Ivor ([00:00:00](#)):

When this started, it was thrown out the window and it's never come back in the window and they will spend 3 million, 5 million per per lives year saved. God knows. And the irony is that if the lockdowns are not doing a whole lot extra over distancing, which all the mathematics state are not really, then you're spending near infinite numbers per lives saved if you're not even really saving lives.

Professor Levitt ([00:00:22](#)):

I'm just worried about this completely crazy panicked world. If you, I think you were linked to my medium post, which was the one thing I actually posted publicly. And the last three white words are, can you, do you know somebody who knows somebody who can stop this madness now? And this is the 22nd of March.

Ivor ([00:00:51](#)):

huge honor. Today on the fat emperor podcast, we have our first and possibly only Nobel prize winner on the show today. And it's professor Michael levers of Stanford and he works there as of the medical school. And he got the 2013 Nobel prize for chemistry awarded for complex chemical reaction modeling and progression. And as you can imagine, this kind of exceptional expertise is going to be very useful in analyzing the numbers on our current issue. So Michael, professor, huge honor, , delighted to have you here.

Professor Levitt ([00:01:28](#)):

Thank you very much. It's really a pleasure to be here and I like your style.

Ivor ([00:01:35](#)):

Well I do what I can but, you know, just on your credentials there I gave a very, very high level view but maybe just a little short summary of your general history and credentials before we get into this because it's such a controversial topic. I love to have real experts in math and you know, biochemistry and because this is all about the numbers really now beyond the actual biology.

Professor Levitt ([00:02:00](#)):

So basically I have looked about a quarter of my life in four different countries, South Africa, Britain, Israel, not estates. I was born in South Africa, came to him to study, worked in Israel the beginning and now I'm working in Stanford. But it was all much more balanced, lots of backwards and forwarding. Um, I studied physics. I Kings college in London, went on to do a PhD at Cambridge support treatment, molecular biology, which was a remarkable place. This is the place Francis Crick did the work on DNA and so on. And so it was a remarkable place. I was always just about the only non-experimentalist at any institution I've worked at because I'm always surrounded by experimental biologists. And my approach was to basically use computers, which were just coming into being, I mean I've been doing this now for 53 years or something like that.

Professor Levitt ([00:02:53](#)):

It's a long time since I was 20. So, you know, I was always like the person who tried to make things more quantitative and involve modeling, involve data analysis. It involves often logic, you know, just "if this is like this, and this is not like this" kind of thing. "Sanity Checks" the whole thing must be full of Sanity Checks. First one realizes that you're dealing with very large sets of numbers, and you're always looking out for the bug or the error. So you get quite good at proposing things and then just seeing if they're really true. This is something that experimental biologists do really, really well. And I've been at Stanford for 30 something years - and I still move around a lot.

Ivor (00:03:35):

Yeah. So you're such a diversity of experience. And it's funny what you describe there - everything you said, including looking at logic and distinctions and analyzing data properly and not being biased**? It's all absolutely the engineering problem solving method** - which I've been doing for nearly 30 years. It's always going to be the same things that get you to the truth, and bypass belief systems (or "anti-science" as I like to call those). So, you know, we might start off with rather than getting into your journey from January (when most people didn't know what was coming), you were analyzing the China data, you immediately got the bug, but we'll get into that later. But first, maybe a high level view and executive summary of what is the real data and mathematical and scientific proof around lockdown efficacy, versus distancing efficacy - versus the normal kind of curve that viruses follow. Rise and fall, naturally. So maybe a high level view?

Professor Levitt (00:04:33):

Sure. Basically because of my experience with China and it's somewhat accidental, but that's not important, I sort of got the feeling that this virus was much, much less powerful than I might have thought. It wasn't growing exponentially - it's relatively easy to control. The real death rates were very variable, and not that terrible. And this is all basically by the end of February by which time things started to spread. So my, my view, and this hasn't really changed since, there are things about the data that suggests that this is "a virus with it's brakes on". Certainly when you're looking at or comparing some of the exponential growth scenarios, and we can go into that more detail, but this puzzled me - but as things have proceeded, I realized more and more and more WHY the brakes are on, and what's really going on.

Professor Levitt (00:05:31):

And I guess this is going to sound strange, but in some ways I feel almost embarrassed that things I said two months ago are actually still holding true. I guess in a field moving at this rate, that shouldn't be the case. I should also say that I'm probably the least political person you can imagine. I'm also somebody who doesn't take sides. If I watch a tennis match or a football game, I actually like both sides to win and I really don't care. And I like the moves. So I'm not a, without getting into many different countries - I'm a very global person. I sort of care very much about people, but I don't really care whether they are "my people" or somebody else's people or whatever – we're actually all people here on the earth. And I think this also gives me a little bit of a different perspective of how this actually is. But the high level viewis that there were many signs that were really available by the middle of February, but let's say by the end of February - indicating this is a virus that has weak legs.

Ivor (00:06:31):

Yep. So in terms of like let's say "distancing we'll slow it somewhat", "lockdowns added to distancing" may be very questionable in value. What would your feelings be versus "free spread", which happened in Europe to be quite honest, which stayed fully open till March, no one did anything at all to restrain it. And it's a "High R value" virus, so it was obviously all over the place. So at that point when you distance, you can slow it somewhat maybe. And then the lock downs, which caused enormous collateral damage, possibly add very little extra. So what's your thoughts on that now?

Professor Levitt (00:07:03):

I would, I would agree with that. In general. I, instead of saying distancing versus lockdown, I sort of tried to say "smart distancing". I mean lockdown is a form of distancing, but it's a very extreme form. I've called it "medieval distancing". And you know, I think there's no doubt if you, if you had a country and you started out before there was any Coronavirus, and you were locking people down, you know, not letting people ever talk to other people.

Well the the country would not get even a single case of coronavirus. So in that sense, you know, if nobody meets anybody and you don't catch it over the internet, you're fine. Except that - **are you really fine**? And you know, I think there's an issue here about epidemiologists – **who certainly used to maintain that there should be no shutdowns, there should be no stopping of global transportation. T**hings should be allowed to sort of reach the equilibrium in whatever way. Now the key thing here is, is controlling overloading of hospitals ICU's and things like that and that I think requires a careful control. But I remember very early on saying that one should fiscally monitor very carefully. And one thing I did discover from the work in China is that just looking at number of cases per day, divided by yesterday's, is a very, very good indication of how the virus is growing. So you could almost imagine that if you were a benevolent leader, you would decide that you want to try to cause as little damage, but also realize from the numbers that this virus is not going to kill much more than flu is going to kill. It's a small number for flu, which is a bad disease. But it's a disease which we have to put up with because flu mutates and people still don't even take vaccines.

Professor Levitt ([00:08:46](#)):

So you could almost argue that flu is like the threshold of acceptable risk at least in terms of experience. Countries never have locked down at least since last hundred years for flu and there's been a lot of flu around. So I think that's a smart thing to do would be - as I said it sounds rather cruel - but basically adjust social distancing in a very dynamic way to keep the ICU full, but never overflowing. Don't lock down locally. I think local lockdown like schools and locally makes no sense - but you might, for example, let's say an Island which would be a analogy. Let's just imagine that Dublin is really full on, but there's nothing yet going on in Cork town - so you may want to not let people travel freely between Dublin and Cork and so you might want to restrict interruption travel or for example, if there are trains, take the people's temperatures, make them wear masks and things like this.

Professor Levitt ([00:09:45](#)):

I think there are, there were ways of distancing which are really much less intrusive than locking people down, taking away their livelihood, putting kids out of school - so parents are now in difficult social situations. But I think that this is a virus that seems to be… it hits very rarely. I think the ability to lock down almost depends on locking down before you have a single case. The reason is that there are many, many hidden cases. So by the time you see one case, it's a bit like mushrooms coming out of the ground. But, but time you see one coming out under the ground, you can be pretty sure that the whole area is full of mushrooms about to come out of the ground. Not only that, but many of the infected people are asymptomatic, so they never actually feel sick.

Professor Levitt ([00:10:38](#)):

And therefore imagine you were to say we have a very responsible population. Anybody who is sick, you know, stays at home or whatever. But if say, 50% or even more than that of the infected people never feel sick - and they feel great, then they can be very active. So in some ways, I think part of the secrets of this being controlled, and it's really comes from places like Japan or Taiwan, China outside of Hubei is wearing masks, is a really effective way of doing social distance. In some ways, if you speak to somebody through a mask, you are, you're a long way away from them in terms of how much your saliva droplets can get to them. And this is, this is a completely natural thing when anyone in China has a cold. So simply insisting that everyone was a mask from the very first this was seen was in national, any China, Korea, Korea, but certainly in Japan, Taiwan, Singapore, Hong Kong, and one of these places seem to have control.

Professor Levitt ([00:11:43](#)):

There are outbreaks with relatively small numbers of infection. At the other side of the game, we have places like Lombardy, Italy, England, United Kingdom, France, Belgium, Netherlands, New York and Illinois where it's almost been, I would say like complete burnout. And now you could sort of say, well how bad did that get, and in Europe, you know, the complete burnout ended up being something - maybe it hasn't finished yet - but let's just say right now it's about ¾ of a person in 10,000 - while the natural mortality of Europe is 10 in 10,000 or about 1% - so we're not talking about one 15th or one 13th of natural mortality. So it looks like the total excess death from covert in Europe has been about one month of regular death. The trouble really is, is that the population profiles in Europe are very different from those in certainly in China, very different from those in the USA.

Professor Levitt ([00:12:54](#)):

So you use exactly the same rule everywhere. But that is, you know, and it always surprised me: why did Northern Italy actually stop?? I mean, you know, they hadn't killed everybody there. In fact, the death rate was not that different from flu in a sense. Again, I'm not using flu as an example, except that in Northern Italy it's a very flu-prevalent area. In fact, in spite of the fact that there's so much flu there - people often don't take vaccines - for reasons that I am not going to get into. You know, I don't understand this, but it's obviously not considered, but you know - having 20,000 people dying in a sever flu in Northern Italy is not unusual. It doesn't happen every year. My wife was just telling me, you know, you keep on comparing Covid to the the flu, and I say "it has the same numbers".

Professor Levitt ([00:13:44](#)):

It's not the same disease, sure. And the big differential for me is medical professionals. Medical professionals understand the flu, they all take their vaccines and hardly any of them are going to catch flu from a sick patient. Whereas in Corona we don't have that. So the medical people have been the heroes that they've had to take on the one hand an incredibly panicked population, pressure from the government or desire somehow to maximize the number of cold cases and still treat people. But you know, they coped, I mean even in, even in the United Kingdom when people who work at the NHS have come out heroes of this thing because they managed to cope. It was all predicted that they were going to collapse in fault. And again Britain's numbers, whether they're the numbers they've reported or the numbers that places like the financial times think they are - are all within this realm of about one month of natural death.

Professor Levitt ([00:14:35](#)):

And now you could always argue, and people have been arguing that any cessation of the epidemic is not due to burnout, it's due to the measures you put into place. But a lot of evidence is mounting to show that just isn't the case. You know, I initially bought the fact that in China it could have been the case, um, not inside Hubei, but outside Hubei. For my analysis I defined a new region of China called "China non-Hubei", which is a huge country with, you know, 1.4 billion minus 50 million people, but the outbreak in that region was extremely well controlled. It was in all the different provinces, had people who had left Hubei if the government announced that they were going to shut down, and didn't really just shut down. As a result, it's reported that 5 million people left Wuhan and Hubei to go back home for the new year holidays and that's a large number and controlling the more, you know, you might think the Chinese could control them more by locking them all down.

Professor Levitt ([00:15:47](#)):

I don't believe that. I just think that they wore masks and from those five men who left, there ended up being something like 12,000 cases and 120 deaths and the curves of growth looked like they were manufactured. Now I see this very carefully, because I don't believe they were manufactured. A lot of people say that you can't

believe that they're from China. I am totally agnostic about what I should believe or not. I look at the data, I compare it with South Korea, I compare it with New Zealand with the deaths rates and it all fits together. So you know, if China fiddled their data, they must have a time machine because it looks just like the New Zealand data - both in the magnitude and the numbers. And so I think right now, well the numbers seem to me to be about the same. It's interesting. I guess I'm very global in my viewpoint.

Professor Levitt (00:16:45):

For me the hardest numbers to get hold of were initially when Covid started in New York city and they weren't posting accumulative death numbers – it came up on the screen and then it disappeared. So I used a "Wayback Machine" to try to get earlier webpages and then I decided, let's see how good Twitter is. My first Twitter tweet was to ask people if they can get me the New York death numbers. I wrote it to a tweet address, mayor NYC. And to my amazement, I got about 40 emails back, all from people saying, here's some of the data, here's some good data and very quickly I had the complete data set of New York deaths, and a week later they released it all. So, you know, I think the data is all very consistent …

Ivor (00:17:35):

so the data is all very consistent, or concordant. As I was viewing this in March as well, it looked that the curves were following their thing and we can argue about the virology and what the curve exactly should look like, but with all the different countries, different policies, the curve followed broadly the same kind of progression and subsidence. And New York, I mean, just while we're on that topic, New York gets brought up as an example of how bad this thing is. But New York is far North latitude. It's post-winter, where you're going to have pretty profound vitamin D deficiency, you know, immune system kind of not in great shape. You've got a lot of minorities. They also ran their subways with packed cars, right through the March period when it was super-spreading and you got high viral load from that. So New York is a corner case, very tragic one, but it fits exactly what everything else that you're looking at. You know, people use it as an example that, "Oh, it is much, much worse than anything else we've seen." But no, it, it just kind of fits in with everything else we've seen.

Professor Levitt (00:18:42):

Especially when you look at New York city which is actually five different boroughs, and you can get the data for each one separately. And if you compare, say the Bronx to Manhattan, which is actually called New York, the borough of New York is actually Manhattan, and the actual death rate per population is more than twice as high in the Bronx as it is in Manhattan. You know, Subway is a great spread. I think the same thing happened in London. Remember also it's probably spreading before you even know there's a single case. And this is something which makes it very, very hard to control unless you decide, "we must go on" and you can't say we should - you can't shut the subways. But if you just simply said, you know, if you're going to cough, cough into your elbow, don't talk facing somebody, um, or have more shopkeepers wear masks so when they tell you, when your goods are costing, they're not giving you coronavirus - that would probably have worked. But I agree in New York it's about, I was telling you about what the death rate was. It's normally around one in a thousand. The "saturation death rate" that is, I'm not going to call it herd immunity because that's become a loaded term - but "when it burns itself out" - it's typically in Europe **less than** one in a thousand. In Wuhan it was about one in a thousand. And in New York it's about 1.5 in a thousand. So as you said, it's in that realm. What is different about New York is that I find the age profile of the people who had succumbed very, very revealing.

Professor Levitt (00:20:27):

And what you find is, is that in Europe only 8% (1/12th) are younger than 65, whereas in New York it looked like it was at least 30%. And that's a big, big difference. It's like saying the three times more young people relatively. If

we say that less than 65 is young, you know, three times even Wuhan, I remember it was actually 35 in fact - so 35 is more than four times 8 – that's a huge difference. Now what I was thinking and it's something I really want to do this analysis on, and I've got the data – but it looks like the death profile, the number of people of each age range - for Flu and Covid in exactly the same population - is very, very similar. In both cases 8% less than 65, 50% more than 85. And then the rest of the world in between. I've got a feeling that the flu profile in United States is different from the flu profile in Europe. New York has a death profile that is a much more like the U S flu profile. And I never realized this and I'm not sure it's true, but it's something where I've got all the numbers. I need two hours with Excel and I've got the answer. I'll maybe tweet it tonight, or tomorrow morning. But I do know that in the USA, I remember reading somewhere that 25% of less than 65 years old, whereas in Europe it's 8%. So 25% versus 8% is a factor of three difference. It's a big difference, and we need to look at this. And then I was again chatting to my wife, this is how I get all my ideas. And I was thinking it would be wonderful if somebody had a world Flu map, because let's just imagine that there's a correlation between the amount of flu deaths in a certain Locality, and the Corona deaths. I mean like you said New York is very Northerly [low Vitamin D post-winter] and so on. But you know, if you look at Italy, Northern Italy was badly hit - Southern Italy, much less so. And I'm sure that this data exists, that somebody must have It. I think I brought the data from the U S States and it would be very easy to ask, is the peak in winter time, does that peak in different States correlate to the peak now from Corona? Because that would be very, very interesting.

Ivor (00:23:06):

Yeah, for sure. Michael. And I think in a general sense, it very likely will. And if you look at the Euro Momo, you know, mortality data, I know you've analyzed it, you tend to see that. And Italy, Northern Italy has a history of problematic flu death, Northern Italy has a published history of profound vitamin D deficiency and other issues, metabolic issues. So, you know, there's lots of factors here. And I think if you had a model with the 10 biggest factors, you got a pretty damn good fit. But interestingly, no-one's really looking at any of these factors - because the whole focus is on the "medieval magicks" of lockdown. I mean, that's, that's what they're focused on.

Professor Levitt (00:23:48):

But I think, again, what shocked me about that is that…well firstly, you know there are lots of examples of the world health organization and epidemiologists - for them, success is minimizing the number of deaths from a particular outbreak. It's not "at what cost". In other words, you know, and this is why you often get these very large exaggerations and then they say, "well, gee, it's because of my exaggeration that we survived this!" And that's something which is very, very hard to disprove except by looking at lots of different locations. And my feeling is, certainly as a scientist, and I imagine you as an engineer: being 10% wrong on the too-small side is exactly the same as being 10% wrong on the too-large side. Whereas it seems that when it comes to frightening people, you can be a factor of a hundred wrong on the large side, but just don't be 5% wrong on the low side and it's not a good idea.

Professor Levitt (00:24:50):

I mean it's something which governments for whatever reason, governments panicked here…and people followed. I must say, I don't really understand why it happened becaus, you know, the Western countries had at least a six-week lead time. They had the information, you know, it wasn't just China, they knew about South Korea. The Diamond Princess was a classic example, almost an experiment gone wrong. And that data was all available - totally - by the end of February. And analyzing this data, I think anybody who can use Excel - and there are a lot of people who can use Excel - can do this. It doesn't require, you know, C++ coding or Python coding. I mean, I DO all that stuff, but Excel is great. What you see is what you get and you know, you play with the numbers until it makes sense.

Ivor ([00:25:48](#)):

Yeah. It was professor Feinman, a good friend of mine who said "the best statistical test is the eyeball test." And if you chart things in Excel, you can very quickly make an instinctive judgment, particularly if you're very experienced in these things. But when you look then at the overall death, and you did touch on figures already, but the Euro Momo looking at the whole of Europe, I found the people were astonished when they saw that the total deaths from Corona so far, which may be over-counted in 2020 even - are roughly the same as the 2018 winter season when you tot them all up, the excess deaths. And it would appear to be almost obvious – (though I'd be careful saying that) – obvious that the flu season in 2020 was extremely soft until Corona triggered. And through November, December, January, February, March, there was an incredible lack of flu deaths, which is quite extraordinary.

And then when Corona came along and it's a super-spreader and it is very severe, you get a huge spike in March, April. BUT, the reality is that around Europe now, basically Corona's coming down hard in Europe, death rates are coming right down and the total is only approximately matching the 2018 season - where we, we made no commentary - and did nothing. I mean is that, is that still the way the doctor is looking?

EUROPE ALL-CAUSE DEATHS
(EuroMomo Countries)
~440 Million Population

2018 Winter Season Excess Deaths
TOTAL = ~140,000

2020 Winter Season CORONA Excess Deaths
TOTAL 16 May = 153,953
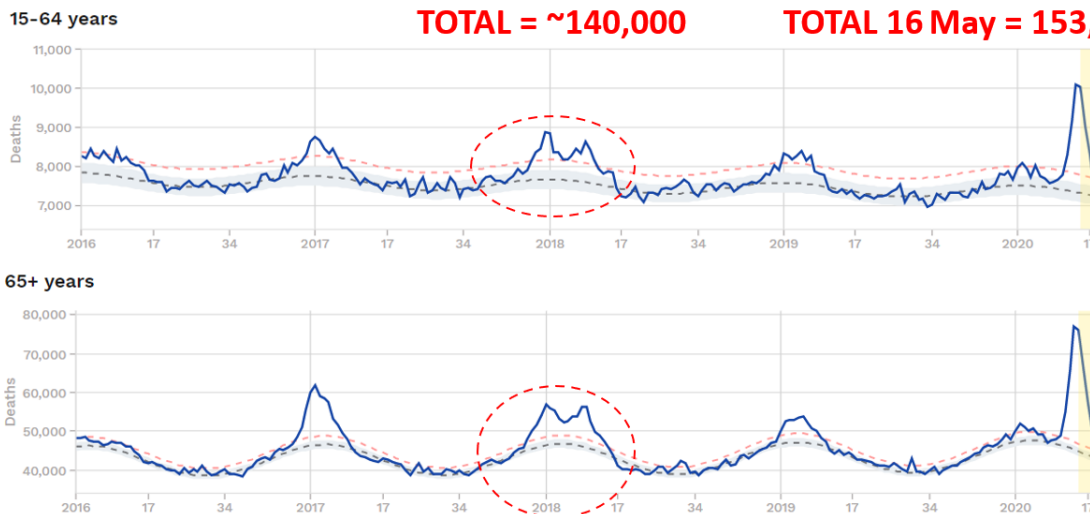
Professor Levitt ([00:27:17](#)):

The data up to last Wednesday (they release the data every Wednesday). But I already spent almost two full days on this, basically Friday and Saturday. And the excess deaths from Corona are actually 15% more than the flu season of 2017/18. It turns out it's actually quite hard to get this number because EuroMomo uses a calendar year, which doesn't actually bridge the flu season and they don't give the data for 17 with 18. So you actually have to work through the plots by hand and read things off by mouse-overs, and they even have an error - what they give as the baseline is actually 2000 above the baselines and you get numbers that are 2000 a week less than they should be. They're not paying attention to it.

Professor Levitt ([00:28:08](#)):

So you know, I think that this is absolutely the case. I also noticed the, the lack of flu in this year and you know, it's horrible to make analogies, but I was kinda thinking like forest fires - when there hasn't been a forest fire for

a long time, then the first one that comes along is a big one. The other thing is that to my surprise in my analysis, if you looked at the declared reported numbers from all the individual countries in EuroMomo and added them up, you've got exactly the same numbers as EuroMomo had. So you know, and I'm not sure if this is just a cancellation of errors. I was, I'm surprised by how well they tracked each other. So it looks to me completely consistent. I even looked at financial times that was trying to raise a scare tactic, showing how UK was 50,000 when the official reporting said 30,000, but they fitted exactly. Their total from the financial times for the European countries was exactly, I think it was 4% more, I mean tiny errors. So I think it's all very, very consistent and again, which we've talked about a little bit, what surprised me - was if EuroMomo was now releasing just for the last two weeks, the age profiles: below 65, above 65, above 75 and so on up to a greater than 85. And this information was amazing because you could get the same profiles from Flu and from Corona, from exactly the same source, exactly the same countries, from the same database. **And these two profiles were essentially indistinguishable**. So it was again saying that, you know, it seems to me that in any country you get a certain number of people who very sadly are less robust, more frail than other people. And something like this comes along and they get taken out. It's interesting, we were talking about lockdown. **What is interesting is that no country succeeded in protecting the elderly and no country succeeded in protecting the nursing homes.** And , even in Israel where they made a fuss about every single death, 25% of the deaths were in two single nursing homes. So it's, it's a hard thing to do. And I think the reason that they can't do it…. I shouldn't state a reason – let's just say it didn't happen. No way. Not in New York, not in England. And you know…
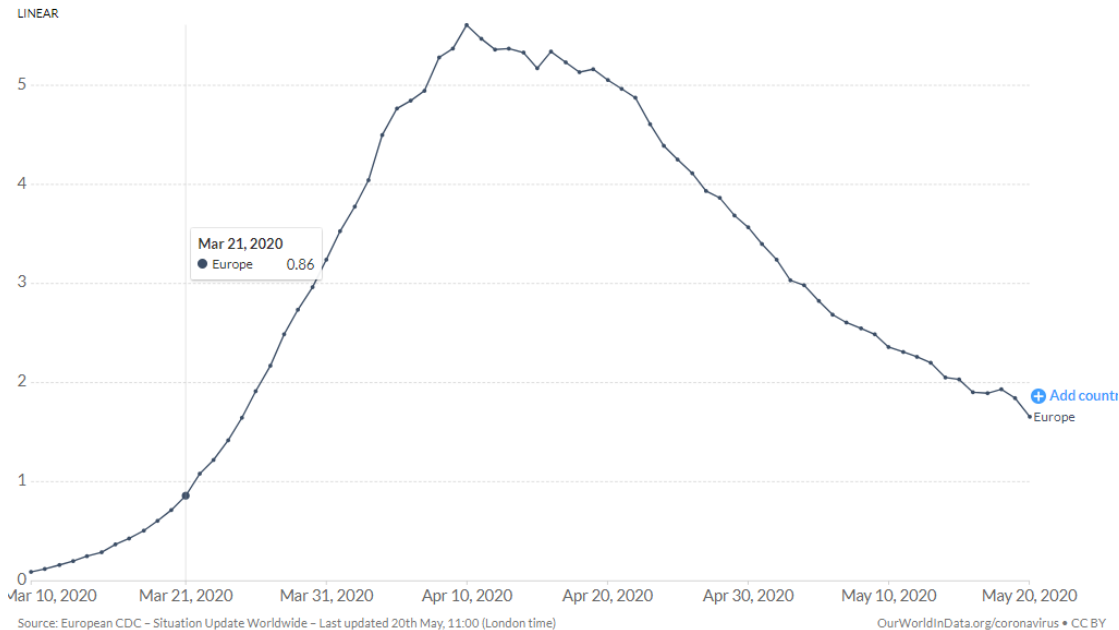
Ivor ([00:30:34](#)):

absolutely Michael and in Ireland as well, we have somewhere north of 60% of all deaths are in care homes and institutions. In Sweden I believe approximately 75% of their deaths are in care home scenarios - Anders Tegnell the Swedish Coronavirus Team Leader, the other day in a news broadcast said 50% in care homes and another 25% involving people in a "home care" setting. So we're talking enormous percentages are related to care homes. And like you say, no one succeeded. And I think, you know, it's hard to say it but we have to be scientific about this. The reality is yes, if you have a soft flu season - there are only so many susceptible people really. And if those people don't experience excess death during the early part of a soft flu season, then they are obviously in the firing line. Terrible phrase, but there you are. When a severe flu or severe Coronavirus "Common Cold" virus comes along. And I like your "Forest Fire" analogy and that looks exactly what happened in this one, that all the susceptible people that normally would be hit by the generic flu like in 2018, over a longer period - were hit by a virus that came late in the day. And swept through rapidly. But if people can, if people can internalize two facts that are so important - that right now we're around 15% worse for excess death, 15% over the 2018 winter season. And the way the curves are heading (and I know we can't predict the future), but I mean the way the curves are heading, it might taper off in the summer with Corona in real life data being maybe 50 or 60% worse than 2018 season. And if people just internalize,

Daily confirmed COVID-19 deaths per million, rolling 7-day average

Limited testing and challenges in the attribution of the cause of death means that the number of confirmed deaths may not be an accurate count of the true number of deaths from COVID-19.

LINEAR

Mar 21, 2020
● Europe   0.86

5

4

3

2

1

0

Mar 10, 2020   Mar 21, 2020   Mar 31, 2020   Apr 10, 2020   Apr 20, 2020   Apr 30, 2020   May 10, 2020   May 20, 2020

⊕ Add countr
Europe

Source: European CDC – Situation Update Worldwide – Last updated 20th May, 11:00 (London time)   OurWorldInData.org/coronavirus • CC BY

Professor Levitt (00:32:24):

I think the numbers in Europe are dropping very quickly. And where are you going to find this? That, I mean in a very strange way, lockdown does save lives. It doesn't save the lives of the Corona virus people. You know, you can save people via not having traffic accidents, not having work accidents, not having sports injuries. And one thing that amazed me, Israel is a small country, but their excess burden of death is **negative 500**. And this is actually shown in the financial times. They only emphasized those that were over. So basically if we want to shut down economies and save lives, we can - but that kind of shouldn't be what we're optimizing.

Ivor (00:33:17):

You know, I'm going to pick up on Israel there because, and again, for the listeners, you know, you're saying what you're saying from the data, the actual data professor Carl Hennigan is saying the same thing from the data in the UK, that the peak of infections and deaths clearly can't have been impacted really by the lockdown. And we have professor Ben Israel from Israel who did that mathematical analysis a few weeks ago for European Data and said the same thing. The lockdowns not really shifting the curve. And an analysis from a team at the Woods Hole Institute – same result. So just so people know, there's a whole load of professors who have done the analysis, who say the same thing. It doesn't mean it's perfectly correct. But the interesting thing, Michael - the pro-lockdown people who are using basically associational data, which is the lowest form of science, I've been looking carefully to find a pro-lockdown person justifying that there is a great benefit. And that the lockdown hit the curve. Who has actually analyzed the actual data and said, "look, my analysis says here's the lockdown – and it impacted the curve". But all I see in any analysis of this - real analysis of data - is the other answer. Lockdown didn't really change much over distancing. So why are they not doing the analysis to support their view?

Professor Levitt (00:34:35):

And you know, that's a question that I really can't answer. So I have been surprised - many, many of my scientific colleagues, are all hysterically pro-lockdown. But I'm just saying that I felt that there was this feeling that people are basically thinking about this like Flu, but like the 1918 Flu - or they thought they were going to

be 5 million deaths or 20 million deaths with something like this. They felt that lockdown was essential. Now what I felt hypocritical about this attitude was that most of these academics are actually receiving salaries. They're not working. They don't have a store. They're not a cleaner, not driving a bus. They aren't impacted by economic issues. And I think they also feel that, they know themselves: "I know how to lock myself down" - scientists love nothing more than staying at home work. But what about all the other people who are out there having fun and going to football games and going to the beach? And I think that's a, you know, this is a very hypocritical attitude. I feel that the whole problem here in this whole issue was to think about one aspect, trying to stop the virus instead of trying to save everybody in the, in the best possible way. And you know, if someone had said, okay, let's just kill all the people about 65 we'll get rid of any further deaths. That would be horrendous. But it was almost like they were optimizing the wrong thing. The optimum thing, you should be optimizing in an engineering sense is what is the best thing for my country?

Ivor ([00:36:17](#)):

Yeah. And this, this is what's killing me the past two months because my whole career I've always had to optimize both sides of the ledger. You know, customer quality versus cost of production, dah, dah, dah. And I know this is human life, but it makes it even more important. A friend of mine, Dr. Paul Saladino in an interview the other day, he said, there's (and this is UK figures) - there's five times fewer cancer diagnoses made in the last six weeks. So a lot of people are going to suffer. There's heart attacks in Canada have gone up from people who didn't go to the hospital, and the hospitals are half empty - and I could go on and on. Yeah, you're going to save a few car crashes. BUT there's going to be a whole load of collateral death and suffering, you know, psychological problems, excessive drinking, all across society. This huge negative side to the ledger. And his point was that's all "invisible blood", because no politician or academic will ever be linked to that. It's invisible. It doesn't matter. And it can be blamed on a small piece of RNA. But right now, front and center, if I'm seen to **apparently** save lives, not necessarily, but **apparently** - my ratings as a politician are shooting up - and everyone loves it for some reason???

Professor Levitt ([00:37:29](#)):

except that, when the economies of the world go South. And again, what also gets me is that in some ways the people who are worrying about themselves in this sort of baby boomer age group – I'm 73 and I'm really a true baby boomer – they are being very selfish because you know, at the age of 73, whether your go out and work or not doesn't make too much difference. Investments have actually done surprisingly well through all this trauma. And in some ways, you know, you're basically - not deliberately asking people - but you're sort of expecting younger people to give up a lot of their future, so you can get two more months of life or something like that. I mean, you can basically, and I wrote this in an LA Times interview that I did at the end of March. I think that basically the risk having Covid is basically like doubling the natural rates of death for one month. That's almost like the angel of death has decided to come a month early, and will take this whole group quickly. And you know, life is risky - and when you get old, it's more risky. And when you're 85, the chance of dying in every month is probably one and a half percent. And at my age it's half a percent. I actually see this as a liberty thing because I can get a motorcycle now and it'll add very little to my natural rate of death, or go do sky jumping. And I'm serious. I mean, my work will accumulate if I do it and then I wouldn't have even have the chance to do it. But I think that, you know, one lives with life, it's like saying to somebody, okay, you're, you've got a risk for the next month.

Professor Levitt ([00:39:16](#)):

You have a choice now you can go through it or you can kill yourself now. I mean those are the two alternatives. And I don't think there's a lot of risk for me to living for another month. Same thing is true for you. Any age. The risk of Corona is about the chance, the risk of living for another month. Nobody even thinks about the risk of

living for another month! And so I think it's that, you know what the media did here, this is another thing I didn't even understand. It was this glorified…I mean I have a mother who's 105 years old, who's locked down in London. So I'm not, you know, adverse to this, and I'm 73 myself but I do think that whether you like it or not, the future belongs to the young. And you know, there is a question of, you know, somebody dying at the age of 73 - my age - I've had a great life, I've done all these cool things.

Professor Levitt (00:40:08):

If somebody said to me, okay, you know… I have a 16 year old grandson, you know, do you want to live forever? I'd say "NO WAY!" I want him to have his life. You know, that's, that's the way nature works. Now, we always thought this way. But in Israel, at one point I tried to say that what really mattered was not the number of dead, but the years of life lost, which is a very common economic measure. And people would not have it. They were saying "no no no - every life is the same". And I said, but if a 20 year old gets killed as a soldier, surely that's worse than a 95 year old, you know, with many conditions dying. "No, no, no. It's the same." And you know, tech doesn't work here. I mean, you know, no one will give me a life insurance right now. So the insurance companies have no problem telling me, "you're too big a risk to ensure your life". **So why can't, why couldn't the government tell people the truth?**

Ivor (00:41:03):

It's a major issue. And yeah, Dr. Malcolm Kendrick in the UK brought this up months ago - and it was clear even then that this was heading into a complete debacle, but there are quality adjusted life years, QALY's…

Professor Levitt (00:41:16):
I know yes! Which is even "worse" [quantifies life value]

Ivor (00:41:18):

Yeah. And then you base medication cost justification for an individual on these. So the health system for decades has been judging whether to pay for a medication or a treatment, and they might have a guideline of say, I dunno, 30,000 Sterling per year's life saved - quality life - and they're doing that calculation all the time. When this Corona thing started, it was thrown out the window - and it's never come back in the window! They will spend 3 million, 5 million per life year saved. God knows. And the irony is that if the lockdowns are not doing a whole lot extra over distancing - which all the mathematics say they're not really - then you're spending near infinite numbers of dollars per lives saved - if you're not even really saving lives. Now, the logic of lockdown, and I might curl back to this a little again without going into the deeper stats - but the lockdown if you do it, and it has a significant impact. Kind of by definition, if you do a lockdown and you've got a few thousand Corona cases in your society, and let's say it does slow the curve; well when you pull back from the lockdown, the curves going to bounce back up again.

Ivor (00:42:24):

But we're not seeing that. Slovenia, Czech Republic also had a constitutional challenge in the courts in mid-April and the courts threw out the lockdown. Now yeah they kept some distancing, but they had a hard lockdown that in mid-April failed, and I've been told on good authority in past weeks from people in Slovenia, the tubes are full. Everyone. One guy said, there's 60 of us here having pints outside of bar. He said "it's gone". Now I know some people are still doing distancing, but you know – these are eyewitness reports - and the curve hasn't changed since that all shifted, since the lockdown came off. Czech Republic is the same. The curve keeps on going down. You know, Sweden have similar curves to the middle of the pack in Europe, maybe a little flatter on falling less in death, but their ICU curve began to fall on the 5th of April and it keeps falling right down

Ivor ([00:43:20](#)):

So the death are going to follow lowering. So every time you look at the logic, if you take away the lockdown, what should happen if the lockdown was true - is you should start getting cases rising again. You have not eradicated the virus of course. That's absurd. You still have loads of cases, but it doesn't rise back up. So what do you, what do you think of that one? One obvious thing is obviously an element of herd immunity. I know it's a dirty word, but the reality is what's changed now? If you've got a thousand cases in your society and you pull back the lockdown, and you had a thousand when you put the lockdown in - but now the curve keeps just gently floating downwards. What is that? It's not lockdown that's achieved anything – it's the natural cycle that has done that itself..

Professor Levitt ([00:43:58](#)):

Yeah. And I agree with you about this phenomenon. Um, I think that, uh, you know, it may be that what happens earlier I gave, you know, there's several explanations that the virus has changed, whatever, but I don't want to go that direction opens up too many crazy possibilities. I think there's definitely an element of, of invalidity. Um, you know, that the, a lot of this was based on some very, very weak numbers. The fact that 80% would be herd immunity. Um, I took a very different approach to this. I simply said, this is cruise ship called the diamond princess. It has a population density of a quarter million people per square kilometer because it's a hotel. Uh, it may have wonderful lockdown on facilities, but all the air conditioning is shared. Individual air conditioners per room. People were eating in the same dining room. Uh, so let's just say it was medium, you know, it wasn't, and yet the infection rate never got, got about 25%, maybe I think it was 20%, but, and they kept on measuring people.

Professor Levitt ([00:45:02](#)):

But I think if you measured more, you could have found more. I mean it was the early days of the measurements of tests, but basically the number of deaths ended up being seven. Now people have died subsequently. But again, for an elderly population, are we going to count all the future death as being developed? Coronavirus I don't think so. I mean it doesn't make sense, but that actually gave a population fatality ratio of around one and a thousand almost exactly what we're saying now. Um, so I think that is something, but for these other cases it may have to do with population density. Um, I don't know enough about the topography of the area. I mean it's interesting if you compare Switzerland with Austria. Switzerland had I think 2000 deaths in Austria, had just a few hundred, um, of it did lock down very early.

Professor Levitt ([00:45:55](#)):

Um, I don't really know. It may be to do with title. I was great puzzle from the Gregg beginning, uh, in China right from the beginning there I got into, this is when I have friends in China and most of my friends aren't living in Wuhan or Hubei. And immediately this happened. They thought it was like SARS and I looked at SARS. And SARS is basically 10% death rate across the board. But when you looked at the data and the Chinese actually segmented the data almost by city early on. And what I found is that if you took all the cities in the province of Hubei and added them up and then subtracted them from the rest of China, the rest of China was actually behaving in a very, very controlled way. And the death rate out of Hubei was 15 times lower than the deathrate in Hubei.

Professor Levitt ([00:46:46](#)):

So it turns out that we've not had many, many death rates. We realized that it was probably because they weren't measuring enough cases, but it showed that if you didn't panic, the death rate was sort of in the range of, Influenza, Anthony Faucci has a paper that he published in winter to you and go general medicine the 20th of

February where he said that, you know, Coronavirus looks a lot like, flu, I'm not sure if he would say that now. Um, but the numbers seem to suggest that it even looks more like flu than you might have imagined. Um, you know, there's a whole political aspect here. Um, but I, I think that I see this as an experimental way. I mean, I definitely feel that hard lockdown if not a good idea. I don't know. And again, I don't know enough about the, what, what the, I've not lived in Slovenia or the Czech Republic enough to feel, you know, exactly what the dynamic of the populations is. Um, but I, I, I sort of feel that it looks to me like this has gone and whether it's going to come back in, the Fall it could also become, now much warmer weather. I think that's another thing to remember in Israel right now it's 38 degrees.

Professor Levitt ([00:48:07](#)):

That's very hot. I mean, you know, people are, people are dying in the street, no viruses. Um, and maybe in Slovenia I think that Iran was very badly hit, but it renders deadliest in the winter and the winters in Iran are quite cold. The skiing, the skiing above to have, so you know, if not deep, middle, middle Eastern, it's quite normally middle Eastern. So I'm quite happy to believe that it's not going to bounce back. I think also it's very easy to monitor it bouncing back. I mean, you know, you, we know how to measure cases now. We know people are taking people's temperatures. You know, I would say if it bounces back, <mark>people aware must,</mark> I mean you don't want to lock them down. Maybe people who want to travel from an infected area to an uninfected area, take their temperature, you know, don't encourage mass football events involving people from mixed areas. Um, but I, I don't understand the lockdown seems to me to be, it's almost an abuse of civil Liberty just because we can and, and we, the people that can do it to us because we were so panicked.

Ivor ([00:49:13](#)):

Yeah. Michael, I found that actually most unsettling, uh, astonishing that the people rolled over for a lockdown based on no real solid science. And it's just been incredible to watch. And even now when you explain points like we're discussing and show them EuroMomo and show them the reality is even with lockdown lifting, right, it's heading down in the summer towards next to nothing. And maybe it's going to be 1.5 times 2018 maybe or 1.7, you know, with the lockdown gone.

Professor Levitt ([00:49:45](#)):

maximum, maximum, less than that. 1.2, I understand, I understand. But you know.

Ivor ([00:49:54](#)):

probably 1.3 I agree. Because you can see the whole of Europe curve and integrated look at the area.

Professor Levitt ([00:50:01](#)):

and it's already hit. It's plateaued at 1.15 it's going to go up a little bit. But even if you take each of the individual areas in Europe and extrapolate, they've all got no more than 10 or 15% to grow. I mean, and remember, it's almost nowhere to go. Spain has nowhere to go. You know, I think that, uh, you know, one of those things about lockdown is people feel empowered because they're actually doing something to stop the virus. And that's a strange, and this is why they will never admit that it wasn't worth it.

Ivor ([00:50:35](#)):

Yeah, this is a big problem, but what concerns me is for future freedoms and future decisions, what we've become as a society through this is genuinely concerning to me. And I usually don't worry too much about this stuff because the free market capitalism, it's got a leveling effect on any bad things that might sneak into the back door. They tend to get thrown back out again. This one is a worry though because what I've seen on

unravel over the last couple of months is, is astonishing. Like I said, but if we take just Israel, it occurs to me. You're in Israel. So Israel is another example I'm just thinking of because Israel put in a really hard lockdown when they had relatively few cases. Um, they took apart, they're lockdown a couple of weeks ago and I was astonished that the prime minister even said kids can visit their grandparents again and we've completely released the 200 meter limit.

Ivor (00:51:32):

But he said kids can visit their grandparents and we're going to hold off for another week before we do the swimming pools and gyms. But most businesses can open. So they're in Israel, you've got a case where you've got X amount of cases approximately, you lock down, the curve goes right up in spite of lockdown, back down again, gets down to where you started the lockdown and then you take away the lockdown and kids can visit their grandparents. How, how can the lockdown be taken away when you've still got loads of prevalence in your society? Surely it has to go back up.

Professor Levitt (00:52:05):

but you don't have those big concentrations or untraced cases. And I think that it also may turn out that even a little, you know, people are now finding that perhaps just common colds give you some antibiotic resistant to this particular coronavirus. Let's just imagine that you know, you get complete herd immunity at 25% you know, it's a number that I liked, the Princess number, it's a number which I actually used rather than I did run about this was to actually say that the excess death, there was a paper by a very well-known statistician at Cambridge Sir David Spiegelhalter, and he had a paper in the Median, the middle of March saying that the excess burden of death would be one year of excess debt. And I looked at that and I said, this is a great paper, but it's actually one month, not one year.

Professor Levitt (00:53:01):

And then both he and Neil Ferguson sort of came after me, and I said something which I never liked to say. I said, okay guys, whatever, I didn't, I felt it wasn't worth arguing my case. My numbers were very, very clear. And now we see that for all of Europe, it's going to be four weeks. Uh, and no one can deny that Europe is being very badly hit. It may even be three and a half weeks. Um, so basically, you know, there were a lot of very dubious numbers. Uh, it also turns out that uh, there's a whole fallacy about R zero because the growth of the virus is R zero time for time you're infected. So if you are infected for three days, you can have a tiny, you can have a very big loss here and if you've been infected for three months, you'll kill a lot of people with an R of 1.1. It's just the multiplier of those two things. In fact, it's R zero minus one times the time infected, and no one knows what the time infected is, no one knows about hidden cases. There was a lot of completely unknown biology in this issue. I think we're going to see just experimentally when stereotyping is done, we're going to find that a lot of these places that's going to be around 25% this is my bet. Again, it goes back to this one experiment to the diamond princess, which is obviously too small. A stereotyping is difficult. It's hard to get it right. This is what's stopping it. Now I'd need to note that in certain locations, for example, in Israel, the climate in Israel now is totally different than it was three months ago, two months ago. Even if there was a huge title of virus, I don't believe that the virus is going to spread.

Professor Levitt (00:54:53):

It turns out that if you look at, and again I use flu, not because this is flu because we have so much knowledge of flu, so it turns out that flu doesn't like warm climate, but it actually likes warm, humid climate. So flu is endemic in equatorial Africa, a hundred thousand kids die of flu every year. Babies, five-year-olds, and this is probably why it's so bad in Brazil, but if you look at Australia, South Africa, New Zealand, you know this thing, you know,

we're self-limiting. And uh, one thing that the curves show and it is <mark>predictable,</mark> but basically this virus is slowing down from case one, now clearly nobody has any lockdown when you have one case, people don't usually implement lockdown until you have say a thousand cases or a few hundred cases. Well it turns out that the, the growth is slowing down. It's never exponential, but it's slowing down dramatically.

Professor Levitt ([00:55:57](#)):

So if you infect, you know, three people on day one, then those people will only infect 15% less of those three people. And so in an, like a bank paying you, a great thing, come to our bank, we'll pay you a hundred percent for the first week and then 50% for the next week and, 25% for the next week. And you'll quickly realize that it would have been way better. It's got 3% for the whole year. And you know, when you have exponential growth, decreasing exponentially, it doesn't go very far. And you actually see when you were talking about the shape of the curves, the curves are actually bending from the first moment. I picked some of the things I released in my podcasts. So the curves are really bending from day one, and this is true everywhere. It's true in Iran and it's true in Italy, and it's true in New York city.

Professor Levitt ([00:56:46](#)):

And this basically means that there's something slowing down the growth. And what I think that is, I never understood this. It doesn't make sense. I'm the first case, surely I can find three other people really easily and surely they can find me through three other people really easily and we'll get it. You do that for a short while and you'll have five days of exponential growth at three people a day. You have a pretty big number. But I think what is happening is, is that a large fraction. We don't know, but let's just say for every real case, there were three hidden cases. These are people who are asymptomatic, who feel nothing but are infected and are infectious. So now I'm, you know, I'm the virus. I'm in case number one. I'm going out looking for people to infect and I'm feeling great and I'm the first guy on the block, I'm going to get somebody except unbeknownst to me, all my hidden companions have been out before me.

Professor Levitt ([00:57:44](#)):

or the same time. So by the time I get to fresh case, sorry, somebody just got him, we don't even see that person. So I think if you have these shadow cases, they took a change but then, there's a lot of evidence now for these shadow cases. They make the R value a different thing. Because instead of me infecting everybody, it's all the shadow cases working together. So I think that this explains immediately why you get essentially the virus is growing slowly but just competing with invisible copies of itself that aren't being counted as confirmed cases. And this is also why when you have case one, you probably have a hundred infected people and it makes sense.

Ivor ([00:58:30](#)):

And that's the essence of the self limiting slowing curve and then tapering off. And when you think about it, I mean in March there's no question. In the UK, the university of Oxford actually came out with something that was widely rejected. They said, look, already coming into March, we probably got 10% maybe 20% already effectively exposed. And you know, the university of Manchester now have modeled and they're talking 25% London rates are falling. But the really stunning thing for me is probably from professor Hennigan from Oxford. He clearly shows that the cases peaked and the deaths peaked indicating mid-March, the curve had actually turned. So it was actually on the way down before the lockdown really got going and it stayed it's shape. All the way, blindly ignoring the lockdown.

Professor Levitt ([00:59:23](#)):

Yeah, but when the curve goes down, remember you in a country, you don't have a single outbreak that's synchronized. So let's imagine it starts in London and then two days later it starts in Cambridge and then three days later it starts in Manchester. Each of these things are maturing at different rates and you're measuring a single number and you particularly see this in the peak, I mean a single clean epidemic has a peak and then it comes down very quickly. If you look at countries like Switzerland, Italy, it's almost like a mountain range. And this is because the different peaks are maturing at different times, but theyr'e all on the way down. I mean once you see the peak, you can essentially say that we're fine. It might be a long peak, but the longest, biggest, never more than three weeks. I mean the peak should be a few days, but it can be extended by multiple peaks in different places.

Professor Levitt ([01:00:17](#)):

I think that's the problem. But again, I, you know, you got a pretty clear idea of the extent. I think lockdown I was very disappointed by the lockdown in Britain. I actually felt that they were going to go the Swedish route initially and you know, they changed their mind midstream and they probably got the worst of both worlds because they got everybody infected in the first part and then they locked down on all those infected people and you know, but then the hospitals got through it and the fact remains that I'm sure that Britain is saturated and you know, so is most of Europe. And I think that is great, but it does mean that if Slovenia's saturated, It's certainly saturated and this is all good news.

Ivor ([01:01:07](#)):

Yeah, and it is. And in fairness to the, someone mentioned on Twitter when I said we were having this interview today, I'll ask you, do you still stand by our thoughts on Sweden? But interestingly Sweden, I've been watching and they kind of turned hit their peak and deaths. They are more plateaued in their curve to your point. And they're going out more flattened deaths rather than falling sharply. So, but we need another few weeks to see. But the key thing for me is the ICU loading peaked on the 5th of April and has been falling steadily ever since. So the death rate has to start falling off soon. Otherwise there was no logic in the world.

Professor Levitt ([01:01:45](#)):

Well, if you take Sweden and you say you want it to have, you know, say three quarters out of thousand dying. So that means 7,500 people, 7,500 deaths in Sweden. They're only halfway there. I think right now maybe 4,000 by today, it was 3,600 yesterday. So if you, if you just take that logic, I mean, you know, Britain didn't go all the way. 50,000 seems like a huge number, but it's still, the average for all of the Euro countries is 0.7 deaths per thousand. If Sweden does that, it just matches that number. They need to have 7,000 deaths. So they've got a ways to go. So that plateau is fine. I mean, I'm not saying they need to get there, but I'm just simply saying that, you know, if you may argue, you know, there is some level of social distancing. Social distancing is very, very different from lockdown, you know, not letting people have gatherings of more than 50 people is somewhat of a nuisance, but it's not like you can't leave your house any time, any way.

Professor Levitt ([01:02:55](#)):

My mother has been in our home in London. It's a private home with my brother. They haven't moved anywhere since lockdown and they haven't had a single carer come in. She's done fine right now. She had a problem with her iTunes accounts. I fixed that remotely for her, um, if that's, if that's a big problem, you can realize that she's not in bad shape. She was worried about losing her pictures in the cloud. Um, but I, you know, I think that I would agree with you hard lockdown. There is zero evidence that it works. On the other hand, the kind of lockdown or the kind of, social distancing that's being practiced in Japan for example. Well, Taiwan seems to work.

Ivor ([01:03:35](#)):

and you know, it goes again with intuition, particularly people who are technical and mathematical for, for most of their lives, the intuition's pretty good because intuition is not just guesswork. Intuition is based on pattern recognition, uh, neurological processes, scale experience, talents all come together to inform intuition and social distancing from the get go. I intuitively knew that that made sense. It's going to make an impact and protect the hospitals. And where my intuition is screamingly very angry and not happy is with the lockdown additional measure which might have the tiny slice for enormously expensive and damaging, uh, intervention. So, yeah. And, and you know Sweden. I exactly, I sent out a survey around six weeks ago and I showed four curves for Sweden and I didn't want it to look ghoulish but I said A and I had a total of 18 or 19 or 20,000 debts and I showed their curve going on and a big kind of parabola into the summer. And then I had BC and D was, it fell off at 6,000 deaths.

Professor Levitt ([01:04:45](#)):

Yeah, that's alright

Ivor ([01:04:47](#)):

yeah, and I purposely, I purposely said in the survey, the way people were talking, my A option, at 20,000, I said, look, you can also say worse than a, and a lot of people commented worse than a, but I was being a little clever cause I kind of was thinking, yeah, well D that's what the math says. Right. Um, but yeah, only 30% picked D and there are people who probably follow me and they'd seen a lot of stuff already. So fascinating. We perhaps circle, Oh, are there any other key things in this, cause I'm conscious now. I've gone over an hour of your time, Michael.

Professor Levitt ([01:05:22](#)):

That's fine. I enjoy, You know, I love talking about this, because a refresh as my ideas and I think everything is good. I think, you know, I, there's a lot of, I kind of wish that maybe people are doing these things and writing papers on them. I decided that I was going to put myself out there without any, it doesn't even go to pre-print service, It's just going out there. There's a lot of analysis. You know, I like the analysis less of the words and all the padding. Um, but you know, you would have thought that people should be looking at things like Flu versus Corona in the USA, Flu versus Corona. I would have thought if I was an epidemiologist, I would want to know exactly where Flu had hit and then just map your correlation between deaths from Flu through deaths from Corona. I wouldn't be surprised if there's a very good correlation it should be very important because it means, a country that says we never have flu open up, you know,somewhere.

Professor Levitt ([01:06:18](#)):

But I, you know, I think we've discussed everything I could imagine. It's been great. And this is all way beyond what I wanted that, and again, I do see that it's the numbers. I'm just worried about this completely crazy panicked world. Um, if you, uh, I, I'll send you a link to my Median post, which was the one thing I actually posted publicly. And the last three words are, can you, do you know, somebody who knows somebody who can stop this madness now and this is 22nd of March. And you know, it's a very hard prediction. And I guess I was often saying to my wife, well, you know, maybe I'm just lucky with my predictions, but I basically have been pretty accurate so even if i'm lucky you probably should follow me. Not because of, but you know, it's all based on the numbers. I'm not somebody who deviates from the numbers.

Ivor ([01:07:14](#)):

Well, absolutely Michael. And that's a good way to finish it. I mean, there is the scientific method. We're controls proofs and good science. There's going by the mathematics and analyzing your data carefully and rapidly to better understand the tempo of a problem. Uh, and there's all of that science-based stuff and it has been effectively suspended now for two months, which kind of, I find that offensive because I was always a person I always hated when the technical truth was twisted. You know, some people hate people who lie. I was always really offended if someone twisted the truth around the cause of a quality issue to suit their political purposes. It drove me crazy and I even managed to never do it myself, which is amazing. It offends me. And this thing has been a living hell for me because of that. But we'll get there and we might circle back in a couple of weeks when these curves really kind of reach their destination and you can kind of really look back on the whole thing. Maybe that'd be super Micheal.

Professor Levitt ([01:08:14](#)):

There's also a silver lining in the way everyone is feeling and that is even a little bit of positivity goes a long, long way. I mean, a lot. I'm getting so many emails, direct messaging saying just how I brought light into people's lives and you know, this is just because they were in such bad places. So I think in some ways the fact that some, some light is getting through the chase in this very dark time is very important. And I think that we are seeing this and I think Sweden, you know, even if they thought it was the wrong thing was a great example because people will say yes, but theyr'e social distancing. You look at their travel records looking at this. But the fact is is everyone should have socially distanced. Like Sweden would have had no economic damage. Exactly. And CNN team visited there. And to be honest, I'd say they're being politic and how much they're really hard distancing In reality, they visited Stockholm and people are in hairdressers. They interviewed people, people were shopping with no real one metre even so, you know what? Sweden are pretty soft distancing. Even if many of them are traveling less or working from home, fine. But there's a hell of a lot of activity going on that would be unthinkable uh, to the other countries in Europe. So let, let's see what happens.

Professor Levitt ([01:09:30](#)):

Yeah, I'm looking forward to that. Anyway, it was great to talk to you and I look forward to your tweets and whatever I, where do you live? Do you live in Dublin?

Ivor ([01:09:40](#)):

I, yeah, I live in Dublin. We've been locked down for around eight weeks and i'm out in my office in the back garden and I, seven days a week, I'm the house or the office,

Professor Levitt ([01:09:49](#)):

Are things, are things being relaxed?

Ivor ([01:09:52](#)):

Well, I almost got sick in my plate a week or two ago when they brought out a four month plan to slowly relax the lockdown.

Professor Levitt ([01:10:00](#)):

I saw that.

Ivor ([01:10:01](#)):

four month.

Professor Levitt (01:10:01):

it was going to end on 15th of March, 15th of August. I saw that I was interviewed by the Sunday independent and they asked me to comment on that plan and I said, look, I'm not going to tell your government what to do, but they're going to do the right thing. Especially Ireland has been an economic miracle for the last 30 years compared to where things were plus Ireland is one of the most equal, income equal countries in Europe. It's like Iceland has a great, it's called the Guinea index. It's one of the lowest in Europe. When you have a country like that, they must be doing something right in the leadership or look at the numbers and do the right thing. That seemed like the best thing I could say to avoid injury, We'll see. I'm optimistic. No one wants to destroy the economy.

Ivor (01:10:49):

Yeah, And I, I think they'll, they'll wake from their stupor is the way I look at it, but I think they will. And the people also, I'm meeting people, uh, just out walking the dog, uh, business people who have already worked out what we're talking about now. There's not too many of them, but there'll be growing numbers looking at the data and saying, okay, hold on a minute. Did I lose my business for this? So hopefully they'll get through to the media too, in time.

Professor Levitt (01:11:14):

Thank you so much. It was really nice to talk to you. Bye. Take care. Bye. Bye.

Ivor (01:11:19):

Thanks for tuning in, guys. If you're watching on YouTube, you can see my subscribe button in the middle of the screen and go to ExtraTimeMovie.com to see our fascinating new documentary on stopping and reversing heart disease.