were already published by the 1970s on the effects of microwave radiation. And also, a considerable number of studies on the effects of millimeter wave radiation.
So, those results were known, right? So, this is

maybe in some ways, it's an experiment against the Nuremberg Code. You can't experiment on people without their consent. But in other ways, perhaps, there's a deeper thing happening here that we really need to, you know, bravely look into.

So, I wanted to just to dive in. A couple more questions about the wireless and the solutions. And then maybe we'll finish with some dot connecting information for our audience. Can you talk about, are there other technologies that you haven't mentioned yet? That you really recommend for people to protect from wireless and millimeter wave radiation? Like what else works? And is there anything else in addition to the list that you mentioned previously?

Dr. Klinghardt: One of the big successes in our practice was to detoxify people for metals. So, all of us have a significant toxic metal burden. Lead is in everybody's bones. Cadmium from the car exhaust. Substantial number of people are mercury toxic, you know from eating fish. From many, many other sources, even ambient air. And the iron content, you know, even in the system plays a huge role. Meat eaters have a lot more iron in their system than others. And it's the metals that are mostly resonant with the Wi-Fi. That means the Wi-Fi would go through us if it would be just would be water. In fact, over the duck experiment, that water has been good at deflecting Wi-Fi. And so, a big strategy is to detox people from heavy metals. I think in the context it is interesting that with the announcement that 5G is going to be new deal. Pretty much the same day the FDA in the US stopped the availability of DMPS. The main drug that we need to get these metals out of people.

On the same day that the FDA stated that 5G is safe and that we are going to go forward, they ruled no more metal detox agent. You know, the main metal detox agent was removed from the list of things that is available. For no reason, there were no incidents, there were no cases of death or anything of that. So, I think it shows like the sinister part of that very well. So, yes detoxing metals is a huge issue.

We were experimenting with different waters right now. One of the things that we are very excited about is a water that will removal all the aluminum toxins. And aluminum is resonant with Wi-Fi by certain frequencies. And KiScience is actually is a main aluminum researcher in the world. And he found a water full of organic silica compounds, different ones, hundreds of different compounds that actually very quickly leeched out aluminum from our system.

And he found that when people drink that water, for just six weeks, they become much more stable in Wi-Fi environments. It is called Acilis water. That's basically silica spelled backwards. And now I know, KiScience has it available. So, the metal detox, of course, I have been lecturing on heavy metal detox for decades. But it has become an amazingly effective tool and making people stable in the high Wi-Fi environments.

I'm sure, when I actually talk with patients, I have a lot more ideas. I'm just blanking out right now with what else we're doing.

Josh: No, you have already provided so much value here. Just in this string of things that are working that people can do. And so, we encourage everyone just to do your own research on these. And start to engage in these solutions for yourself, and your kids, and your parents, and the elderly.

Dr. Klinghardt: Maybe, there is one more thing. Metals reflect Wi-Fi. And that's going to be the same for the 5G. Whatever higher frequencies are used, they are actually going to have to turn up the power up quite a lot to penetrate buildings. So, you have reception on the inside. The original

compromise that I would have swallowed was that every house gets a little antenna on the outside there to conduct the Wi-Fi signal on the inside. And then the Wi-Fi signal on the outside and the public places available to everybody would have been a fraction of what is needed now to penetrate through concrete buildings and get to the inside. And so, the idea right now to put the cell phone tower every hundred yards or so, is ridiculous. And I like to get this off my chest, you know, sort of. None of the people that I know, reasonable people, have ever asked for the need for 5G. You were quite happy with 3G. It was doing everything. We could stream films. And we could do things.

I just had a meeting with one of the high up executives of AT&T. And they're all totally excited about the new possibilities of what 5G can do. The faster networks can do in industrial settings. But then when I went down the list and I'm not going to spill the beans here, because I'm not allowed to. None of these things are serving anybody in a normal state of mind. These are all special applications. I mean who in the world was asking for a driverless car? I mean it, let's face it, you know, so my greatest joy is in the morning to get in the car and put the music on, and be in my own world there. And having that displaced by driverless car. And the driverless car is the only thing that makes the 5G necessary. And also, will make it necessary that every hundred yards or so. There is a cell phone tower that is an emitting device.

So, meaning that there is not going to be any spaces left for us to be in a Wi-Fi poorer environment. So, the driverless car basically destroys the surface of the planet to make it a livable space. And it's very clear, where there is a driverless car space. The roads are prepared for that. There will not be any bees. There will not be any insects. And therefore, there will not be any songbirds. So, you are replacing songbirds and the beauty of life with driverless cars. I don't think anybody is really asking for that. I don't think beauty generated that far.

Josh: Yeah, as part of the Summit, Dr. Timothy Shaklee, is interviewed. And I just encourage everyone again to check out that interview. He kind of destroys the argument, that even if we wanted driverless cars. 5G is not needed, number one. He lays the foundation for even better than having, you mentioned, the idea of just a small Wi-Fi signal to the house and then the house is wired. He actually gives examples of cities that have wired their local infrastructure. They've gone not the way of small cells. But they have gone the way of fiber. They've regained control of their own communications infrastructure in doing so. And so, he talks about how local governments and communities can wire to the home and to corporate buildings and companies.

So, okay five questions left. Not a lot of time left. So, maybe we will aim for like thirty to second seconds per question. Are you ready? Are there any lab tests on patients that you do or have done, that can reveal the degree to which they've been exposed or protected to or from microwave radiation?

Dr. Klinghardt: Absolutely and that may be a shocker to some of the people are listening to this. So, the first one is the LDL cholesterol, the oxidized form of LDL cholesterol. Which is going sky high in most people. And so, you got two choices. You can switch it off or you can take the cholesterol-lowering drugs that shorten your life in general. That's number one.

Number two is insulin resistance. And we have now consistently observed that the Hemoglobin A1C and other indicators of insulin resistance are matching up proportional to your exposures and come down when you reduce exposures. It's a really big one.

Maybe a third one and that's a $2.00 version of it. When exposed to Wi-Fi, your white blood count goes down, you know. So, if your white blood count is lower than 5,500 which is sort of 5,500 to 6,000 is the normal. If it goes down to 4,000 or 3,500. Yes, it can be an indicator of a chronic viral infection, parasites, and all that. But most likely it's an indicator of too high Wi-Fi exposure.

So, these are the three things that are consistent now. The other ones are all the hormones, basically in women the progesterone goes way down with the Wi-Fi exposure. Your thyroid hormones go down. In men, the testosterone and the thyroid go down. And goes up again when you are sufficiently protecting yourself.

Maybe last one is another cheap test, is the saliva hormone test. Where you measure the saliva cortisone test. Where you measure four times a day, you measure your cortisone levels and one time you measure right before you go to bed. And the other one in the morning. And if it is high at midnight. So, you go to bed and then you spit in the sink. And if it's high at midnight, you know that your exposure in the home is way too high. Because that's indicating sustained stress levels.

And so, these are a couple of indicators. I could make a long longer list of that. But these are the easy ones to get for everybody.

Josh: For good, thank you. Question two, Lyme Disease, there appears to be a very solid link between Lyme and those who experience electro sensitivity symptoms, right? You've talked about that before. But you're talking about very specific tea that you've found to very good for overcoming Lyme. Tell us about that?

Dr. Klinghardt: Yeah, the plant is called Cistus Incanus. It's from Sardinia. And when you drink tea, it has the highest borrelia-cidal properties. It means that it kills borrelia, but it is also very, very strong. And is retroviral and has a number of other properties against infections and detoxifies. And it's an ideal tool. And we get it straight from Sardinia. But again, it's also a KiScience product. It's a fantastic tool. It has made the treatment of Lyme Disease so easy. Maybe in connection with that, it's very, very clear that Lyme Disease without Wi-Fi is easy to treatment. And in a Wi-Fi environment, good luck. The same in a mold environment. And if you want to heal mold illness, you have to reduce life exposure.

Josh: Yeah, thank you. So, that mold question was my number three. So, thank you for answering that. But the Cistus, can you spell that for us? Is it C-I-S-T-U-S?

Dr. Klinghardt: Yes.

Josh: And what was the second word? Incarnate?

Dr. Klinghardt: I-N-C-A-N-U-S, incanus.

Josh: Excellent. Thank you. So, do you want to briefly say anything else about the wireless and mold connection? The science has conclusively shown that they work together, right? Like the more Wi-Fi, the more mold growth.

Dr. Klinghardt: We just did an experiment in England, a student of mine. She grows mushrooms. And she put a growth plate for medical mushrooms, you know in a corner in the house. And she saw some growth. And then she put equivalent culture next to the Wi-Fi router. And those mushrooms were like five times bigger than the other ones. This is simple. Mushrooms and molds are the same species.

So, I did an experiment with the Swiss researcher years ago. Where we could show mold culture to Wi-Fi, it becomes several hundred times more virulent, more bioactive. Excreting more biotoxins then it would otherwise if it's not bombarded

with Wi-Fi. And so, it's very clear to me that mold illness, in its extreme form that now, pretty much everybody has. The mold sensitivity of people has in homes, is largely driven by the Wi-Fi environment. And also, homes that have a little bit of mold. That were never a problem before are now a problem. Because the little bit of mold that's there is producing hundreds of times more biotoxins then before. And it becomes a problem now. So, the treatment to clean up a home from mold, it's not enough to exchange the C Drug and clean out the bathroom. You have to turn it off, you have to turn off the Wi-Fi.

Josh: Yeah. Thank you. So, you've talked about mushrooms, there are certain kinds of mushrooms that can actually help, right? So, mushrooms aren't necessarily bad to ingest. Can you quickly touch on that?

Dr. Klinghardt: You know, we have been experimenting right now. I didn't really want to give that away. But we are experimenting right now with a different mushroom extracts and it looks like the incredible ability to resist radiation of any sort that mushrooms have in general. Some of the mushroom species current can give you, by eating them, can give you that type of resistance or that kind of ability to deal with radiation. So, eating certain mushrooms is protective against Wi-Fi.

Josh: That sounds like a paradox though, right? Because you're saying like mushrooms and mold grow more when they are outside of your body when they are exposed to Wi-Fi. But when you eat them, you are saying they help. That they are defense.

Dr. Klinghardt: We actually thought in the past that molds on the walls grow because they are upset about the Wi-Fi. But it actually is, that they can use the radiation for their own growth. So, they are really different elements. We know from Jonah Breeland, and the Japanese's disaster, that the only thing growing in those contaminated areas are the mushrooms. They are wild and huge. And incredible. So, by mushrooms have a protective mechanism against radiation built in themselves, that is conveyed to you when you eat them.

But it's too early. Because it's certainly not all mushrooms. It's certain ones. And we are just now exploring that. And there certainly will be some mushroom products, medicinal mushrooms that will be a huge help. But it's not going to be all of them.

Josh: Okay. Thank you. So, question four. Now, this is a big one. And we have to keep the answer short, we are almost out of time. You started to talk about geoengineering or chemtrails. And how this dot connects. Can you talk about this? And just summarize this quickly? And is there a link that you see between you know that agenda and the 5G agenda?

Dr. Klinghardt: Yeah, so we've had a lot of the inside information that I can't really disclose my sources of that. But just having studied the skies, you know, we know that pretty much all over the western countries, the skies are regularly sprayed with a substance that makes a gray sky. That with the obvious intent to shield us from the sun, to cool the temperatures below. That is at least on the surface what is there. So, we have pretty good evidence. We've examined the fallout from that. Of course, what goes up, eventually comes down.

So, we have examined the fallout. It's not just an anodized aluminum, but it's actually microbeads of plastic that are spiked with aluminum, some titanium, some other metals on it. The dramatic thing happens is we are inhaling it. We get aluminum toxic. We get some microbeads of plastic in us which we get from eating fish anyway. But the main effect is the covering of the entire

oceans of the planet.

And prevents the natural evaporation of the water. And so, the atmosphere, around the Earth, and just in the last twenty years. Has lost about 40% of this moisture leading to huge droughts in areas of the planet. So, there is this myth, never being told you that the plastic beads on top of the ocean from the plastic bottles that be throw away.

Well, plastic bottles do not integrate into this specific nano plastic particles. That's from the sky. So, this program is so obvious, in your face. But it is so effectively kept secret. You know where the people that speak about it are really killed and there's a lot of fake websites created. You know, how insane people out there believe that it's real. We just have to look at the sky.

But the net effect is, that we all have toxic lungs, lung cancer is the mostly deadly cancer in women. More so, than breast cancer and ovarian cancer. It's growing in spite of us having stopped smoking. And the aluminum travels from there straight to the central nervous system. And Chris, actually just finished a study showing that autistic kids have an astronomically high level of aluminum in their brain. So, the consequences of that are very severe. I also mentioned on Alzheimer's Disease in the beginning, there is a huge link with aluminum.

So, it is part of the bigger picture and of course, aluminum in the brain almost makes it a Wi-Fi antenna. So, it makes it more relevant than it was maybe twenty or thirty years ago. So, it looks like there is a complex of things that we're exposed to that all work together in the same way.

Josh: Okay, really quickly. Your top three things that get aluminum out of the body? Natural remedies?

Dr. Klinghardt: It's the water that I mentioned, the Acilis water, is a main one. There is an herbal mix that I developed is called Polmerlo, several herbs that are able to cleave aluminum from the brain, and from the lung tissue, and mobilize it. And the third one is a strange one, is the ionic foot bath. That's a fantastic tool. We have a particular model that are all a little different. You put your feet in for thirty minutes and there's a coil in there that creates an electromagnetic field. We did urine studies afterwards and found that between the hour eight after the foot bath that day. That people's aluminum excretion goes up 600 to 900 percent from where it was before. And so, these are my three tools and it works fantastic.

Josh: Okay, excellent. So, we're out of time. Just closing with one last question here. This is a lot of information. So, valuable. Thank you so much for how you frame this, and how you're bringing the solutions, and you're bringing a deep level of awareness for so many people right now, Dr. Klinghardt. Thank you.

Do you have any perspective or viewpoint on the mental perspective or the world view that we can hold, so that we don't just go into fear and close down? But so that we can help this awareness spread and be solutions focused? Secondly, how do you see that going from here? With our relationship with technology in the big picture?

Dr. Klinghardt: Of course, I have to be a little bit cautious what I say because I have a medical license to lose. But it looks like now, that the form of government that we have right now. So called democracy. That they're so vulnerable to the corporate influences. Our Democratic systems are failing right now to protect the citizens. And as you know, from Michael Moore's work or so, corporations have only one responsibility and that is to create money for the people that have invested in them. And they do not have a soul. They do not have ethics. They are not life affirmative. And this increasing tendency that the government has to listen to the big corporations

rather than to its people.

And so as long as the developments are going in that way, expect for another few years we're going to go downhill. But the conditions on the planet are going to be so unsustainable, that there's going to be a shift again. And it's up to you, and me, and you know an increasing number of others, to raise awareness. Because at least in the Democratic countries, you need two things to govern. You need money to be elected. But you need the votes also.

And we know that there is a huge rise in activity in the green parties and recognition of the green parties. Even though, unfortunately none of the green parties know what the hell they are doing. None of the green parties, or members that I have interviewed in the last few years, have had any understanding of the dangers of the cell phone radiation, any understanding of toxins, any understanding of the chemtrail issue. But there's an intuition of the followers of the green party that know something is really badly going on. We are here to educate people. So, eventually people can with the vote change the future. And it will happen. But it will be a few more sad years.

Josh: So, Dr. Klinghardt, just in closing here. Something that we are doing in addition to the Summit, at the same time, we are realizing a tool on our webpage, for anyone to quickly send an e-mail to their elected officials. Multiple elected officials just in a few seconds. They can customize it. They can e-mail. They can tweet. They can phone easily their elected reps. So, how important is it that people do that process? And educate, inform, and hold accountable their elected officials with this kind of information?

Dr. Klinghardt: I think it's the only chance we have for a better future. I think it's the most important step. You and I can educate. But ultimately, it has to be the political action that interchange of policies. That is actually needed to protect us the citizens from the corporate damage, you know, that's done. I know people high up in AT&T, as I mentioned before. There's nobody evil there. There's just people only have small compartments of knowledge. They are not aware of the huge damage that they're participating in. There may be a small group of people behind wherever we see that is aware of this. And that funnels their intent into these technologies. That is something that I don't know for sure. But it looks like it.

Josh: Dr. Klinghardt, thank you so much for your time today. I appreciate it so much. You are just giving this value, wisdom, and information to all of us. I really appreciate it.

Dr. Klinghardt: Thanks Josh, and we connect when I'm back in your neighborhood. Yeah?

Josh: Yeah, sounds good.

5G: The Agenda for Total Control

Patrick Wood

Josh: With us today on the summit is, Patrick Wood. Patrick, thanks so much for joining us today.

Patrick: You're welcome, Josh. Good to be here.

Josh: Patrick is a leading and critical expert on sustainable development, green economy, UN Agenda 21, 2030 Agenda, and historic technocracy. That basically means he's one of the best researchers out there that in the past decades, has really helped to delve into the conversation around these topics and around how the dots connect behind the scenes. He's the author of *Technocracy Rising*, and co-author of *Trilaterals Over Washington*, volumes 1 and 2, with the late Anthony C. Sutton. Wood remains a leading expert on the elitist Trilateral Commission, their policies and achievements, and creating their self-proclaimed New International Economic Order, which is the essence of sustainable development on a global scale.

So we're going to be diving into it today. We're going to be kind of separating out the truth from the lies and really distilling some dot connecting. We're going to get into solutions. We're going to get into really understanding the bigger picture here, in terms of technocracy. Technocracy is a word that you're really helping, Patrick, to bring forward into our lexicon; to understand how technology is intentionally being used to be the new control mechanism in our society. So let's dive right in. Tell us about your perspective. What is 5G? What is the Internet of Things and how do they intersect? What's the purpose here?

Patrick: Right, exactly. Just to lay a little bit of background. Technocracy originally was conceived at Columbia University in 1932. They got kicked out, the whole group got kicked out of Columbia for a couple of reasons. But they started a commercial operation called Technocracy Incorporated, where they had membership, people paid dues, and membership cards. And it was very popular in America, they had up to 600,000 card carrying members at one time. It was a pretty big deal. It pretty much fizzled out in the late 1930s.

But it was resuscitated in the late 1960s, early 1970s, with the foundation of the Trilateral Commission, 1973 in particular, with David Rockefeller and Zbigniew Brzeziński. Brzeziński had written a book, while he was at Columbia University, by the way, called Between Two Ages, America's Role in the Technetronic Era. That's what started the modern iteration of technocracy again. We could call it neo-technocracy. I just choose not to because nobody knows what technocracy is anyway. So I don't have to really make that distinction.

But the Trilateral Commission fed the doctrine of technocracy to the United Nations in 1992, under the auspices of sustainable development. We hear this everywhere today, sustainable this, sustainable that; sustainable development. It's a resource based economic system that depends on allocation of resources. Not allocation by a price

based economic system, which we understand today but direct allocation of resources by the "managers" of those resources. And now, the UN has kind of got this idea of setting up a global common trust, where resources will be transferred to them. They will manage the allocation and the licensing and so on of resources and you and I will basically be excluded.

The program completely wipes out private property, not allowed. The United Nations has sworn that they are going to uproot capitalism and free enterprise altogether, for the sake of replacing it with sustainable development. All of this is baseline stuff and I cover all that in my book, so I'm not going to go into it a lot more; but this is kind of the background. In the original Bible, if you will, of technocracy, it was called the Technocracy Study Course, written by M King. Hubbert; mostly. That also was the guy that started peak oil theory, by the way, in 1954. We've heard a lot about that too.

But Hubbert was a co-founder of the Technocracy Incorporated Organization. And in that, they described the criteria that were necessary for technocracy to take root. In that criteria, energy management was number one. They wanted to track every single erg of power that was used within the economic system. Secondly, they wanted to surveil and monitor everything in society, all consumption, all production, of where people were, what they were doing, and so on. They didn't have the technology back then but we do today.

And I believe they saw the day when technology was coming, if for no other reason that when they were at Columbia, they were housed together in the same area, with the early iteration of IBM. Which was then making the first Hollerith computer, the tabulator. It was later used in Germany and Europe and so on for tracking statistics and things like concentration camps, and ugly stuff like that. Well, anyway, they were rubbing shoulders with visionaries, and they considered themselves to be visionaries anyway, because they were with Columbia University after all.

So that is the background. Technology now has matured greatly since 1973. We have things today that were barely even conceived of back then. As computers have advanced, as software technology has advanced, for instance, we now have artificial intelligence. This was not really a discipline back in 1973 at all. We now have the ability to transmit data in ways that we never conceived of, back in 1973, using wireless technology. This new body, this recent body of technology now, is being used to accomplish the original goals of technocracy.

That's my point in this whole thing. The technology has advanced. Some people would say, "Well, it's just people inventing things, after all," and that's probably true in a sense. But as soon as it's invented, the technology gets hijacked by this group of technocrats, if you will, turned around, weaponized and used back against the people that it seeks to control.

That's where we are today. We're talking about 5G, I'll just throw this out; 5G is not about cell phones. It's being sold that way. "Your cell phones are going to be so much faster." You can get the latest and greatest new iPhone, you could pay whatever. Probably by the time it comes out you're going to pay $2,000 for a smartphone that will do 5G. And you can get your movies downloaded in three seconds, instead of three minutes." They say, "Wow, what a benefit!"

It's not about cell phone speed up. I've listened to the speeches of the CEOs of Verizon, T Mobile, AT&T, and consistently, you can see them salivating. Not over voice communications or human communication on cell phones, but they're salivating over the Internet of Things. And this is what they're talking incessantly about. That 5G is going to light up the Internet of Things that will allow all of the data collection, all of the devices out there that could be connected to the internet,

it's going to draw all that data back in real time. And when I say real time, that's hard for most people to understand what that means.

The latest wireless technology, 4G, is fast, no doubt; but 5G takes it to a completely different level. Not only are the data transmission speeds higher, much higher but the other factor in internet communications, is called latency. Latency has to do with how long it takes that first little ping back and forth, to say, "I'm ready to send," and the other one says, "I'm ready to receive." And so they have to go back and forth, back and forth all the time. Determining, "Are you ready to receive it? Are you ready to send it?"

Now, this sounds like a miniscule thing. Typically, in a home situation where you have a Wi Fi router, your latency time can be something like 20 to 30 milliseconds and we say, "Ooh, that's really fast," and it is, but it's not real time. 5G technology has gotten the latency period down to one millisecond or less.

This is incredible, this is absolutely revolutionary. What this means is, the sensors embedded in a city will be able to send data in real time back to the central computer. Where artificial intelligence will be waiting to analyze it, to model it; to extract all of the useful information out of it. This is what the biggest carriers are salivating over. They want that data.

We used to say in the 70s, Josh, follow the money; follow the power. That's still true to some extent. Well, of course it is. Money always seems to come into it somewhere. But today, as far as technocracy is concerned, here's how you watch this; follow the data, follow the power. Go where the data is. Look for the data flow. Look for who's receiving... not first collecting, and then look who's receiving the data.

And what are they doing to it? All of the people in the data world today are claiming that data is the new oil of the 21st century. And they're absolutely right. The money and the value today, the income stream is in the data that these technocrats are able to extract from society.

So when you talk about smart city, implementing all these sensors around. Whether they be light poles with microphones and cameras and the 5G transmitters. Whether it be sensors in elevators and buildings and thermostats and smart meters on the sides of homes and businesses and smart meters for the water and the gas, all that kind of stuff.

Autonomous vehicles, by the way, driving around in the city and so on; all those things are going to be connected via the Internet of Things. By the time they're done implementing 100%, smart city technology in one given area, a computer with sufficient resources will be able to literally model the city in real time. And to rotate it and look into it in different areas they want to look at. This has never been possible.

Josh: What are some of the applications of that? And before you answer that, I'll just maybe say that I have a good friend who has coined this saying, "We scare because we care." And so we're going to go into a little bit of these, you know, potentially scary areas, to really look at, like what this technology is and or could be used for. So that we can deal with this, with what is actually happening, bring the conversation forward, and intentionally change course, collectively. Like that's what we're talking about here, right? We're talking about having a period of time in which we're coming to terms with this reality. We're investigating solutions. And we're getting intentional about it. But let's just go into this, Patrick. What are some of your deepest concerns? What are you seeing in terms of application here and in the future, with this technology?

Patrick: This whole body of truth we're talking about here has to do with social control. That's what technocracy was about in the first place. That's what sustainable development is about today, with Agenda 21 and the 2030 Agenda and the New Urban Agenda and so on, from the

United Nations. It's about social control. This is what the Green New Deal is all about that AOC has introduced into our country, with a firestorm I might add. Everybody's talking about it now. This is about social control; getting you to do what they want you to do. It takes away private choice, it takes away citizen choice, it takes away citizen concerns completely and says, essentially... this is such an ego trip, "We know what's best for you. You should trust us to make all your decisions for you."

Your purchasing decisions, your medical decisions, your travel decisions, your consumption decisions; how many children you have decisions. Everything under the sun is envisioned right now, is on the table for them to exercise social control over you and I. This is not just by mistake or unintended. This is the way it was from the beginning. Now we're really feeling the bite, Josh, is the problem.

Look at China. China has implemented the social credit scoring system over there that's affected every person in their country. All 1.4 billion people have been enrolled into the social credit system, with their pictures, with biometric data, with all of the data. Everything that happens, they know; the government does.

They're applying artificial intelligence now to rank and rate and sort all the people in the country. The outliers that are troublemakers, like you and me... the outliers are simply dropped out of the system; they're excluded. There's 13 million people right now in China on the blacklist that have been relegated to be second class citizens. They can't travel the way other people do. They can't go to the same schools that other people want to go to. They can't live in the same areas that other people want to live in. They can't buy the same stuff that other people want to buy. This is so dystopian. It's beyond dystopia. This is what's coming to America, because this is the heartbeat of technocracy. This is the heartbeat of social control.

Josh: Wow. And I remember you writing on things like pre-crime; like that movie, Minority Report that probably a lot of people are familiar with. Do you want to touch on that and any other specific ways that you've been reporting on, on your website, technocracynews? Other specific ways that this technology is sought to be implemented?

Patrick: Well, you have it, pre-crime is a pretty good example. You have, in our country today, in America today, a rollout of surveillance technology that's very similar, if not identical, to what's being used in China. Although American companies now have the technology and they're selling it to police departments across America. Exactly the same concept and functionality of the software used in China, to be able to identify people walking down a street, using a public camera. Tracking people by name by, you know, a little box or whatever, a balloon over their head, saying, "There goes Josh del Sol. He's going down to get a coffee at his favorite coffee place," or whatever.

This technology in America is being sold to police departments across the country right now, by aggressive, pinstripe suit type, you know, not IBM salesman but that's kind of the picture you have when you have professional sales people. They're going out to police departments to market this surveillance software. Police departments are gobbling it up at incredible rates. And a lot of people will say, "This isn't legal," or, "It isn't right," or whatever, that, "We don't want that here."

But police departments come to find out, Josh, there is no federal regulation, not one single federal regulation or law that prevents a local police department from implementing this ubiquitous type of surveillance software. And implementing any kind of AI software for pre-crime analysis that they can get their hands on.

It's just a matter of money. Now, police departments don't have a lot of money. So as the price came down on this software, hardware combination, more and more police departments said, "We can afford that. Well, we can get rid

of maybe a half a dozen patrolmen we don't need anymore, but use their salary to pay for it." That's what they've done. So now this is sweeping America. Americans individually, have not caught up mentally with what's going on in police enforcement across our country. But when they use this pre-crime technique to try and predict where crime is going to happen, when it's going to happen, and by who it's going to be perpetrated, this goes into such a dangerous, dangerous ground.

Because to a technocrat mind, it's perfectly acceptable to be 90% accurate. If they can get something that's 90% accurate, well, they're thrilled. "It's wonderful. We have pre-crime analysis and we can go out now and do all this stuff." But here's what they just ignore; what about the 10%? What about the 10% that get busted for something they had nothing to do with? This is such dangerous, utopian like thinking; that Americans haven't yet got their mind around. "90% is good enough," that's not the way America ever worked. Our legal system, the rule of law. Okay, it's not perfect because maybe people aren't perfect sometimes, but the rule of law applied the same law to everybody uniformly.

Not so with pre-crime analysis software or any other thing like that, that works on artificial intelligence. It's not going to apply equally. It's been proven to have biases, in other words, the bias of the programmer has been seen now to be reflected in the software. And 90% accuracy leaves the other 10% out in the cold to get busted for any cockeyed thing that somebody comes up with. And even if they are proven not guilty in the end, they've ruined their life in the meantime, by the mere accusation that they did something.

Josh: Yeah, I mean, thank you so much for painting that picture because this is obviously scary, to move from the rule of law to an AI system making assumptions that affect people's rights, because that's what we're talking about here. It's technocracy. It's the potential for chaos. It's the potential for complete and utter dependence on the system and loss of individual rights and common order. So thank you for that. Obviously it's disturbing. So, Patrick, you've also been doing work on exposing smart region initiatives, smart cities, and smart region initiatives. Tell us about that.

Patrick: Well, okay. First, certainly we have the technology. We've talked a little bit about some of the things that go into smart cities. We've missed a lot of stuff too, it's a very complex area, and it's a big area; but we've kind of laid the groundwork. There are some really disturbing technologies out there that that these technocrats are trying to impose upon cities, to implement the data pump, to get data out of the cities. The money is in the data, remember. So when you hear these large companies like the AT&Ts of the world, talking about getting the smart city technology out to entire cities, they're talking about creating a huge data pump within that city.

Now, there's a problem in cities. A problem not to us, we are the city. The problem to them, is that there's those pesky city councils out there that just continue to ask questions. And they continue to want to know, "Well, how is this going to really protect our citizens?" And there are representatives, right? We elect them. We may not like some of them. I don't like all of mine, but still, they're on the front line to protect the people in the city and do things for the city, the way the city wants them to be done; the people. Technocrats hate... this entire smart city crowd hate city councils because there's so many of them.

There's thousands and thousands of cities across the country that are kind of woke, if you will, now. They're watching for this kind of stuff. So, instead of trying to go directly to the cities to negotiate for smart city technology implementation, in Phoenix, Arizona, of all places, there's a pilot program going on right today that every other community in the country is watching like a hawk. And it's called Smart Region Initiative. How it started here,

Arizona State University, which bills themselves as being the most sustainable university in the country, they actually offer up to a PhD degree in sustainable development. So they're really up on it.

They have risen up, gotten ahold of three other NGOs in the area. One is a chamber of commerce like organization. Another is just a new startup, kind of a data development management company. And they've all created this consortium together, called the Smart Region Initiative. This is very similar to the Council of Government concept that's already implemented across the country.

So a form of regional government, patently unconstitutional, by the way, but it's out there. We have locally, councils of governments called the Maricopa Association of Governments. It also is concerned with 22 cities and 4.2 million people, something like that. And this Smart Region Initiative is working hand in hand with the Maricopa Association of Governments to develop smart city technology to be implemented across the region.

Josh: Without the consent or permission or approval of any city government. That's the basis of this FCC law that basically is a power grab, right? I mean, they don't want to have to ask permission anywhere.

Patrick: You're absolutely right. So the cities have contributed no input to this group whatsoever. There's no elected officials that belong to this particular group. In the case of the Maricopa Association of Governments, every city is supposed to contribute one council person to this larger Regional Council. But that does not give representation to the people in the cities. That's a model of the European Union, for Pete's sake, where each country gets to send one or two representatives to the EU Congress. They get two minutes to say something, once a year and they complain.

So, this form of regional governance is off the wall. But in the case of smart city technology, this little consortium, this little cozy consortium of academia, the ASU, along with these other nonprofit groups who have all kinds of different motives for being there in the first place; they have simply stood up and said, "We know what's best for this region." And they don't know anything about this region, other than most of them may live here. They don't know the 4.2 million people in this region. And this whole thing, the whole program, Josh, is absolutely bogus, as far as I'm concerned. It should be scrubbed off the face of the map.

However, because the cities and the Maricopa Association of Governments are involved in this, all of a sudden, they have this newfound authority in the eyes of people that live here. "Whoa, you mean the smart region initiative says we need to do it this way, huh?" Yeah, that's what they said, "Well, I guess we'd better do it that way then." They're not even questioning these decisions that come down. In the meantime, this is an absolute goldmine for the AT&Ts, the T Mobiles and so on of the world, the Verizons that are coming in, setting up this data pump; because now they can get uniform deployment of technology across the entire region.

And imagine how much more valuable that is to them than having 22 individual systems, having to be negotiated, implemented, etc. around. Now they get everything in one fell swoop. They get it faster because it's going to be done all at once across the entire region. And meantime, the region here in our area, I can tell you, knows nothing about this whatsoever. They're completely oblivious. There's been no publicity. Maybe just a couple of press releases send out but no publicity whatsoever.

And even worse, people from all over our country are looking at Phoenix as an example, waiting, saying to themselves, "If they do it, man, we're on the bandwagon. We're right behind them, we're going to do it too." There's even people in

Europe that are watching the Phoenix situation right now. They want to do the same thing. Set up these smart region initiatives, where they can just blanket the whole technology, the whole suite of things across an entire region. And in our case, in Phoenix, they're going to catch 22 cities and 4.2 million people; bang, slam dunk.

Josh: Wow. So with smart meters, that has gone forward in the name of climate action. With 5G, that is being pushed forward in the name of convenience or keeping up with the progress of technology or competition with China. And it's like a new Cold War, right? That's been kind of propped up, perhaps, between US and China. Isn't that what Trump is saying why he wants 5G, 6G and any kind of G?

Patrick: Well yeah, any kind of G. President Trump has said that the United States must win the 5G war. Whenever you have something complex like this, the way to get it done quickly is to turn it into a race. I've seen this so many times. In fact, I used to do this with my two young sons when they were young. All you had to do was suggest, "Let's have a race. Let's run," or whatever. "Oh, yeah." Well, they want to compete against each other. That was guaranteed to burn off some energy, if nothing else.

Anytime, like President Trump says, "We have a race with China. We have to beat China," everybody, all of a sudden, "That's a challenge. That's a challenge." "Oh, you're darn right, we need to beat China." "Why?" "You know, those people over there are doing all kinds of things to their citizens or whatever. We need to beat them to the punch and do it even worse..." I say this jokingly, "Do it even worse to our people."

But this is the mentality, I believe, of the Trump administration, saying, "We need to beat China in this race." They're actually speeding up the implementation of 5G in our country. We've seen them work through the FCC, which you just alluded to, to take away the authority of cities to charge and do independent negotiations with carriers. So now, there's a federal mandate from the top down to get this 5G stuff implemented. And it goes even beyond that because all of the smart city things we're talking about, Josh, are part of a larger construct called infrastructure.

Infrastructure. We think of it as, "There's a pothole in front of my house. I'd like to get it fixed." Or, "There's a bridge that is unsafe down the road. I'd like to see that fixed." That's not infrastructure to the technocrat mine. Infrastructure is all of the electronic stuff that's being implemented across the country, to connect people in cities together. And the data centers together to suck the data. This is infrastructure.

Just recently, President Trump emerged from a meeting with Senator Chuck Schumer and Representative Nancy Pelosi, having concluded a deal for infrastructure spending in America. And Schumer came out of the meeting... he's an arch enemy of Trump, he hates Trump's guts, and I think probably vice versa... he came out of the meeting saying, "We had a great meeting with the President. Why, he even suggested more money than we suggested for infrastructure, and he upped the ante." And so President Trump put on the table for infrastructure spending, $2 trillion.

Josh: Wow.

Patrick: Huge. Where will this $200 million go? Are they talking about bridges? Are they talking about potholes? Are they talking about repaving the freeways? No, they're not. They're talking about the infrastructure that we're talking about here. To blanket our country with smart city technology, and everything that goes to shore it up, for the largest social engineering project in the history of the world.

Josh: Wow. I just want to confirm, is that two trillion or 200 million?

Patrick: Two trillion.

Josh: Two trillion, right, they're two vastly different numbers. I just wanted to clarify that. Wow. I just

want to kind of put this in context. I'm kind of struggling to do so right now, other than to say that this is the biggest thing that's happening. What Patrick is talking about is 5G, and we need to understand that it's not just a one dimensional conversation.

So this is going to be something that we encourage you to do your own research on and get educated about this aspect; this dot connecting aspect of 5g. I think Patrick perhaps could help people really understand the 'why'. Really understand things in a big picture and really be able to then reach an even larger amount of people with this information. So it's not just about the health. That is a serious concern that this is going forward with no safety studies. Would you agree?

Patrick: I would agree.

Josh: But there's a huge other conversation. So yeah, please continue. Help us to contextualize this and lead us to... you know, eventually we want to get to what specifically our best steps to take are.

Patrick: Right, let me just add on top of this, the philosophical idea which is prevalent with this whole technocrat crowd, going back to the 30s. Going through the United Nations, we see this everywhere. When we talk about resources. When we talk about resources, we're thinking about timber, lumber, oil, food coming off the land, things getting mined out of the earth; resources. We think of water as a resource. To the technocrat mind, resources also include you and me. All humans are simply resources on the table, with all these other resources. That need to be worked and managed in concert with each other, to save the planet, so to speak. I say save the planet figuratively. That's what they say. They're not saving the planet, trust me.

But humans are reduced to being simply another resource on the face of the earth, no different than the cattle or the sheep, or the goats or any anything else. Even trees in the forest and the farmland growing cauliflower up on the farm. We're just resources to be managed. In their mind, we're no better than a cow or a sheep. So we're just there to be managed. Now, when Americans or when people concerned about the health effects of 5G, get all worked up and they go to wherever they go to protest... when they're facing a technocrat, in the technocrats mind, "Why are you talking to me? Why should I care? You have to break a few eggs to make an omelet."

"So what's the problem here? You're just a resource, don't you understand? You're just a resource. The health issue, we don't care about the health issues. Because you know what, if you've got 50,000 cattle in a feedlot, you obviously don't want to lose the whole herd. That would be dumb. But you know what, cattle die in a feedlot for all kinds of reasons. They pull up a tractor to put them in the bucket and they haul 'em off. They take them to the sausage grinder or something, I don't know." That brings up another bad thought about an old movie called [inaudible]. I didn't mean it, folks.

But you see, when you reduce humanity to be just another animal, the mindset that comes out of that, Josh, is dangerous, and its anti-human, in my opinion. It's flat out anti-human. So all of the health concerns, if you're addressing technocrats, will fall on deaf ears. They won't have anything to say to you, because they're going to be looking at you and saying, "You guys are really crazy to be talking about this to us because there's just nothing to be concerned about here. Who are you anyway? You're just an animal, like all the other animals."

Josh: Let's talk about this sort of anti-human type mentality. I mean, perhaps in the microcosm, it can be that part that we struggle within. It could be the dissociative mind or the ego or whatever, right? But on the on the larger scale, it seems to be that yes, there is like this, whatever force or source it's coming from, it is a collective

unconsciousness that seems to have a death wish, let's say; or have a death wish, and then project that on to other people, in the context of control. So, this is something that, again, another aspect of this, I came across, perhaps when reading your work about the Club of Rome. When which they concluded... basically, they created the context for this battle. What did the Club of Rome do or say, and what's the takeaway?

Patrick: First, I'll say there was a great overlap between the Club of Rome and the Trilateral Commission. And we wrote about that in our book, Trilaterals Over Washington, back in the 70s. What the Club of Rome did is they threw up a kind of an Al Gore-esque panic attack, sky is falling. By saying that we have a radical shortage of resources in the world. And if we don't allocate those resources more wisely, that we're all basically going to die. And humanity is going to come to a screeching halt. Well, their book, their work, called Limits to Power, was widely, widely circulated amongst the global elite especially. I doubt many people, even in this audience that we're addressing right now, probably have ever heard of that book before. But it had a huge impact on the global elite.

And so the Club of Rome prescribed, essentially everything that the United Nations is doing today with resource management. A resource based economic system; control all the resources. Myself and Sutton said this, by the way, even though we didn't understand technocracy back in the early days, as I do now. We said that the goal of the global elite was to get their hands on the resources directly, not just on the money that comes out of them, generated from them, but get their hands on the resources directly. This makes sense. In a historical sense, this makes very good sense to them, not to me, but it does to them.

Because there comes a time when money runs out of usefulness, there comes a time when money becomes worthless, by definition, because they're chipping away at it a little bit more every year. Since 1913, the dollar has lost like 99% of its value. There's going to come a time when it's 100% and money will meet nothing. We're almost at that point right now, by the way. But when money becomes worthless, and I think they saw this even back in '73, when money becomes worthless, what do you do for an encore? Well, if you control and own the resources, it doesn't matter what type of accounting system you put on top of it. If you've got the resources, and everybody else wants them, just wait for it to sort itself out. And you're going to own everything again because you've got the resources in your pocket.

This is why the United Nations has been busy gobbling up heritage zones and stuff around the world. This is why, in our country, in America now, the US government owns, I think 38% or 36% of the landmass of our nation. It's owned by the government. And people go, "What? Our government owns that much property?" Yes, they do. "Are they allowed to?" Well, the constitution doesn't say they can but they just went and did it. And that's land that you and I can't use for legitimate economic purposes.

And the United Nations has been doing this all around the world. So the global elite now are in a position to, I think one day, let the financial system go all together. It won't matter to them anymore because they will have the actual resources behind everything to recreate themselves in any way they want to recreate themselves, when the time comes.

Josh: Wow. Some of your work has gotten into opportunity zones. What is that?

Patrick: Well, this is new. Again, I get shocked... people say, "How can you get shocked?" I get shocked at the stuff I run across; that I never saw coming. And I think my ear is to the ground on a lot of stuff but recently I discovered this whole opportunity zone concept. This was created by an act of Congress in December 2017, signed into law by President Trump. And it was called the

Tax Cuts and Jobs Act of 2017. In that act was a provision to create opportunity zones. These are supposed to be low income designations within states that will achieve certain tax advantages, if people invest into these opportunity zones.

They're self-certifying zones that the governors of every state were allowed to define. "Well, what do you want your state to be in an opportunity zone?" So they started drawing the maps, whatever, in every state. The President then sign an executive order one year later, in December 2018, that created a national administrative council, including some cabinet members; that will shepherd the opportunity zone initiative across America. So it's actually been formalized within the government now. It's a big thing. Today, Josh, there are 8,700 opportunity zones created across America and they're all focused on investing money into these areas.

Now, here's the thing about this. If you have an asset that has a very, very low tax base. In other words, you bought maybe for a penny, and now it's worth 100 bucks. If you sell that asset, you're going to pay through the nose, capital gains taxes. Big investors hate that because it just drives their income, and they pay the highest possible income tax rate on it. And so they want to avoid capital gains taxes anywhere they can. Well, this opportunity zone setup allows for somebody to sell assets like that, reinvest the money into the opportunity zone, and defer their capital gains taxes for at least six years. Now, that's huge.

And what we've seen in practice so far, is that the biggest opportunity here is for public private partnerships to be created, where people can pool their money together in these opportunity zones, invest the money into the city on anything they want, including light poles, or sensors, or street sensors, or anything else. Invest the money in there and they can reap whatever benefits they can get out of it; and they defer their taxes for a long time. Now, what's happened in practice so far, is that I found some opportunity zones early on, that said, "This is our opportunity to implement smart city technology in that area," in that low income area.

Well, low income areas have no ability to really to fight anything like this because they're low income and they don't have the resources. They don't have the political infrastructure, probably and they simply just don't have the money. Maybe they don't have the education. So it's easy to get this implemented. So here's the big question; where did this legislation in 2017 come from? Who backed it? And what was it all about? This organization called the Economic Innovation Group that was kind of the primary NGO behind this legislation, the founder and executive chairman is, Sean Parker.

Now, for those who don't recognize Sean Parker's name, I'll just read one line from his bio. He was a co-founder of Napster at age 19, and Plaxo at 21. In 2004, he joined with Mark Zuckerberg to develop the online social network, Facebook. Has anybody ever heard of Facebook? And served as Facebook's founding president. And the bio goes on. But you get the point. Here is a guy who is Mr. Data himself, right? And he's pushing this, Now I can tell you what, this is all about the data. Remember, I said, "Follow the data; follow the power,"? This is a data grab of epic proportions. We'll see how it plays out.

Josh: Yeah. Before we get into actions, kind of moving towards wrapping up here, Patrick, I wanted just to touch into this. So 5G, linked with Internet of Things, linked with AI, linked with transhumanism. What's your take on that?

Patrick: Well, it is and I've suggested this quite a bit. Both transhumanism and technocracy...

Josh: First, let's define it. What is transhumanism?

Patrick: Well, transhumanism is the religious proposition that, through the use of advanced technology, man can escape the human condition. In layman's terms that means, can become immortal. They want to escape death, that's the

bottom line. This philosophy, and the father of transhumanism, and the father of technocracy are the same person. It just so happens, it's the same person. You can check the books on it, if anybody doesn't believe that; you can. His name is Henri de Saint-Simon. He was a French philosopher that lived around 1800. He wrote extensively on both topics, and he is now considered to be the father of both.

He developed the religious concept of scientism. That science was the solution to man's everything. Got a problem? "You know, scientists can come in and save the day, because they're better than everyone else. They're smarter and they can predict the future." Well, we're not going to go into scientism right now, but there's a lot been written about scientism. CS Lewis, by the way, wrote a number of papers against scientism, fighting it; debunking it, if you will. Transhumanism is based on the concept of scientism. We can use the technology to escape death. That's the ultimate problem.

Josh: Merging man and machine.

Patrick: That's right. And I describe it like this, technocracy is to the formation of society as transhumanism is to the people who will inhabit society, if that makes sense. Okay, so a technocratic society would be most perfectly filled by transhumans. The transhuman philosophy believes today that by using this advanced technology, they will create humanity 2.0. They believe through genetic modification especially, that they can hijack literally, the forces of evolution.

Okay, now evolution is not a Christian biblical concept, of course, but to those who come from an evolution frame of mind in the first place, where they believe everything was just incidental and you know, just happened; they believe now that through science, they can take over the process of evolution and direct future evolution, themselves. This is really twisted, I hate to tell you. It really is just wow, these people are out on a limb. They think that they're going to create humanity 2.0. Now, humanity 2.0 would be the perfect type of humanity to live within a purely technocratic society.

Josh: And when you say 'they', like the elite, you're talking about the Trilateral Commission, the Club of Rome, the Bilderberg Group, right?

Patrick: Anybody that adopts that philosophy; absolutely. I mean, there's billions of people outside of those elite groups that you could look at and you can see them involved in scientism. You could call them a technocrat, you could call them a transhuman; they may not have any idea what the global elite is doing. But the philosophy has permeated, the religion of it has permeated people's thinking process, and it is a religion. Scientism is a religion.

Josh: It isn't just materialism, it's what can happen, the depths of depravity to which the human mind can go, when it ceases to see the essence, the value, or the spark of divinity or the soul in other human beings.

Patrick: Science becomes a god, bottom line. To a scientismist, science is the god. Science can do no wrong. Science is settled. Science is indisputable. Do what science says. Don't be a denier or you'll be punished. It's a religious proposition all the way down the line. But science is set up as some kind of an immutable god that can provide answers for everything man wants to know; all truth, it's found in science. "Just listen to science. Don't listen to God. Don't listen to ethics or moral discussion or whatever. Just listen to science."

Josh: Wow, well you've given us a ton to think about today, Patrick, and thank you for helping to bring light to all of these topics. And really, just to explain the 'why', the bigger picture, the dot connecting around 5G. I really appreciate that, on behalf of the audience. Just as we wrap up here, what can you tell us in terms of solutions? From your perspective, where do you see it most effective for the people to put their energy, if we

want a positive future outcome here?

Patrick: Absolutely. At this point, the only possible line of defense that we can put in place is at the local level; the city, and county level. And I encourage people to get active locally. To get to know their city council people. To run for city council. To run for all kinds of various offices around their city. And intercounty, get on any kind of board you can get on and get your seat at the table. Somebody, a liberal actually, suggested one time to a friend of mine, "If you don't have a seat at the table, you are what's for dinner." Don't do that anymore. You can get involved in your local civic matters and make a huge difference.

Case in point, of all places, San Francisco; San Francisco, the bastion of liberalness and progressiveness in America. And I was born there, I should know, there's no city in America that's more progressive and liberal and off the wall, than San Francisco. Their city council just banned facial recognition technology from the city.

Josh: Excellent.

Patrick: They've banned it. Okay, don't tell me that the cities don't have power; they do. But if the citizens don't go and request the local city, magistrates, and the council members to take a stand on their behalf on these issues, they won't do it. You have to go and get involved. That's one reason, by the way, that I created Citizens for Free Speech last year, in turn which created localactivist.org, as a social networking platform just for local activists to go after issues like this. And people are welcome to go there if they want to; localactivist.org and sign up.

And believe me, if you come in and you're disingenuous, and you're a troll or you've got some other idea that you're going to crack the safe, we'll throw you out faster than a country heartbeat. This is a private network for people like us that are really desiring to get in and set our country back straight again on a local basis. And you can check it out, citizensforfreespeech.org and localactivist.org.

Josh: Excellent. Patrick, thank you so much. I absolutely, to the highest level, recommend that people check out your book, Technocracy Rising. And also your previous work, which was, Trilaterals Over Washington. You just bring such a grounded, research based depth, without the conspiracy theory, and help us to really understand; and there it is.

Patrick: And my latest book, by the way, Technocracy: The Hard Road to World Order. I'm not sure you've seen this one yet.

Josh: I haven't seen that one. Thank you for letting us know about that.

Patrick: Absolutely. This is the more current iteration of how... kind of like what we've been talking about here, using current examples to demonstrate these initiatives and stuff. On how they're implementing technocracy. So it's worthwhile. I call it connecting the dots.

Josh: Absolutely, yeah. And just to everyone watching out there, I just want to... just from my heart, you heard Patrick's message just right now, about how important it is to educate and communicate with your local officials right now. Not only your local officials, but local community members, and people both online and offline. This is off the cuff, I just wanted to... I'm just trying to figure out from a business standpoint, if this is even possible, but I'd want to somehow encourage you to share this talk and this series with your local governments. That's one of the reasons why we're putting on this summit. So, please... We're going to make it more clear on how you can do that.

But if you do purchase this series, at the end of the free period, you have my permission to take that video and put it on a zip drive or upload it privately and send a link to your local elected officials. Okay, this is really important that we understand that this is the type of research right here, being done by Patrick and others on this

summit, that can change minds and perspectives of those in positions of power and gatekeepers in local government. So, while we don't have everything defined, we do know that our intention is to get this out to as many people as possible. And I, from my heart, want to support that as being as easy as possible. So, Patrick, thank you so much for your time today. This has been an incredible conversation, and we look forward to keeping in touch with you.

Patrick: Thanks for the opportunity, Josh. I really appreciate it.

How Wireless Causes Harm (Part 1)

Martin Pall, PhD

Josh: With us today on the summit is Dr. Martin Pall. Martin, thank you so much for being with us.

Dr. Pall: My pleasure.

Josh: This is an interview that I've been looking forward to for a long time. I think I contacted you around a year ago, and we've been trying to set it up. And so now that we're doing the summit, I'm just very pleased to be able to talk with you and to be able to help your vast knowledge and information get compiled and released to the people, to the viewers. It's very important at this time. So I'd like to just read your bio, and then we'll dive right in.

Dr. Pall: Okay.

Josh: So, Martin Pall is a Professor Emeritus of biochemistry in basic medical sciences, at Washington State University. He earned his PhD in biochemical genetics from Caltech, and was on the faculty of WSU for many years before; "retiring" in 2008. But you haven't really retired, have you? You just continue to do a lot of work in this area. Since then, he has published numerous papers on wireless radiation effects. Dr. Pall's research has focused most on nine different categories of the effects of wireless radiation, including neurological and neuropsychiatric effects, cellular and DNA, cell death, endocrine effects, cancer, cardiac effects, very early onset Alzheimer's, and other dementias.

One of the most valuable contributions Dr. Pall has made, is describing in detail, the main mechanism by which these effects are produced. So, Dr. Pall, let's dive right in. So talking about these so called government safety standards, governments and their agencies are telling us that 5G, just like other wireless sources, is going to be safe because it comes below the threshold; below their stated threshold of supposed safety. What can you tell us about these government standards and why we should or should not look to them as defining what is and isn't safe?

Dr. Pall: Well, with any theory, and basically, the safety guidelines are a theory that predicts what things are safe and what things are not safe, you need to test the theory to see whether it makes accurate predictions. And so what I've done recently is to go through each of eight different types of repeated studies, which tell us whether the safety guidelines in fact, predict biological effects and therefore are safe or not. In every single one of these, these safety guidelines fail and in most cases, fail massively, to make accurate predictions. And it's very interesting to see the way in which they fail because the way in which they fail tells you a lot about what the problems are with the safety guidelines.

So I guess what I'd like to do is to go through those eight with you. So we can discuss what's going on and why these safety guidelines really don't tell us anything about safety. Okay, so the first thing is that there are these different effects that you discussed in your introduction. There are large numbers of reviews on nine different effects

that have been published, that clearly show that each of them occur at levels well below safety guidelines. And therefore the safety guidelines do not predict safety. And by the way, they range from nine to 38 different reviews on each of these things. So there's a lot of evidence on every single one of them.

So let's talk about them. First of all, you have reproductive effects. So, the reproductive effects... EMS, well below safety guidelines, have effects on the structure of the testes, and the structure of the ovaries. Both of those have been done in animals. They produce a lower sperm count, lowered sperm motility; other measures of lowered sperm quality. So all those things are very important for male fertility. They produce lower number of eggs in females and lowered fertility, in human studies. They produce increases in spontaneous abortion, and humans and in animals. They produce lower levels of each of the three kinds of sex hormones; estrogen, progesterone, and testosterone, and lower libido.

So everything that you can think of that might impact reproduction is being impacted here, and this is extraordinarily serious; at levels well below our safety guidelines. And in many cases, orders of magnitude below the safety guidelines, like 1,000 times lower or 100 times lower. So that's a big deal. Now, there are all these other things, there are widespread neurological, neuropsychiatric effects. And we'll talk about those in some detail, I think, in the second interview. And they are already far along in our societies. And we'll talk about that also, in the second interview.

There are other effects. The mechanism of action goes through excessive intracellular calcium, which produces everything else, and so that's one of the things it's produced. These are intracellular calcium levels go up, following EMF exposures. Oxidative stress, and free radical damage goes up following EMF exposures. What's called apoptosis, sometimes pronounced apoptosis; programmed cell death, goes up, following EMF exposures. Again, all of these well within our safety guidelines.

Josh: Just to jump in, you're talking about peer reviewed published science that is vetted and within the scientific community, right?

Dr. Pall: Yes.

Josh: But which the safety standards and the governments are not taking into account?

Dr. Pall: That's correct. So the apoptosis is very important, both for the reproductive effects that we already talked about, and also neurodegenerative effects and so that's important. And you also have attacks on the cellular DNA, of three different types. You get single stranded breaks, you get double stranded breaks, and you get oxidized bases, they all produce important mutations that can be involved in both cancer causation and in reproductive... producing mutations in young babies that were just born. So that's a big issue.

And then cancer, which of course is caused to some extent by the DNA effects we just talked about. There are 38 different reviews arguing that EMFs, well below our safety guidelines, cause cancer. And I think it's absolutely stunning that we're still discussing this issue. The only reason we're discussing it is because the industry puts out so much propaganda, that it's getting covered all the time. But there is extraordinary evidence that cancer, in fact, is caused by EMF exposures. And that the DNA effects we talked about before are an important part of that, but not the only mechanism. There are other things that are going on as well.

There are also hormonal effects of various sorts. Almost every hormone system or perhaps every hormone system in the body is impacted. And then there are also the cardiac effects, which we haven't said anything about. So the EMFs cause immediate tachycardia, rapid heartbeat. They, over longer time periods, produce bradycardia,

slow heartbeat, and they all produce arrhythmias. Arrhythmia is associated with bradycardia, and are highly associated with sudden cardiac death. And we have a big epidemic of increases in sudden cardiac death, including among apparently healthy athletes, dying in the middle of an athletic competition.

Josh: Yeah, sorry to jump in there, Martin. We saw a Canadian longtime career journalist, exposing what was happening in, I believe the Simcoe County School District in Ontario, in a talk to, I think the board there, the school board. And he was telling how since the Wi-Fi was installed several years ago, in a short period of time, there was two sudden deaths from students and two others, cardiac arrest that were resuscitated. All around the time from the Wi-Fi being installed. And in many of these districts, and most regions aren't correlating that possible link between when Wi-Fi transmitters and all these Wi-Fi devices go live; and effects like that. I mean, so that one thing alone is potentially, like, huge, in terms of the risk of what we're talking about here with 5G and beyond.

Dr. Pall: Yah, it is. I mean, there are many, many risks, and we'll talk about five of them that are, I believe, clear, existential threats to our survival. And I won't even be talking about the cardiac effects at that point.

Josh: We'll dive into those in the second half, in part two. If you're watching this, we'll go into those five specific areas. What we're going to do now is just more of an overview to expand the science and the mechanism really. So yeah, please continue, Martin.

Dr. Pall: Okay. So we have all these things. By the way, there's a total of 197 bodies of evidence, each of which shows that one of these things is occurring at levels well below our safety guidelines. So there should be no question about any of them. And yet the reason, of course, we're still talking about it is because of all the industry propaganda, which has no connection with reality. And by the way, there are a whole series of types of radiation that we are exposed to all the time that have major effects on us.

So we're talking about cell phone radiation. We're talking about cordless phone radiation. We're talking about cell phone towers, you know, people who live near cell phone towers. We're talking about Wi-Fi. We're talking about smart meters. All of these have major effects on us, based on all the available evidence we have. So it's really outrageous that people don't have a feeling for what they're facing. And the main reason is because of all this industry propaganda, and the lack of coverage in the media, on all these things. And again, we're talking about peer reviewed studies, in the scientific literature, that show all these things. I mean, we're in a weird situation. Okay, so let's go on with regard to the eight. That's just one of the eight that we just talked about. That 197 bodies of evidence. That's just one of the eight. Okay, let's go on to two.

Josh: One of the areas in which...?

Dr. Pall: Areas where you have extensive, repeated evidence that the safety guidelines do not predict biological effects and therefore do not predict safety.

Josh: Okay, thank you.

Dr. Pall: Second one, we have 13 different reviews that each show that pulsed EMFs, EMFs that pulse up and down rapidly, are in most cases much more biologically active. And therefore much more dangerous than our non-pulsed EMFs. And part of the reason this is important, is that every single wireless communication device communicates at least in part, via pulsations. So, these are things we are exposed to all the time. And even radar has as its own sort of pulsation because it uses something called phase arrays, which exposes us to pulsations.

So, almost everything we're exposed to is highly pulsed, and the smarter the device, the more the pulsations. And potentially, and I believe actually,

the more dangerous it is. So we're going down this road towards smarter and smarter devices, with the whole issue of pulsations being key, and this is totally ignored. The whole role of pulsation, totally ignored in the safety guidelines and totally ignored by the regulatory agencies. Even though we've known about these things. I mean, the first review on pulsations was published back in 1965. Believe it or not, and so it's bizarre where we are. Okay, so that's the second area and it's very important, and especially important with regard to 5G, because 5G is terribly highly pulsed.

The third area has to do with what the main mechanism is, by which non-thermal effects are produced. And this is my own work, not based on my own experimental studies, but based on studies that were in the literature before I ever got involved in this. So what we know is that there are, I believe, 28 different published studies that have shown that EMF effects, these non-thermal effects, can be blocked or greatly lowered by using calcium channel blockers.

And there are five different classes of these that have been used for these studies. And they're all thought to be highly specific in what they do. So this argues that those calcium channels, and they're called voltage gated calcium channels, which are blocked by these drugs, these calcium channel blockers; that what the EMFs are doing is activating those voltage gated calcium channels. Therefore, you can block or greatly lower the effects by essentially blocking these channels.

Josh: Do you want to dive into that more now? And we will be able to show some visuals on the screen as you talk about this. But is what you're saying, EMFs disrupt the ability for calcium ions to go in and out of the cell through the membrane? Is that correct?

Dr. Pall: No. What the EMFs do is they actually greatly increase the influx of calcium ions through these voltage gated calcium channels. The voltage gated calcium channels, I abbreviate as VGCC, is just so you don't have to keep repeating all that stuff. So what happens is that the VGCCs get activated by the EMFs and we know now why they get activated. And this is very important. The VGCCs have a structure called a voltage sensor, in which the normal physiology, it detects the electrical charge across the plasma membrane.

So, these are channels in the plasma membrane, the membrane that surrounds all of our cells. And as far as I can tell, they occur in every single cell type, not necessarily at the same levels, not necessarily the same types; there are actually 10 different types of these things. But they occur in all of cells. And when the channels open up, they allow large amounts of calcium to flow into the cell. And most if not all, biological effects are produced by excessive intracellular calcium. And intracellular calcium is designated Ca2+i, which I think is on some of my figures that you may be showing.

Josh: So that's a huge point right there. In the fact that there was an existing body of science before, like, you've looked at these studies, you've expanded this awareness about the primacy of the role of VGCCs. And you've added to this body of knowledge, and you're bringing it forward; because for years, that's been kind of a distracted question by the industry, is, "What then is the mechanism?"

So now you've essentially answered that and there's others who have different parts of the puzzle, such as Paul Héroux, who is part of the summit, and other researchers. But this, I just want to focus in on that, for people to realize this mechanism, this aspect of the mechanism and the science of how these molecules work together, and these VGCCs. That's absolute prime knowledge and information that everyone needs to be aware of. Would you agree?

Dr. Pall: Yeah, well obviously I will agree. Of course, I have a little bias in this but let me just say; the first paper that I published on this that I published in 2013, has now been cited 219 times in the scientific literature, according

to the Google Scholar database. So that's very important because what it means is, is that this has been widely recognized. And this is unusual, usually in science, when you come up with a new paradigm of what's going on, it takes quite a while before people accept it. But this is already widely accepted. That doesn't mean everybody accepts it. But it means that there has been a stunning amount of acceptance of this view, in a short time period. So that's important.

Now, there are a couple of other very important things here that I want to mention. And one is that, all the EMFs, all the way down from millimeter waves, through microwaves, through radio frequency, through intermediate frequency, through extremely low frequency from our power wiring, 50 or 60 hertz, depending on what part of the world you happen to be in; all the way down to static electrical fields, and amazingly, static magnetic fields, they all can work via VGCC activation. And this is absolutely stunning because it's a big surprise.

So then the question is, why is it that the VGCCs are so sensitive to low intensity EMFs? And I think the reason basically comes out of the structure of the voltage sensor, the thing that actually regulates the opening of the channel. So the structure has been known for a while, from a number of important scientists who've worked on this thing. And what's true is that the voltage sensor occurs on four different alpha helices that are within the structure of the VGCCs, and that occur within the lipid part of the lipid bilayer. So they're in the fatty part of the lipid bilayer of the plasma membrane.

That turns out to be very, very important for two distinct reasons. And one is that there's something called Coulomb's Law, it's the law of physics; it was first enunciated back in 1784 by August Coulomb, a French physicist. And Coulomb's Law says that the forces on electrically charged groups are inversely proportional to the dielectric constant of the medium in which they occur.

Josh: Translation?

Dr. Pall: Well, so the dielectric constant of the fatty part of the membrane is about 120th of the dielectric constant of the aqueous parts of our cells and bodies.

Josh: What is dielectric?

Dr. Pall: Well, it's a measure of the electrical properties, basically, of that part on a charger. The point is that the forces on those charges are about 120 times stronger, because of the dielectric constant. Okay, so that's important. The other thing that's even more important is that the plasma membrane has a very high electrical resistance. And for that reason, things are highly amplified. The electrical gradient, highly amplified across the plasma membrane, and that's about a 3,000 fold.

Now, when you put all this together, it turns out there are 20 charges in the voltage sensor and so you've got 20 times 120, which is the dielectric constant, times 3,000. So if you're comparing the forces on the voltage sensor, with the forces on singly electrically charged groups, and the aqueous parts of our cells and bodies, the force is about 7.2 million times stronger. That's absolutely stunning. And the safety guidelines are based on heating, on the thermal effects.

Josh: Yeah. The safety guidelines throw out all of that science and all of the science period, and just look at how much something heats up over a period of time.

Dr. Pall: Right. So the thermal effects are produced mainly by the forces of these electric charges on singly electrically charged groups and the aqueous parts of our cells and bodies. That's how it gets produced. So that argues alone that our... and we'll talk about other things that come into this... but it argues alone that the safety guidelines are allowing us to be exposed to levels that are something like 7.2 million times too strong.

Now, one of the things that we'll say later is that those response curves on this are nonlinear. So that doesn't mean the effects are 7.2 million times higher than they would be at the safety guidelines, as opposed to at the very low levels the safety guidelines should be. But still in all, this is a huge, huge thing, and it's really gigantic.

Josh: Can I just ask about the plasma membrane? I want to understand and kind of visualize this mechanism, and hopefully some of the slides we can add in, will help. So you mentioned the plasma membrane of the cell. Does that have anything to do with what I think Gerald Pollack and Paul Lemay, science and tech writers, journalists, were talking about like this fourth phase of water? Do you want to say anything about that or is that going into left field?

Dr. Pall: I mean, it doesn't have a direct relationship to it. That's all I can say.

Josh: So plasma membrane is essentially just the cellular membrane that regulates the influx of calcium ions and other ions.

Dr. Pall: Yes, it regulates the influx and efflux of all kinds of things into the cells. Yeah, that's right. So, the plasma membrane is very, very important. One thing about this is that normally, under normal conditions, where you're not trying to regulate anything, the calcium levels inside cells are about one 10 000th to the calcium levels outside the cell. And so there's a big concentration gradient driving calcium into the cell.

There are also electrical forces driving calcium into the cell. So all of this means there's powerful forces driving calcium in. And obviously, the fact that the cells keep the calcium levels very low, means that that's a very important thing to do. And so what happens when you activate these VGCCs when they shouldn't be activated, and you keep activating them, you get all kinds of really stunning effects that occur.

Now, there's one other thing I want to mention here, and that is that you can see the physics here tells us why these VGCCs are so sensitive. And let me just say, there are also other voltage gated ion channels that are activated, but the calcium channels seem to be the really important ones, probably because calcium itself is so important in the cell. So basically, the biology is telling us that the VGCCs are the main mechanism of action of the EMFs, and the physics is telling us why. So here, the biology and physics are clearly telling us that the same thing is going on here. So this is a very, very important finding here.

Josh: You mentioned earlier that there are specific medications for reducing the influx of calcium ions. Can you say a little bit more about them? And are you talking like, are they pharmaceuticals, or are they natural? What effects have been observed so far?

Dr. Pall: A lot of these studies have been done in cell cultures. So, people have been looking at the kinds of things you can look at in cell culture. Which include calcium influx, which include the hormone release, for instance, which include apoptosis, and which include oxidative stress. So a lot of this stuff has been looked at, at the cellular level, which is, of course is what... in general, in biology, if you've got something occurring at the cellular level, it's best studied at the cellular level. So this is the best way to study it. So, those things are all terribly important here.

Josh: I just want to dive into that a little bit more. Are there specific medications or remedies available for reducing the influx of calcium ions?

Dr. Pall: I think there are some things that help and in fact, for a long time, people have been saying, "Well, these calcium channel blockers don't really help clinically." Now there are starting to be reports where apparently they do. At low concentrations, you can actually get something. I don't know that it's that clear. The problem, of course, is that these VGCCs are important. I mean, they're there for important reasons. So you can't completely block them. If you do, you're just blocking not only the whole nervous system, but

all kinds of other things like your heart, and so forth.

So, there are limitations to what you can do. I think there are a number of things that could be useful, including magnesium, which is probably useful as well. But let me just say, I'm a PhD, not an MD. Nothing I say should be viewed as medical advice. So, should we go on to some of these others? We've gone through three of these things and each of them shows that the safety guidelines don't predict biological effects and therefore don't predict safety. There are several others and I want to talk now about a couple of other types of studies, which involve this whole area of pulsation. The reason why I want to talk about it, you know, pulsation is terribly important with regard to understanding 5G. So it's very important to understand these things, to understand 5G.

Okay, so there have been at least 100 different studies on what are called nanosecond pulse studies. So nanosecond pulse is defined as a pulse that's between one nanosecond and one microsecond. So there's a big range here, but they're all very short. And what's true, is we have a lot of studies that show the nanosecond pulses, and some of these occur in cell culture and some of these occur in whole organism studies; produce effects, very similar to the effects that are seen from other kinds of EMFs. And that it's been shown that these effects also go through VGCC activation.

So, the next two actually are very important, with regard to the pulsation issues, and which are very relevant to 5G. So those are things we need to focus on, to understand 5G. Okay, so the first of them has to do with single nanosecond pulses. So these are pulses that last somewhere between one nanosecond and one microseconds. They go up and down quickly, and they produce effects. But the safety guidelines... which we really haven't talked about their structure, the safety guidelines use average intensities, over a period of six minutes or 30 minutes, to predict whether there will be biological effects or not. Okay, so six minutes, think about that.

So if you take, let's say, a typical nanosecond pulse, let's say one that's 40 nanoseconds long. And you average that intensity over a period of six minutes, you're averaging the intensity over a period that's 10 to the 10th times longer; 10 billion times longer. Now, obviously, what that does is it lowers the average intensity by a factor of 10 billion. So what the safety guidelines do is they predict, "Oh, there shouldn't be any effects," but there are. There are effects over and over, and over again, and safety guidelines say, "No, there can't be any effects."

Josh: It's almost insane, when you break it down. The fact that this has been allowed to occur, to define our standards of safety for the general entire population for so long. I mean, it's insane. But please continue.

Dr. Pall: Yeah, I mean, it really is insane. So, what is the rationale for taking something that will work in, let's say, 40 nanoseconds to produce an effect, and averaging it over 10 billion times longer? It makes absolutely no sense to do this. I discussed something, which would be a sort of a parallel failure in logic, in the document that I wrote up on this. Let's say you're concerned about being shot by a high powered rifle bullet that goes over 2,000 feet per second. And that rifle bullet then takes about 50 microseconds to destroy your body. And you go to a regulatory agency, and you say, "Well, I'm concerned about this," and they say, "Oh, don't worry about it. If you average the intensity over 10 billion times longer," which turns out to be about 75 days, "the average intensity is so low. You don't have to worry about it."

Josh: Right.

Dr. Pall: I mean, that's exactly the kind of logic that's being used here, by the safety guidelines in the regulatory agencies, with regard to EMFs. So it is, as you said before, totally insane; and yet, that's

what we're doing. So those nanosecond pulses are very important because 5G is going to have huge numbers of nanosecond pulses. It's also true that there are also studies on pairs of nanosecond pulses; and those are also important, and they're also highly relevant to 5G.

So there are studies that have been done where you have pairs of nanosecond pulses that are within a few microseconds of each other. And what you find is, if they have the same polarity, and we'll tell you why the polarity is important a little bit, they produce super additive effects. So, the safety guidelines are based on only having additive effects on anything. So here you have super additive effects of two nanosecond pulses within a few microseconds of each other.

You're going to have billions and billions of these pairs of nanosecond pulses in any kind of full-fledged 5G system. So these are highly relevant to the kinds of exposures that we'll have, whenever 5G, if it ever happens, that we get something like the final system that they want us to get, which I certainly hope we never will, it's going to be absolutely stunning what the biological effects are going to be.

Josh: So, by super additive, you mean, kind of synergistic on the negative side. Where more than one adds up to be greater than the sum of its parts.

Dr. Pall: Much bigger effects than the two summed together, yeah.

Josh: Okay. And then I also just wanted to say, for our viewing audience, that as part of this summit going to make that standards document that you wrote, we're going to make that available as part of this summit. So look for that, if you're watching this, either on this page or look for it in your email, but that's an important document, Martin, and we want to help to get it out.

Dr. Pall: Great, thank you. So there are also studies that have been done where the second pulse has the opposite polarity of the first pulse; and when that happens, it actually lowers the effect of the first pulse. So you get much less effect than you get with the first pulse alone. So this has been called cancellation or partial cancellation. So the second one, if it has opposite polarity, you get a major lowering in the effect. Now, that's not predicted by the safety guidelines either, because the safety guidelines assume that everything's additive.

Now, this actually tells you several very important things about the EMFs and the safety guidelines. First of all, the safety guidelines are based on the assumption that EMFs have scalar properties; that is they have intensity, but they don't have any directionality. And that's what allows the safety guidelines to just average these things. They just look at average intensities; that's all they look at. But what this clearly shows is that's not true, and in fact, it's been known for about 200 years that EMFs are vectors, not scalars. They have a directionality, and that the angle at which the magnetic and electrical fields kind of stick out from the direction of the vector, can vary.

So you can get different angles, and that's where the polarity comes in. So the polarity is very, very important here, as you can see, because you have one polarity and a relative polarity. And you get super additive effects, you get the opposite one; and the second one greatly lowers the effect of the first one. So there are major issues and all of that shows that the basic structure of the safety guidelines is completely bogus. They're assuming that EMFs are scalars, not vectors, and not vectors with polarity; and we know that assumption is false.

So the physics is false here, again. Okay, we talked about the physics of the VGCCs as being very important and being a very important example where the physics is false, with regard to the safety guidelines. Here's the second one. So the people who taught the safety guidelines say, "Oh, the physics is wonderful." Well, the physics in fact, is not wonderful, and it doesn't work. The physics

they've got in the safety guidelines is deeply, deeply flawed. So that's important.

Okay, now let's talk about two other things that are important here and that is that there are a whole series, I think there are nine different reviews that have been published. Where you have what are called intensity windows. Where the intensity of a particular kind of EMF, within a certain range of intensities, not a very tight range, but a fairly tight range of intensities, give you maximum effects within that intensity. But when you go lower or higher, they drop way down.

Josh: Interesting. So it's not always a higher intensity equals a higher effect and a lower intensity equals a lower effect. There's something else happening here.

Dr. Pall: That's right. That's right. So what that tells you; that tells you something else that's very important about the safety guidelines. So the safety guidelines, as I said before, are based on everything being additive. You can only have additive effects if you have linear dose response curves.

Josh: What is a linear dose response curve?

Dr. Pall: It means if you double the intensity, you're going to double the effect. If you go up the intensity tenfold, you're going to get tenfold the effect, and so forth. So it's directly proportional, the effects are directly proportional to the intensity. So it makes no sense whatsoever to simply add these things, and we already said they didn't add them right anyway. But it makes no sense to add these things if you have nonlinear dose response curves, and these dose response curves are not only nonlinear, they're what's called non monotone. That is, they don't always go up with increasing exposure, and they don't always go down with decreasing exposure.

So again, the whole structure of the safety guidelines is bogus. It's not just that it doesn't make good predictions, the whole structure of it is just ridiculous. Okay, so that's another thing that's very, very important. So, the other one is that there have been a whole series of studies where specific research groups, using the same methodologies, have studied different cell types in culture. So you look at different cell types. And what they find is that the effects produced are highly dependent on what kind of cell you're looking at.

That's not surprising at all, when you've got a biological target. But that's not what you expect if all you're looking at is heating, you know, the thermal effects, and a biological target, which differs from one cell type to another. At least in terms of how much is there and what kind of susceptibility they have. So, what that tells you, in fact, is you cannot ignore the biology. That's clear. And in fact, every other example that we talked about also says you cannot ignore the biology; because all of these things, where you look at the biology, you find the safety guidelines don't work.

So, the fact that the industry and the regulatory agencies have been ignoring the biology throughout this whole thing is just another outrage in this whole process. So what we have here is a multi-trillion dollar set of industries, all of whose claims of safety are based on fraud, really. Because the safety guidelines are fraudulent, and therefore anything based on those are fraudulent.

The last thing of these eight is that there are also, what are called frequency windows, and these are very specific frequency ranges. So you're talking about a very, very tight range, where specific frequencies give extraordinarily strong effects, even in extremely low intensities. So, intensities many orders of magnitude below what some nearby frequency would require to see an effect; you can see extremely large effects.

And these are thought to be due to resonance with a target, and I think that's right. I would predict the targets are the voltage sensors of these VGCCs, but we don't know that; we have no evidence on that. The interesting thing is, the only place where we do have evidence on what

the target is from these resonance things, are some studies that were published by Igor Belyaev, on Escherichia coli bacteria. And in that case, the direct target is actually the DNA.

Josh: Can you define the direct target? Are you talking about the specific target mechanism?

Dr. Pall: Well, I mean, so we talked about the fact that the voltage sensor is the direct target, but there could be other direct targets. And in this case, from Belyaev's study in E-coli, the bacterium, E-coli, the target of these frequency windows is the DNA of the cell. And I won't try to tell you what the evidence for that is, but I think it's very compelling evidence. So that's interesting and that's surprising. So it raises another question about, is the DNA also a target in the animal and plants? And I think there are effects on the DNA in animals and plants, but so far, we don't have any evidence that they're important for anything. So I don't know. I don't know the answer to that. But we shouldn't be too dogmatic about things. That's a possibility that may still be out there.

Josh: It seems like the insurance companies know about this, at least to some extent, right? Like Lloyds of London doesn't ensure wireless products. And I mentioned in a couple of the other talks, like Swiss Re and some other major insurance companies are identifying the high level of risk of the wireless industry. It seems like there's some level of awareness of this behind the scenes and probably throughout a considerable amount of industry. But they're just looking at the short term and making as much money as they can, and getting as much control as they can, I would argue.

Dr. Pall: Interestingly, the Swiss Re insurance company put out a press release, expressing a great concern about 5G; specifically about 5G. And that's, I think, very important. It was in German, and I actually translated it into English and put an English version up.

Josh: So, we know of the bio initiative report on bioinitiative.org, there's roughly 1,800 studies, I believe. As early as 1972, Zora Glaser and the US Naval Medical Department, compiled something like 2,300 studies, all showing a biological effect. And all these studies are just not taken into account, as we've discussed, by regulatory agencies. How many studies would you estimate, Martin, are there that show a biological effect from EMF?

Dr. Pall: At levels well below safety guidelines?

Josh: Yeah.

Dr. Pall: I think there are probably at least 14,000.

Josh: Wow.

Dr. Pall: And I can sort of give you a rough idea. Let me just say, there are also therapeutic effects of EMFs, and that's something I recognized from the very first paper that I wrote on it. Which, interestingly, are not recognized by the industry. They're more concerned about maintaining their propaganda claim that nothing's going on, than they are in trying to take credit where they might actually have a little bit of credit. In that there are actually therapeutic effects of these EMFs.

Josh: Interesting.

Dr. Pall: Yeah. So there's something like 4,000 papers on the therapeutic effects and there are at least 10,000 on the pathophysiological effects. And then of course, it's the pathophysiological effects that we're concerned about.

Josh: So, diving into 5G, what is it specifically about 5G, from your perspective, that makes it potentially more harmful than 4G and other technologies? We know that 5G is a higher frequency band, or it includes a higher frequency band, and it actually includes low and mid-range as well. And you mentioned the nanopulses. So maybe talk a little bit about, how is 5G different, with regards to your concerns?

Dr. Pall: Well, let me just say, I'm also very concerned about 4G. That's not a trivial point; but I think that the thing about 5G is the extraordinary

level of pulsations. So the whole idea behind 5G is to use high frequencies, which allow you then to have extraordinarily high levels of pulsation, in order to carry extremely large amounts of information per second, or whatever time period you're interested in. So this, again, emphasizes the importance of pulsation in this whole story. And so you're having extraordinary amounts of pulsation in a 5G system.

And if we ever get to the point where 5G antennae are interacting with what they call the Internet of Things, with thousands and thousands of devices, the amount of pulsation undoubtedly is going to be absolutely extraordinary. So, this is an absolutely gigantic issue, the pulsation issue. And let me just say, some industry sources now are saying, "Well, we're really not going to use millimeter waves," so I can't say about that. They may have found out that millimeter waves are way too dangerous, and they've decided maybe they're not going to use them.

But the millimeter waves are absorbed by materials, building materials, materials of our bodies; the electrical parts of the millimeter waves are absorbed. Now, what that tells you basically, is that the electrical parts of the millimeter waves are going to interact with electrically charged groups, including the electrically charged groups in the voltage sensor. So I think what that tells you is that their ability to activate this target is going to be extraordinary, because of this absorption.

Now, one of the things that the industry claims is, "Well, it's absorbed so much in our body and therefore can't penetrate, except maybe about a millimeter or so into the body, and therefore you don't need to worry about effects deeper in the body." And they've made that argument. I've made a counter argument, and I can tell you what it is, but what's also true is now we have evidence from published studies on millimeter waves that in fact, millimeter wave effects go at least 20 times deeper than what the industry claims. And I suspect it goes much deeper than that.

So how then do you get deep effects? And this is relevant both for microwaves and for millimeter waves. I think the way you get deep effects is that while the electrical parts of the EMFs are absorbed at some level, but the magnetic parts are extremely highly penetrated. That's the first thing. But now you say, "Well, okay, but it's the electrical parts that interacts with the voltage sensor. So why should you even think about the magnetic parts?" It turns out, and I mentioned this before, the magnetic fields can activate the VGCCs as well.

And I think the way they work is that, for instance, when you have a magnetic part of 5G radiation, it goes very deeply in the body, when it interacts with electrically charged groups, this is your dissolved ions in the aqueous parts of our bodies, what does it do? It puts forces on them, and when you put forces on those, you're going to regenerate the electrical parts deep within our bodies. The same frequency, same kind of pulsation, just much lower intensity.

But when you have the voltage sensor so exquisitely sensitive to these EMFs, you can get effects very deep in the body. And this is based on millimeter waves that are not pulsed, so they don't have all the problems with pulsation that 5G does. They can produce effects on the heart, they can produce effects on other internal organs in the body, many internal organs in rodents. They can in humans, produce EEG effects, produce changes in the electrical activity of the brain, in humans. And so in order to do that, what do they have to do?

They have to penetrate through the hair, through the skin, through the skull, and through the meninges that surround all the neural tissue in the brain. And so what that means is, they have to go at least 20 times deeper than the industry claims as possible, in order to do this. And if they can go that deep, they go any kind of deep, because basically, the magnetic parts could go right through your body. So I think this is another

situation where the industry makes all kinds of claims. But if you look at the data, it's just wrong.

Josh: So, Deborah Davis, who is the President and leader of the Environmental Health Trust, in this summit, is going to talk about the effects of millimeter wave radiation, according to the independent science. We know that the industry is not doing any science on 5G. They don't want to find out what they probably know that they will, if they were to actually do some studies, that's been admitted, as we talked about before. But one of those studies, I think it's an Israeli study that looks at sweat ducts. Have you heard about this one, Martin? I think it was a study from last year, the sweat ducts, how they act as Helios antennas of some type, to transmit the energy from the millimeter wave pulsations, more deeply into the body.

Dr. Pall: No, I haven't heard of it. Let me just say, in science, you always have to distinguish between the results and the interpretation. So the fact that you're seeing these effects, doesn't necessarily tell you that the interpretation that's been proposed is the correct interpretation.

Josh: Well, the bottom line, we know that the effects happen more deeply into the body, with millimeter waves, especially with pulsed millimeter wave radiation, and the science is very clear on that. Alright, so just wrapping up this first part, Martin, of this interview, what are your predictions in terms of what 5G, the implications of 5G, would have on humans and the environment?

Dr. Pall: My prediction is that everything that we know that microwaves do, 5G will do vastly stronger, because of the incredible pulsation. And again, we know that the individual nanosecond pulses work by VGCC activation; same mechanism. And, I think there will be absolutely extraordinary effects, because of the pulsation, and also because of the frequency that's being used. And I think there may be specific effects that may be particularly severe, where you have large aqueous regions in the body. Where basically, this conversion from the magnetic to the electrical part may be very highly efficient.

So, there are a lot of those, where there are major concerns. For instance, the cardiac effects we talked about before. You've got a lot of water in the blood and the heart. So there could be very high effects there, and the cardiac effects. There are effects on the whole vascular system, and there are impacts of microwaves, for instance, on the vascular system. So, that's an issue. Kidneys have a lot of water. We may have huge epidemics of kidney failure. The eyes have the aqueous and vitreous humors; we may have gigantic epidemics of blindness, because of the impact on the eyes. I mean, so there are a lot of different things are extraordinarily concerning.

Let me just say that, I expect that obviously, you're going to have a lot of effects on the skin, because there are surface effects, and those surface effects are much, much higher. And among those things that I think will be occurring as a surface effect, we'll probably have giant... and I hate to use that term all the time, but I believe it's true, giant epidemics of melanomas, because of cancer. And there is evidence, in fact that melanomas can be produced by EMFs. And if you have these huge, huge exposures, I think we're going to have huge, huge epidemics of melanomas.

The other thing is that the blood circulates towards the surface, so anything that's in the blood can be heavily impacted. And so what kind of things are we going to see? Well, the erythrocytes, it turns out, are highly sensitive to the EMFs, surprisingly sensitive to microwave frequency EMFs. And you get things like what are called Rouleaux figures where the erythrocytes sort of stick together into long chains; that kind of clogs up the circulation of the blood.

You also get changes in the structure, you know, erythrocytes kind of look like a nice smooth, more or less donut shape. And those are really good for the erythrocytes to go through, in blood

circulation. But when you have EMFs, you get little spiky things coming off of there, which kind of gum things up. You also get a lot of hemolysis, you've got a lot of cells that just lyse and release a lot of hemoglobin into the blood. You can get anemia from that. So I think there are going to be massive effects, from that standpoint.

I think that there will also be effects on the cells of the immune system, including high levels of allergy, because of the impact on mast cells; and also high levels of autoimmune diseases. And by the way, there is a report now on autoimmune diseases being elevated from millimeter wave exposures; and there's a whole series of reports that microwaves elevate autoimmune diseases. The way these elevations work, at least from the microwave studies, is that you get changes in the T cell signaling that controls the autoimmune response. And these are our calcium signaling changes in the T cells that control it. So I think we're going to have huge epidemics of autoimmune diseases, as a consequence of 5G.

Josh: And we already are, right? I mean, there's 1 in 6 people apparently, in the United States that has an autoimmune condition and it's all been increasing exponentially, in just this generation, since the proliferation of wireless.

Dr. Pall: Right. So it's amazing that we've got all these things going on, and we

at least we have substantial literature, which says EMFs cause autoimmune diseases, and nobody's paying any attention to it.

Josh: Yeah. We know the chemicals, I mean, the various industries that produce chemicals. Dr. Tom O'Brien talks about this in the summit, how that contributes, and wireless exposures contribute to an overall toxic load in the body that once it's reached, is when people start exhibiting symptoms. And everyone has a different level of threshold. Would you agree with that, just that overall toxic load perspective on it, at what point people exhibit health problems?

Dr. Pall: I'm skeptical about that. I mean, the reason I'm skeptical about it is from some other work that I've done in the past, and that has to do with the fact that chemicals, and I believe EMFs and other stressors, such as physical trauma, such as infections, etc., etc., can initiate a vicious cycle mechanism. And once the cycle mechanism gets going, it can propagate itself over time. And then it doesn't make any difference what the initial causation was; this thing will go on regardless.

So I think that in fact, in things like multiple chemical sensitivity, when people are studying what kind of chemicals they have in their bodies, often they're not high. That's in part, of course that people avoid chemical exposures. But it doesn't help them get rid of the disease, it helps prevent it from getting worse, which is useful.

So I think that... let me just say, there are chemicals.... and this is another thing that I've worked on in the past... that act through increases in the NMDA receptor activities, those also produce increases in intracellular calcium. So the effects of the chemicals, and the effects of the EMFs can be very similar, because they can both work often via increases in intracellular calcium. So I think, to my mind, that's a better perspective to use, to understand the connections between the chemicals and the EMFs.

Josh: Is peroxy nitrate part of the overall mechanism that involves VGCCs?

Dr. Pall: Yes. There are two main pathways of action by which the EMFs produce pathophysiological effects. One is through excessive calcium signaling, and we already talked about that. The other one is that from the increases in intracellular calcium, you get increases in both nitric oxide and superoxide. Those are two free radicals actually that are relatively non-reactive. But when they react with each other, which they do very readily, they form peroxy nitrate, which is a potent antioxidant.

Peroxy nitrate is not a free radical, but it breaks

down to form highly reactive free radicals, including hydroxyl radical, which is probably the most reactive of all of them. So, you then get free radical effects and in fact, that's how the DNA effects are produced. The DNA effects that you get are produced through the free radical attacks on the DNA. And those then can produce single strand and double strand breaks in the cellular DNA, and they also produce oxidized bases. And those are the three types of things that we see in the DNA effects, they can all be produced in that way.

So, the free radicals and oxidative stress are very important parts of this whole story. You also get increased inflammation as a consequence to them. And that goes through increases in a transcription factor known as NF Kappa b. So we know a lot about how these things occur. And that's, I think, very important. I mean, the industry tries to claim, "We don't know anything," and it's just complete crap.

Josh: Well, Dr. Martin Pall, thank you so much. This has been a blockbuster talk here, this part one of two. And just such valuable information that lay people, parents, the industry, and our elected officials need to know; this is the root fundamental science, showing causation, showing how all this is working at the cellular level. I really appreciate your time.

In part two, we're going to go into the big picture, Dr. Pall's big picture perspective. We're going to go into five main areas. We're going to dive deeper into the science of those five main areas of symptomatology. We're going to talk about how we solve this problem and get Dr. Pall's thoughts on that. So, Dr. Pall, thank you so much for your time today. And we'll look forward to talking with you again in part two.

Dr. Pall: Great. Thank you.

5G CRISIS

AWARENESS & ACCOUNTABILITY