



## 108. Coronavirus SARS-CoV-2 Update & Electric Cars in Australia

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With guest co-host, futurist, Ross Hill.

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

*This is Future Sense.*

**Nyck:** Here we are on a *Future Sense*, and this morning, it's a great pleasure to welcome a special guest to the studio, who has been here before, my good friend, Ross Hill.

**Ross:** Good morning, Nyck.

**Nyck:** Nice to see you here. Ross predominantly lives in Melbourne, but also is partly living up here now. Ross has been involved with tech start-ups from California to Melbourne; a young man—a couple of generations even, younger than me, and I always love to have that perspective of someone of different age groups. It brings so much depth and importance, I think, to the future. Just that. And Ross is, in my opinion, quite a futurist himself, and also, as you know if you a regular listener to this show, we talk a lot about Clare W. Graves's work, and Ross has been studying that work for about ten years. So thanks for joining us this morning.

**Ross:** Pleasure.

**Nyck:** We're going to also be welcoming a guest in about half an hour or so to the studio, and that is Helena Norberg-Hodge. Many of you are very familiar with Helena's work, and we're going to be talking particularly about *Local Futures: the Economics of Happiness and New Economy Network Australia*, which is a forum—a convention really—from Friday, March

the 20th to the 22nd, coming up very soon on the agenda locally down here at the Byron Theatre.

We're going to be talking about that, and of course you probably know Helena as someone who has, for many years, pioneered local movements globally through her organisation, *Local Futures*. She's written *Ancient Futures*, a book since translated into 40 languages, and created the documentary, *Economics of Happiness*, inspired by her time in Ladakh and her observations of globalised systems within Indigenous cultures. We're going to be talking particularly about localisation and resilience, words that we use quite a lot here, and perhaps, in some ways, kind of important given the current coronavirus situation, so we'll look at what she's going to be doing at this at this convention coming up.

Before that, we're going to talk a little bit about the coronavirus. We did a big update last week. We're not going to go fully into it like that, but we're going to share a few things that we've discovered that may be of value to you if you feel like you need some resilience right there in terms of your vulnerability to these kind of scares. Of course, our scares, but also there's a reality to them, so we'll be talking about that.

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**Nyck:** You're tuned to *Future Sense* on BayFM. Thanks for joining us, and you can always text in on the text line and speak to us; bring our attention to stuff or make commentary about what we're talking about. In the studio with me, my special guest presenter this morning, as I've said already, Rose Hill, whose partly Melbourne, party up here, and is a futurist also.

Steve McDonald has gone away, as we said last week, for a month. He'll be not here for the next four weeks. A little anecdote from Steve on the way up to the Brisbane airport: talking about the coronavirus, he said that the taxi driver said that customers to and from the airport are down 49% outbound and 51% inbound, so it's just a simple example of the effect—the financial effect—that is occurring across the world, in fact. Taxi drivers, of course, don't get sick pay, generally speaking; I think 90% of them don't get sick pay, so if they go out of work, then among many other professions, they're in real strife. And I guess you've seen a few a bit of this around the place, Ross, yourself, in terms of the effects.

**Ross:** Yes, it is fascinating. Obviously in Australia, there's only a small number of cases so far relative to the world, so mostly what we're seeing is the economic effect. It's interesting because when you use words like economics or finance, we often think, you know, that's what bankers do, but it becomes an everyday thing if most of your customers disappear, then all of a sudden that's a big deal.

**Nyck:** Absolutely.

**Ross:** And so most of the effect here so far would appear to be that lack of customers, suddenly. I think it's probably changed a little bit now. I haven't followed it too closely, but I

did remember reading a report about the Chinese students coming here for university and it was almost a third of the students.

**Nyck:** I know. It's incredible. I mean, we know that's happened over the last generation or so—that increase in Asian students and Chinese in particular—but it's unexpected to think that it's a third of the whole university population in this country.

**Ross:** And that's one of our top revenue streams for the country.

**Nyck:** Totally.

We're just going to mention a few things, as I said earlier, regarding the coronavirus—some useful supplements and ideas about it. We did a big update last week, so we're not going to go there. You're probably overwhelmed with all the stuff about the coronavirus anyway, but I thought this was rather useful for those who are concerned and might not have heard about some of these things. These are things we've discovered through some of our associates. Thanks to Dr Stephen Booth in Melbourne, and also our friend Rob down there, too, who gave us some of this; and to Julia, who also gave input into this.

A couple of the supplements that are useful: the antioxidant lipisol glutathione—I'm sure many of you would have known that—taken orally. Because it's an antioxidant, it's found naturally in plants, animals and fungi, and some bacteria and other places, and it's an important component to prevent damage caused by reactive oxygen species such as free radicals, peroxides and heavy metals, also. Apparently it's shown to be—and there is some science behind it—a good stopgap for these kind of viruses. If you can't get the above, which you can—these things are available basically over the counter as far as I know—there's a precursor to that that the body uses to make it, and it's N-acetyl cysteine, also known as just NAC, which can also be brought as a supplement. Things like olive leaf extract—many people in this audience would be very familiar with olive leaf extract—apparently also very good for that. And oral supplementation of the glutathione, in particular, elevates body stores of that and the markers of immune function. In other words, it just increases your ... immunability—is that a word? Something like that. We won't name particular brands here because there are many other good brands, but there is a thing called *ArmaForce*, which does come under a certain brand, which apparently combines some of these factors, and there is also some Chinese medicine going into that as well.

I wanted to share with you this fascinating story, which also goes to some of the things we're going to be talking a bit later on today in terms of science, as well, once we've talked to Helena Norberg-Hodge in about half an hour. We're going to be looking at space, which is a particular area of interest to you, Ross, but science, generally—our take on science and the future of science and where it's going and our attitudes towards it, perhaps you could say.

So, this is a story—and thanks to Julia for this one—an old story from the bubonic plague: Four thieves were captured and charged for stealing from the sick and dying. The four thieves never contracted the plague, despite it being a death sentence for pretty well

everybody at the time. The king asked them to share how they did it by letting them off the death penalty. Now these people were perfume and spice merchants, unemployed due to the closure of the seaports, and they used cloves, lemon oil, cinnamon, eucalyptus and rosemary on their hands, ears, temples and feet, and wore a cloth over their faces with the oils soaked into it. Doctors did the same after that, and it worked. All these items, of course, are antibacterial, antifungal and antiviral. There are some essential oil companies which sell this *Thieves* blend. In fact, I knew about this *Thieves* blend, but I didn't realise it came from this story, which is fascinating. Have you heard about it before?

**Ross:** I haven't, but it's a good one.

**Nyck:** It's a very good one. As I said, I won't name particular companies, but there are a number of companies that create this kind of mixture of these natural oils and herbs and flowers and so forth. Very useful if you're concerned about keeping yourself protected to some degree from the potential of the virus spreading around here; along with this simple thing, too, also available over the counter at chemists.

From James Robb, M.D. from University of California, San Diego, who was a professor of pathology at the University of California there, and was one of the first molecular virologists in the world to work on coronaviruses in the 1970s. A useful note from him: "Stock up now with zinc lozenges. These lozenges have been proven to be effective in blocking coronavirus (and most other viruses) from multiplying in your throat and nasopharynx. Use as directed several times each day whenever you begin to feel any cold-like symptoms beginning. It's also best to lie down and let the lozenge dissolve in the back of your throat and the nasopharynx." I think that's a really simple thing to do as a bit of a protection and probably just healthful, generally speaking, in this world where there is so much transmission between people on all sorts of levels, I guess you could say.

**Ross:** Interesting. I also find it quite fascinating how the Thieves story—it's a good story, obviously, by itself—but it's interesting that that worked, and that at the time they just knew that it worked because they tried it and it worked. Now, with the development of more modern science, we know exactly why: it's got the antifungal and antiviral properties. That's a really interesting discernment in some ways, because at the moment I see, when we're looking for solutions to problems, we'll often go back and say what used to work with a hope that it'll still work now, and sometimes it's really hard to discern between what is going back, in a way, and what's going forward. It's really interesting when some of these stories from much older cultures are older times—we hear them, we can then test them with science, and if they if they do work in both systems, then we're off to a good thing. It doesn't mean that things that aren't proven by science don't necessarily work, but it could go either way.

**Nyck:** Of course, when you're speaking there, I'm thinking of the old term 'old wives tales', which I think has sort of passed away now because a lot of these old wives tales—this kind of thing—are proven by science.

**Ross:** We just call it medicine a lot now.

**Nyck:** We call it medicine now. We might still call it somewhat alternative, however there is science to back up a lot of these, especially herbal mixtures.

I've already got a text in—thank you very much—mentioning *Mullum Herbals*, and we will give it to local business; we will give a hello to them, because they do produce all this stuff. So that's one place you could go to get some of these, which is a local business, and support them. Locality and resilience, absolutely.

Fantastic. We'll take a small music break and come back and we're going to be talking about—well, we'll see where we go next. We're welcoming Helena to the studio in about 20 minutes, so we'll we might start talking a little bit about some of the science, too; and some personal stories about Ross, perhaps, because Ross owns a Tesla.

**Ross:** I do.

**Nyck:** You do. Yeah!

**Ross:** It's a lot of fun.

**Nyck:** It is. Well, I've ridden in it , and in fact, you drove out to Uluru with it, but let's come back and talk about that, because we were out there and we drove around Uluru in a Tesla—a red one. Curious that. What do you think about that? Maybe some of you think it's a great idea; maybe you have some issue with that. Let's find out.

Text us in. Someone's just written in: "High levels of vitamin C per day orally or IV infusion, 20 grams helps." Thank you for that. All these are good ideas, and natural ones, too.

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**Nyck:** You're tuned now to *Future Sense*, here on BayFM with myself, Nyck Jeanes, and our special futurist guest, Ross Hill, as we have Steve McDonald who is actually in Texas as we speak. G'day, Steve, if you happen to be listening out there.

Before we get onto Helena Norberg-Hodge shortly, talking about *Local Futures*, as I said earlier, you own a Tesla, and that's interesting enough.

**Ross:** It seems to be.

**Nyck:** How many Teslas are there in Australia? We're here to talk about the future and clearly the Tesla is ... well, it's kind of from the future.

**Ross:** Yes, it's one milestone, I think you could say. In Australia, there's about 18,000 electric vehicles, and I believe that about 80% of those are from *Tesla*. A lot of the other ones are from *Hyundai*—they have quite a few—and the *Nissan Leaf* is quite popular as well.

**Nyck:** That doesn't include the hybrids like the *Prius*, or does it include those?

**Ross:** I think that's a different number.

From a change perspective, I find that quite interesting, because you'll often have a transition time where you sort of bolt both things together. You say, 'well, we've got this oil engine, let's bolt a battery on and do a bit of both', and from a product design perspective, you kind of make a sacrifice on both sides. It's not going to be the best oil engine and it's not going to be the best electric experience either.

I haven't had a car for 10 years, so I was actually going from no car—I love the trams in Melbourne and all the public transport there, which actually is renewable-powered as well—but when the *Tesla Model 3* got announced for Australia, I thought, I'll give that a try, because it's the cheaper model—it's not cheap, but it's at the cheaper end of the scale—and it is a 100% electric car. I didn't quite know what I was signing up for. I knew it would be fun and a bit of an experiment. I also knew they'd been doing it for, I think, roughly 10 years so it can't be too bad; and I can always give it back if it is no good, but it's been a lot of fun so far. I thought what better test than to take an electric car, which traditionally is really good for city driving—they work really well; you could stop and start really easily; there's no idling the engine, it's either going or not going—and they have this cool regenerative braking, which means that when you're braking in general, or going downhill, you actually recharge the battery. It's like a little generator. If you're going up a hill, you're obviously using charge; if you're going down a hill, you're actually charging the battery, which is super fun. So there's a few of these things, and I think you really have to directly experience a new technology to

really understand it and get your head around it, because some of them seem too good to be true.

So, I got this car December-ish, and then on New Year's Day, I started driving from Melbourne to Uluru. So, electric cars are traditionally known to be really good in cities, especially dense cities—that's why they're quite popular in Europe and places like Tokyo. The test is really when you drive them away from the city into the desert. The first part was super easy—there's heaps of chargers everywhere—but as you pass through Adelaide and then Port Augusta, they start to thin out and so I was charging off the electric plugs at the different roadhouses on the way to Uluru.

**Nyck:** Yes, you pulled into a pub—a roadhouse—and said, 'can I plug in my car, my Tesla?' and people were very amenable to that. What was the reaction from people?

**Ross:** Well, it's funny, the people come to know where the plug is, and you usually pay them twenty bucks for it, and some of them are behind the shed or whatever it is, so they'll unlock the gate and let you in—and that's kind of cute—and you plug it in. Because they're three-phase power, they are a bit slower than the dedicated ones that you see in cities, and so you might have a long extended lunch—maybe a three or four hour lunch sometimes out there—charge it up and keep on going along the road. But it is possible; it does work.

**Nyck:** Yes, it does. That twenty bucks, say, for charging the car, would take you 500 kilometres at best, won't it?

**Ross:** It will, yes.

**Nyck:** That's pretty cheap, and that electricity that you're using, hopefully in the end, will come predominantly from solar power.

**Ross:** Most of it does, yes, although once you get into the outback, a lot of the road stations are powered from diesel generators. I have seen some research, though, that even if you power an electric car from a diesel generator, it's still more efficient than a diesel car, and that's because the electric motor drives convert the energy to motion at about 90% or 90% plus, whereas a petrol car is about 30%, and a lot of it comes off as heat or fumes or other things, right? We forget that, but even when you're charging from the diesel generator, it's still more fuel efficient.

**Nyck:** Where you're living here is in the *Habitat* facility out there at the Industrial Estate. They have their own community power grid, and you can charge your car there for free.

**Ross:** You can. Yes, it's great. There's a lot of incentives—not from the Australian government, so much yet, but from local communities. *Habitat* have four chargers out there and they're currently free to use. NRMA have a great network across New South Wales, and roughly every hundred kilometres there's a little charger at a town somewhere. They're also free to use at the moment. The Byron Shire has a charger at the library near the beach, and so that's really cool. It's great to see some people incentivising this transition.

And it is working. If you look at the sales, I know *Tesla* already sold 1,000 cars plus this year, just in the last two months, and there's a ship that just arrived in Sydney with another 500 of them, so they're really, really taking off. I think one of the big shifts is the *Model 3*, which is, as I said, *Tesla's* cheapest, but not necessarily cheap. It is about AU\$57,000, but it's by far the most popular model. I think it's because it bridges the gap. You're not sacrificing anything as you maybe needed to in the past, so it looks like a normal car, it feels like a normal car, it's just got a battery in it instead of a fuel tank.

**Nyck:** Well, it does feel like a normal car in a way, but having ridden in it out there in the desert with you a few times—as we all did, like kids in a candy store—one of the things that was most disturbing initially was looking across at you from the passenger seat in the front and seeing that you had no hands on the wheel. That moment—because it's different, of course, from cruise control, when you've still got your hands on the wheel—but that moment for all of us ... and perhaps it's also harder for an older person like myself to accommodate the shift in consciousness just to receive that the car is driving itself. 'Are we safe?', you know? 'Is it okay?' And to trust that. So that element of trust in new technology is a really big thing, isn't it?

**Ross:** Yes. If you look at the statistics, you are statistically safer using the autopilot system at the moment—which is not full self-driving; it's sort of fancy cruise control is what I call it. Statistically, you are safer, but whether you feel safer is a different matter. Whenever I've used traditional cruise control in the past, I've felt that it's not very safe because you're just holding the button down and off you go. But it does work; it does take a bit of getting used to, but it is a very comfortable way to drive. One of the biggest things as well, especially when you're driving through the desert, is you can't hear the engine so you're just listening to the wind and looking out for kangaroos.

**Nyck:** It's extraordinary, not to mention the acceleration, but perhaps we won't go there.

**Ross:** That is fun, too. But there are a few things that are, I guess, paradigm shifting. Like we said with the filling up at the roadhouse, yes, it's nice to have a long lunch and let that battery charge a little bit on the slower chargers, but it did only cost \$20, whereas the petrol cars were paying probably \$70-80 and they were charging in five or ten minutes. They might have stayed an hour for lunch anyway, but it is a little bit of a trade-off in terms of its much



better value on your wallet. But it does take a little bit longer once you go out that far. When you're in the city on the fast chargers, you can charge at a rate of about 1,200km per hour. It's a bit funny sometimes to think about charging in terms of speed, but for every hour of charge at the super-fast chargers, you'll get about 1,200km of charge, whereas if you plug it into the socket in your wall, like when you're charging your iPhone, you'll charge about 10km every hour. It is cool to think that anywhere you charge a phone, you can charge the car. It'll just take a little while.

When you get out to Uluru itself, that is the biggest gap in range of chargers and everything. They've got a 1.8 Megawatt solar farm out there which powers all the hotels and different places as well. I was charging with Mark, who runs Technical Services there, and it's super cool because you see this vast arrays of solar panels collecting the sunlight—obviously, in the desert you can feel the sun, it's pretty strong—and then five minutes later, you're racing down the highway, driving sunlight. So it's come a long way.

I was looking at the *World Solar Challenge* which has been going since 1987. That was a race between roughly Adelaide and Darwin [approximately 3,000km] and it would usually take people four to seven days. A lot of them look like little go karts, almost, with a panel on the roof, and they were super, super, super cutting edge, trying to make efficient engines, trying to make efficient panels, and that's 32 years ago. Now, here we are. You've got huge solar farms happening which you can charge off, and you've got cars that look like all the other cars.

**Nyck:** And of course, South Australia is the home of Elon Musk's—talking about *Tesla*--\$100 million solar farm out there, which is proving to be very successful and somewhat disruptive to the powers that be, it seems.

**Ross:** Yes, that is quite interesting.

**Nyck:** You like that.

**Ross:** I do like that.

**Nyck:** We're going to come back to Elon Musk anyway—we're talking about *SpaceX* a little later on today as well—but I do notice you also mentioned that there are 10,000 *Teslas* produced in America every week.

**Ross:** Yes.

**Ross:** That's a lot.

**Ross:** Well, it is a lot, but it's also not many.

**Nyck:** Well, it seems to be a lot. Why is it not many? Because it's only a small percentage, isn't it?

**Ross:** If you picture it, it looks like a lot. It's about 500,000 a year. It's taken quite a while to get up to that rate. I think if you look at global production, it's 0.7% of all the cars in the world.

**Nyck:** So it's not very much.

**Ross:** They got a lot of the attention for various reasons, but they're actually not producing that many cars in terms of the whole. Elon did comment once that even if every single car that was produced by all the factories was instantly electric tomorrow, it'll still take 30 years because cars usually last for a couple of decades before we move them on. So the best possible case, if we're moving to electric cars, is 30 years if they all transition. But as of today, it's 0.7% of new cars.

**Nyck:** Also, we have in this country, not a lot of incentive from our current government towards electric. There is incentive towards hydrogen. Why that? What's the thing going on there, in your opinion?

**Ross:** There's a lot of reasons and ideas we could probably come up with for that. I'm not excited by hydrogen, and so I haven't looked into it that much. You still have to go to someone else's place and fill up your tank of hydrogen. I like the idea that you can have solar panels on the roof and fill up your car on sunlight and off you go. That seems pretty simple to me. We'll see what happens. It'd be nice if the government did support a bit more if this work.

What's interesting about Australians—and having worked in technology for a while—it's interesting because Australian organisations are really, really slow at adopting new ideas and new technology, but Australian individuals are far ahead.

**Nyck:** Yes, we are one of the top early adopters of new technology on a person-to-person basis, and yet, in business, it's a different thing.

**Ross:** And having worked in business technology and social networks across Australia and California, it's fascinating to me that the American organisations will adopt these things and

kind of roll it out across the whole organisation quicker, whereas the individual might be a little cautious or wary about trying new things. In Australia, it's the opposite: the organisational will take a while but Australian individuals have personal iPhones far before the organisation rolls them out.

**Nyck:** Ah, it's the pioneering spirit of Australia, which has done so much damage, but also there is a good quality in there somewhere.

**Ross:** Yes. Australians, you know, we have some of the highest solar panel rates per capita on our roofs, which makes sense. We'll go and do that, and we'll go and buy an electric car at some point and plug that in. I think that really makes sense, and that's what you see a lot of in Australia. So do we need the government to support things? It would be nice, but I think we're going to do it anyway, as well.

**Nyck:** Talking about the last thing in terms of renewables and electricity generation generally, you'll notice that in Tasmania, while the *Australian Federal Coalition* refuses to accept the notion that "Australia can reach 50% renewables without sorcery ..."—I'm quoting here from [reneweconomy.com \(https://reneweconomy.com.au/tasmania-sets-world-leading-target-of-200-per-cent-renewables-by-2040/\)](https://reneweconomy.com.au/tasmania-sets-world-leading-target-of-200-per-cent-renewables-by-2040/)—"... or total economic destruction, Tasmania's Liberal government has just announced a possible world first: A renewable energy target of 200 per cent by 2040, powered by a doubling of the tiny island state's hydro, wind and solar energy production." That's sort of counter-intuitive for the governments in power there, you would think, but what do you think about this?

**Ross:** I think it can kind of make sense. The *Liberals* like to sell things, and if you've got excess power, you can sell it, so I think that makes sense. And if it's for a good cause, all the better.

**Nyck:** Absolutely. Very good.

You are tuned here to *Future Sense* on BayFM 99.9. You're listening there to Ross Hill, who's our guest presenter today—and probably for the next few weeks while he's up here—and myself, Nyck Jeanes. We're going to be welcoming Helena Norberg-Hodge very shortly to talk about *Local Futures*, the event coming up here at the Byron Community Centre downstairs from March 20th to the 22nd, presented by *Local Futures: The Economics of Happiness and the New Economy Network*. We'll be chatting to her about localisation and renewability and resilience, in particular—that lovely word which I have quite an affection for at the moment.

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