

Princeton Pulse Ep. 4:

Can we tackle vaccine hesitancy and climate change with a similar playbook? Researchers think so.

Heather Howard 00:02

Hi, and welcome to the Princeton Pulse Podcast. I'm Heather Howard, professor at Princeton University and former New Jersey Commissioner of Health and Senior Services. On campus and beyond, I've dedicated my career to advancing public health. That's why I'm excited to host this podcast and shine a light on the valuable connections between health research and policy. Our show will bring together scholars, policymakers, and other leaders to discuss today's most pressing health policy issues, domestically and globally. We'll highlight novel research at Princeton, along with partnerships aimed at improving public health and reducing health disparities. I hope you'll listen in as we put our fingers on the pulse and examine the power and possibilities of evidence informed health policy.

On today's episode, we're tackling vaccine hesitancy and climate change. What do these seemingly diverse problems have in common? More than you might think. Although they're distinct challenges, both imperil global health, are perpetuated by social behaviors, and, according to a recent study, could be solved with a similar playbook.

To set the table for today's discussion, it's critical to note that the rapid development of effective vaccines has been a shining success in the fight against COVID 19. Yet, there are many people who are opposed to receiving them, even when the vaccines are free and readily available. At the same time, human induced emissions of greenhouse gases are propelling global warming, a threat to humanity that is sometimes denied or minimized. On both fronts, the driver is inaction, on the part of individuals, communities, corporations, governments, and other actors. And the solution is collective change. Evidence suggests that resources, effective policy, and strategies for influencing health attitudes could be the key to reducing vaccine resistance and motivating climate friendly behaviors.

Here with me today are Princeton Professor Simon Levin, who will discuss his research on this important topic, and Nick Silitch, who recently retired as Chief Risk Officer for Prudential Financial, who will speak to the role of corporations and addressing these issues. As always, we'll explore how we can work together to impact policy and improve global health. So Professor Levin, Nick, welcome to the show.

Simon, can we start with you? Tell me generally about your research and how you came to this issue. And maybe, if you could throw in for our listeners who are expecting a public health podcast, why is climate change a public health issue?

Simon Levin 02:40

Okay, well, first of all, I should say something about myself and where I come from, because I began as a mathematician. My Ph.D is in mathematics, but I wanted to apply it to deal with problems of the world. When I first got into this business, Rachel Carson and Paul Ehrlich and others were alerting us to some of the big problems of the day. And so I quickly turned attention to ecological problems. But after working in that area, including infectious diseases, which is part of what ecologists do, I realized that I wasn't going to be able to address these problems adequately, unless I could begin dealing with social scientists and economists in particular, because there was an economic side of the decision-making. And so I've been working in that area for the last 30 years.

One topic that became particularly important is how you get cooperation, and how you deal with what are called social norms. How do you get collective action in this society? So this was a problem that I worked on within the context of climate change for a while, but we've seen dramatically dealing with the current pandemic, in particular, why it's also important in dealing with ways that we address pandemics, mask wearing, vaccination, etc. And how do you get collective action? Why is climate change a public health problem? Well, you know, there are a whole bunch of reasons, some of them simply having to do with changes in the environmental condition. But climate change is also affecting the ranges of diseases and vectors of disease. And we're seeing, for example, influenza, which used to be confined to a much more narrow ranges of the season, spread out over longer periods of time. And for vectored diseases, this is obviously a major problem as the vectors of diseases are changing their ranges. So these are closely related public health problems. And the difficulties in dealing with them are quite similar as we'll get into, I'm sure.

Heather Howard 04:52

Great. I'm looking forward to that. But Nick, you just recently retired, so we're so glad that we could get you after retiring. What does it mean to have been a chief risk officer at a large insurance company?

Nick Silitch 05:05

Well, your foundational role is to determine what the envelope of possibilities might be when you look at any distribution. So, you know, Simon talks about his math thing. I was an undergraduate, and not even a very good one, at Colby College. But as I grew through time, you realize that there's an awful lot of benefits to all of that stuff. And I spent a lot of time thinking about how do you build a distribution, what kind of data you can use to drive it and create it. And then as you get to define these distributions, both based upon history and analysis of future shifts. For instance, in the world that we look at for capital markets and interest rates, for stress test, we look at data that goes back 30, 40, 50 years. None of it's that important compared to where we are today -- for the shape of the distribution, yes, but for the tail of the distribution, what you have today is a world where the U.S. dollar is over 60% of global debt, which is a stunning number. And the US dollar, if people's perspective on that changes, the volatility that we get is likely to be materially higher. So we think about the distribution of outcomes.

As we look to climate change, for instance, distribution of outcomes is very important. Especially on the asset side for us. We invest in every different kind of business model on the planet. And as you're doing that, you need to make sure that you think about the evolution of cash flows through time. So if a business is exposed to dirty coal, the odds are their business is going to start shrinking. Fifteen years ago, we were thinking about these things. More recently, we've been pressured by our investors to say, hey, we don't want you to do this, we don't want you to do that, or by regulators. But the real driver of it to begin with was just the cash flows and the evolving of the business model. And then from COVID's perspective, my goodness, we've had a lot to think about. Do we take vaccines into account as we write life insurance? Can we make that a mandate to underwrite life insurance or not? There are a lot of issues around that, in terms of whether or not it changes the numbers enough to make a big enough difference, and with the population that we insure. Those are all interesting questions that we think about as we go through it.

Heather Howard 07:41

So what's already popping out of me is that your job requires you to think long-term. Right? Simon, that's something that you've wanted to do. It sounds like you've been frustrated with what the policymakers haven't done. Is that the source of your friendship and how you know each other?

Simon Levin 07:56

Well, yes, I think so, plus a mutual respect for him. Nick's not necessarily even talking about long-term. You know, when we hear about climate change, usually people were thinking 50 years, but we're talking about 10 years here. And so that's a long term for a politician. It's very frustrating to enact change there, unless there's pressure from the people and pressure from the business community. So I discovered, over the last decade, that there's much more leverage and much more convergence of perspectives, in dealing with many aspects, not all, obviously, of the business community. I'm not talking about the big energy, although I was on the advisory committee for British Petroleum for a while, but especially insurance companies are very sensitive to the risk. They can't afford to ignore it. They can't be influenced by political agendas. They have a job to do. And so I found much more resonance in talking to Nick and others, like Peter Hancock, who used to be at AIG, about these sorts of issues. I think that that sort of leverage is what we're going to need in order to get politicians to pay attention.

Nick Silitch

We're hyper-focused on the transition risk. I can argue that the vaccine and the climate change are very different in subtle ways, right? The number of reasons why people don't want to get vaccinated range from "I think it's the wrong thing to do scientifically," to "I've got a religious anchored thought that I don't want it," to "I might want to have a baby." Whatever it is.

Simon Levin 09:47

Or to a libertarian, simply.

Nick Silitch 09:49

Yes. I think, at the core, the reason why people don't want to do climate change is it costs money. We have been borrowing from the future. to pay for our lives today in climate change since 1880, I would

argue, really since the late 1600s, when we first started building up the carbon count. But since 1880, when we've had commercial electricity... Didn't Edison live right around here, too?

Heather Howard 10:20

Proud New Jerseyan, yes.

Nick Silitch 10:21

But when that happened, and the combustion engine, those two things literally put us on the Hyperworks. It wasn't until 1980, or maybe the 1970s, with acid rain, that people began to think, oh, my gosh, we've got a problem. But the cost to fix it was too expensive. And politicians aren't willing to have that hit. So we need to get to the point where everybody is on board. At this point, there are some climate deniers, without a doubt, but that population has gotten increasingly small and out on the wings. Nobody wants to confront how to deal with it. So they'd rather pretend it wasn't a problem. And I think that's a different challenge for us to address. The issues still need collective thinking, but it's a different challenge.

Heather Howard 11:15

So it's interesting, you're drawing a distinction. On the vaccine side, there may be people who are opposed to all vaccines versus people who are vaccine hesitant. Right? And I think, where you're going to take us is, especially for the vaccine hesitant, is how to move them. You're making the point that there's this small group who are complete deniers, but there are many people who believe in climate change, but aren't willing to take action because of their own personal interest. So let's go there. Simon. I think you saw a study that showed ways to move people who were vaccine hesitant, right? And from there, you thought about what we can learn from this.

Simon Levin 11:52

First of all, from a risk perspective, I want to talk about yet a third problem that we're dealing with, which is antibiotic resistance. Our group, especially with Ramanan Laxminarayan, who is a professor here also, got interested in the differences between dealing with antibiotic resistance and vaccine hesitancy - in particular, the notion that we tend to overuse antibiotics and underuse vaccines. Now, why is that? And I think our conclusion is an interesting one, from a risk perspective point of view. Antibiotics you take generally; there are exceptions, but generally, when you already know you're sick or compromised. So you want to get better. Vaccines you're asked to take when you're feeling fine, and they are probably going to make you feel, in some cases, sick for day. So this is an interesting perspective on how people look at risks and benefit.

Nick Silitch 12:51

That is, in fact, the same issue. Right? It's the short-term versus the long-term.

Simon Levin 12:56

And so that was the second thing. I wanted to volley off both your points. Much of this is about discount rates. How important is the future to the short-term? That's what Nick was talking about. Even on a 10 year horizon, now, you can't get many people to be willing to attack that. As an example, 15 or 20 years ago, there was a growing consensus that climate change was a problem that we had to do something

about it. Then something happened in 2008 and 2009. And I must say, there are people who disagree with my interpretation of what happened. But, without question, we had a financial meltdown. And when the financial meltdown came, support for doing something about climate action dropped precipitously, by 25 or 30%. It's recovered, but there was a tension on a different crisis, the financial crisis. And also these were two crises that were sort of in conflict with each other... we've got to get the economy going, etc., and therefore we'll worry about climate change later. It's about discount rates. And I think a lot of the debates that you see about climate change, in particular, and you could argue with vaccination as well, is that I'm more interested in today and how I feel today. I'm more interested in how I'm doing economically today than I am, in the case of climate change, 20 years from now, and in the case of the vaccine, if I should happen to get infected.

Heather Howard 14:33

Nick, do you want to build on that? We're seeing right now, in the public policy arena, that states like Florida are rethinking property and casualty insurance, right? Should Florida rebuild after the last big storm?

Nick Silitch 14:48

It depends on where. Rebuilding on top of a hill might make some sense. Rebuilding on the coast, 20 feet away from the Atlantic Ocean, makes an awful lot less sense.

Heather Howard 15:01

But politicians don't want to tell people not to rebuild. Is the insurance industry sending those signals by changing rates?

Nick Silitch

Sadly, it's not the insurance industry's job anymore, because they did send that message way back when. If you lived in a flood zone, you couldn't get flood insurance, right? That was just a simple rule. And then, whether it was state funds or federal funds that went to backstop the purchase of flood insurance in those zones, you can now get flood insurance for way less than the economic cost. And so people started building really big houses right on the coast. That's now back in the conversation, at least, about maybe we shouldn't be doing it. But I think when you when you talk about the broader notions that Simon was talking about, it seems to me that our issues are how do we transform the way we're thinking and get people to absorb -- you called it the discount rates -- I call it the true cost.

When we first started building our carbon count, nobody could know that we were doing that and there was a long-term cost. But by the time we got to the 1970s and 1980s, we started becoming aware that there was a cost to this. And we didn't bake it in. We didn't bake it into our electrical grid, we didn't bake it into the coal consumption, and it has to be done globally. And if we had started baking it in through some form of a carbon tax or something like that, it would have driven cost up. A lot of people can afford it. For the people who can't, you can take some of the amount from the carbon tax and put it toward that. You could also use it to subsidize renewable things, because right now the gap between the renewables and the fossil fuels is pretty big. And it's not economic. So you have to do something to change that. And we're trying right now, when it's pointed to just the financial institutions, and the regulators are pointing to us. Their answer is to raise the cost of capital -- to your point, raise the

discount rate -- for fossil fuels, which drives up the cost of fossil fuels. And they can do that, sort of, but that's just addressing one issue. It's reducing the amount of fossil fuels available. And we see the danger that has to energy security, certainly in Europe, and probably here, too. I hear New England is going to have some issues. So that's not an acceptable political outcome. You have to address the other side, which is to stimulate the renewable universe to the point where it can be in a position to offset that. And that's the journey, and just poking at it doesn't answer it.

Heather Howard 17:53

So Simon, that's where your research comes in. The article, which we'll link to in the show notes, is entitled "Vaccine Hesitancy and Global Warming: Distinct Social Challenges With Similar Behavioral Solutions." Tell us about how you dug into that data and talk about how to bring home to individuals that true cost or discount rate.

Simon Levin 18:16

The work that you referred to, the experimental work, was done out of Ilan Fischer's group in Israel. Ilan's been our collaborator for maybe 20 years. Ilan is a psychologist, and we've done a lot of theoretical work before. Ilan led this study. But let me give you a little context for it. In the case of Ilan's work, he refers to it as strategic similarity or something of that sort. But it fits into a broader spectrum, which is, to some extent, all these are problems with collective action, and public goods. Now, they're a little different.

In the case of vaccination, you're doing it for two reasons. One is that there's a direct benefit to yourself to get vaccinated. And secondly, there's a benefit to society. Most of us prioritize the first. In this case, I got vaccinated primarily because I was scared not to. However, if I'm in an environment in which everybody has been vaccinated, against whatever we're dealing with, then there's less incentive for me to do it because I'm not going to catch it. But we're seeing, even with things like measles that we had basically wiped out, that there are small pockets of anti-vaxxers who aren't getting vaccinated, so I'm still at risk. Obviously there's also a benefit to society, but the point is, in the case of vaccination, that what I do depends on what society does. And my incentive to do it is much less, because there are slight risks and inconveniences, if everybody is vaccinated.

In the case of climate change, that's much less. I'm not going to change my own personal climate by doing something. It's a collective action decision. But all of these are what Garrett Hardin referred to as the tragedy of the commons. This goes back to William Forster Lloyd, two centuries ago, who talked about the commons. Hardin picked up on it, suggesting that everybody has an interest in preserving the commons but everybody views that their own contributions to the problem or to the solution aren't going to make that much difference. So how do you get people to cooperate? It's a lot like voting. Why do people vote? And so his solution was mutual coercion, mutually agreed upon, by which he meant that you create government entities or something of that sort to enforce it. Garrett Hardin did not win a Nobel prize. That was left for Elinor Ostrom, who was a colleague and collaborator of mine, who won the Nobel Prize shortly before her tragic death. She worked with small fisher societies, and showed how they could develop norms, norms of action, so that everybody bought into these ideas. And then you could get cooperation, at least on a small scale. She raised the question, in several of her last papers, of how do we scale this up globally. She talked about what she called polycentricity, which

meant that you build local collective units - it doesn't have to be geographically local -- and then these would be building blocks.

Nick Silitch 21:44

That's such a challenge, though. For example, I was in Japan two weeks after the Fukushima earthquake, and they had a real problem. All of their energy had been provided by nuclear, and suddenly they didn't have that anymore. They were importing natural gas as fast as they could, big tankers everywhere. But they didn't have enough power. So they needed to reduce energy consumption by 25%, literally in a week. I went there, and walking the streets at night, there wasn't a light on, not in the apartments, not anywhere. Everybody turned off air conditioning. The classic black suit disappeared; people wore whatever they had to wear. So they collectively got there really fast. In the United States, I lived in California during a huge drought in the mid 80s. Honestly, the guy who had the lawn that was still green, everybody on his block was going to him, saying, "How are you doing that?" In Japan, that person would have been ostracized from society. In America, that person is lauded because they're somehow skirting the rules. So we have to find a way, culturally, to address that. And it's not everyone, but it's enough that it creates an issue.

Heather Howard That's right. I mean, we're so divided. How do we find that perceived similarity when some people have the advantage of being able to weather climate change, and others don't?

Simon Levin 23:02

That's a great question. So let me work from the bottom up, and also point out that -- together with Helen Milner in the politics department here -- we organized the special issue of the Proceedings of the National Academy of Sciences last year on the dynamics of political polarization. Political polarization, obviously, is on the increase. The data support that. And lots of people from Princeton took part in these meetings, in this special issue. None of us, well certainly I didn't think and Tony Fauci didn't think that political polarization was going to drive the discussion of vaccinations.

So let me take a step back and go back to my second order roots in Ecology and Evolutionary Biology, in which one of the fundamental questions that people have been fascinated with is how do you explain altruism. Darwin didn't understand that. It delayed the publication of the origin of species for 20 years, as he tried to understand why it was that in the social insects, the females would give up their own fitness to help their sisters. And I don't want to get into a debate on it, but there are lots of explanations, many of them tied to kin selection. In the social insects, the sisters are more closely related. Genetically, they share three quarters of their genes, because the males come from unfertilized eggs... you don't want all those details. Anyway, this is what's called kin selection. Obviously, you do things for the benefit of your kin. So you don't take the decision only for your own immediate benefit. It's your close kin. But secondly, you might then do that for other members of your society. You certainly can engage in what's called reciprocal altruism, where we basically have an agreement that you scratch my back, I'll scratch yours. But there's also called indirect altruism, where you develop a norm in the society. The late, great catcher, Yogi Berra, is quoted as having said (he probably never did) that if you don't go to other people's funerals, they won't come to yours. But there's a truth in that, meaning that if I

don't go to someone else's funeral, then other people aren't going to come to mine because it's a social norm.

We do experiments in our class on why people make the decisions they do, often not in their own economic, apparent self-interest. It drives economists crazy that this happens, but it's because they're sustaining a social norm. And so that's what Lynn Ostrom was getting to. In order to address these problems that have the "public goods" dimension that Nick was talking about, you need to develop a broader sense of community. And it can't rely just on genetic relatedness. So how do you do that? In my class, I let the students talk to each other about what they're going to do in these situations, before they do the experiments, as to whether they're going to contribute. If you think other people are thinking similar to you, just like Nick's experience in Japan, then you'll be embarrassed not to eat, or you'll have confidence that others will do this thing you do. So one of the best strategies in dealing with cooperation is what's called "tit for tat." If you do something and cooperate, then I'll cooperate with you. If I expect you to cooperate, I may be more likely to cooperate. In a more sophisticated way, Fischer's experiments showed that if you're in an environment in which you think other people are going to make decisions like you, this enhances cooperation, maybe because it's sustaining of social norm. And we've got to get to that stage. This was Lynn Ostrom's idea... that it's easier to do that in small groups.

Nick Silitch 27:16

Can I build on that sustaining social norms piece? Because it's actually fascinating when you think about it. One of the other ecosystems that's in trouble is the financial system. If this is the foundational drive for all of us to sustain social norms, we have been able to collectively agree on one thing, literally, across the U.S., Japan, Europe, virtually every society, and that is that debt is okay. Society has coalesced around, "hey, debts, okay, as long as we can keep up with the Joneses," which is the social norm piece. And so everybody's doing that. And we've all been able to agree to it, because it doesn't cost anybody any money today; it costs them down the road. The difficult thing is to get them to coalesce around something that costs them money today, even though for people, both individuals and the government, to borrow money is a really bad idea. I was the chief risk officer of a major financial company, and I've never had a credit card. My wife has one because she can trust herself to pay the bills every day. But I have a debit card. I don't like debt. It's not a great thing for me. But there are other people in society who don't think twice about it.

Heather Howard 28:37

So what's the practical application of this, Simon? If President Biden called you, or the head of the WHO, and said they're designing a campaign to get people to be vaccinated and we want to think about some environmental actions. How could this be practically applied by these governments?

Simon Levin 28:54

That's a great question. I'm not an expert on that. But the impact of the experiments and the paper was that you get people to communicate with people they trust, with their relatives and others, and to discuss issues and educate them. This drives them away with what's known as cognitive dissonance, when they realize that the positions they're taking are not consistent with the other things that they deeply believe.

Heather Howard 29:18

You also wrote, though, that changing the mindsets is one step. But you also have to make it easy for people to effectuate those new mindsets and behaviors. Can you talk about that?

Simon Levin 29:28

Well, you've got to give them a pathway to compromise. I think that one of the biggest social problems that we're facing today is the political polarization that's emerged that makes it impossible to even compromise on one issue. We've got to find ways to get around it. Madison, in the construction of the Constitution, believed that political parties were going to be a bad idea, that we should try to avoid them. He believed that what would make a democracy work is the diversity of issues., and that this would sustain a working system. He was right about the latter. He was wrong in thinking that the system he devised would eliminate political parties. In fact, it strengthened them. And what does that mean? Political parties mean we've lost dimensionality. How many people in the political spectrum today can you think of who have a mainstream opinion for their party on some issues and not on others. It's becoming more and more difficult.

Heather Howard 30:31

In public health, we often think about how we can make the right choice, the easy choice. For example, in vaccine campaigns, what we've seen so far, is that it's got to be free, it's got to be accessible. That means if it's hard for people to sign up for an appointment, they're not going to do it.

Simon Levin 30:50

It's got to be not embarrassing.

Heather Howard 30:51

That's right. It's about changing those norms and making it easy. So you go to where people are, but we haven't done as well enough as we could. But, at least in the U.S., vaccines have been free, and they have been pretty readily available.

Simon Levin 31:05

That part's easy.

Heather Howard 31:06

That part we've done. But how does that apply to the climate space. I don't know if you have any thoughts on that.

Nick Silitch 31:14

On the vaccination piece, part of the problem is, and you touched on it earlier, the cost of not being vaccinated isn't being properly absorbed. There is a societal cost to people not being vaccinated, and that's a new strand of this disease coming along, whatever it is. We're not reflecting that. The only way to do that is to somehow raise the cost to the unvaccinated. If their risk of getting sick is going down, that's not helping. But if society and politicians had enough gumption, you could pass rules saying that you can't get life insurance if you haven't been vaccinated, that your health insurance becomes invalid.

So there are ways we could incur a cost. You can't come to work if you don't get vaccinated. You can't come into this environment if you don't get vaccinated.

Heather Howard 31:45

But would we tolerate those?

Nick Silitch 32:16

Societally we don't wish to tolerate them. And I think they'd be very hard things to do. But that's the solution.

Heather Howard 32:29

Does this apply to mask wearing?

Simon Levin 32:31

One of the things that's interesting, both about vaccination and about mask wearing, and also about climate change, is how different attitudes are in different countries. For those of us who have traveled in the Far East 20 years ago, we knew that mask wearing was common, during flu season, in particular. If you traveled to the Nordic country, or even here, you never saw it. And if you went to the Far East, you thought, why are they doing that.

Nick Silitch 33:09

And in Japan, virtually all year long.

Simon Levin 33:11

What's happened is that in the face of COVID, that behavior has obviously continued in Japan and China and Thailand and places of that sort. It's also continued in the Nordic countries, Sweden, Denmark, Norway, where nobody ever wore masks, and they still don't. But then there is a third set of countries, including the U.S., in which there was a dramatic transition in the social norm, where we never had a tradition of mask wearing and somehow the message got across. That's a social phenomena. Our papers try to look at the question of how did that transition occur. How do social norms change? And we've seen this happen, maybe not to an adequate extent, with attitudes towards racial equality, gender equality, smoking in public places, etc. It's very locally specific, it's very culturally determined. It goes back to Lynn Ostrom, social norms are going to change locally, but maybe spread globally.

Nick Silitch 34:16

And time will accelerate that, right? So if you think about it, there's a whole group of people who spent the last two and a half years, the people who are 25 and under, who literally wore a mask every day, and they got used to that. So the next time they are told to wear a mask, it's pretty easy for them to say, I can do that. For the person who's never worn one, it's a big jump.

Heather Howard 34:39

So does that give you optimism going forward, then? Both of you?

Simon Levin 34:45

It gives me optimism that things can be changed. It's very depressing to see the people for whom it's become a badge of honor not to wear a mask or willing to get into a fight because they see someone wearing a mask. I think, in large part, because people regard this entirely along libertarian grounds. It's my body, I can do what I want. Well, it is your body, but it's not just your body. It's like setting fire to your house, and I have the house next door. It puts me at risk as well. It's not the same. It's not even the same as wearing a motorcycle helmet. There is a public goods dimension to that problem in that it drives up health insurance rates. But it's nothing compared to the externalities associated with my spreading a disease.

Nick Silitch 35:35

Sadly, on the vaccination front, we were required to have a really nasty thing come along to shock everybody into addressing the issue. We had been having these conversations around vaccines supply, etc, the exposure to pandemics, because one of the big risks that we've modeled for decades has been what happens to Prudential in a bad pandemic. And one of the reasons we ended up balancing our mortality, and our longevity risk, was exactly to offset that. So we ended up going through this pretty easily. But trying to change that is difficult.

As you look to the future, when we look at the environment or the financial situation, how do you drive change there? I think the answer is that we're going to have to wait for some really scary moment. On the financial side, it could be something like what happened in the UK recently, where they had a tough time funding their debt. Well, guess what, that made everybody pay attention. In the U.S., treasury spreads gap out when they do an auction and get everybody's attention, or Katrina. Well, Hurricane Katrina, we can still put that in the category of "these things have always happened." Maybe it's something like encephalitis becoming the norm in Boston, instead of in Florida. I think it's collectively getting to everybody. In Miami, nuisance floods are happening three or four times a year. Who wants to live there? And yet people are still paying absurd amounts for these co-ops and condos. So I think there has to be something scary for us that will do it.

Simon Levin 37:15

I fully agree with Nick, but I don't want anybody to take away the message that either Nick or I are saying we've got to create these scary events. I published a paper, together with Steve Bacala, a professor here, and Irwin Bult, a Dutch economist, and John List, a great University of Chicago economist. This was many years ago, when John was in the Bush administration. We talked about false alarms. We said that when it comes to setting the alarm in your house for fire, you'd much rather have it go off when it shouldn't than not go off when it should. So we said the same thing should be true about the way we deal with climate change. If there are uncertainties, you want to err on the side of caution. John got in a lot of trouble in the Bush administration for that because people said what they're calling for are false alarms on purpose to scare people. That's not what we were saying. That's not what Nick's saying. He's saying, unfortunately, it may not be until after these events occur that we see change.

Nick Silitch 38:16

And the other thing I'm not promoting is don't do anything until that happens, because that would be a silly outcome, too. We ought to be doing everything we can. But I think that for society to respond, we're going to need some kind of seminal event -- and it's hard to envision what that is. But if we have a drought, for example, where the water supply is impacting half of America and people get thirsty, that might do it.

Heather Howard 38:29

On that note, at Princeton's School of Public and International Affairs we talk about research and forming policy. But, Nick, one of the reasons we wanted you here today is that when we say policy, we don't just mean governmental action. Can you reflect on how research by folks like Simon, effects corporate actions. And, Simon, how does your research affect the broader world?

Nick Silitch 39:12

You say research by folks like Simon; I say research broadly. We do a lot of research ourselves. We rely on other research that we read, too. All of that informs. You keep wanting to link everything to economics; economics works for us. And the reason you think it's important is because it drives a lot of decisions. We think about everything from the perspective of economics... understanding what could happen and why. And therefore doing amazing amounts of research. If you think about how much research we've done on the likelihood of a company to default through time, and across industries, and whatever... if you think about the correlations that we look at, it's all based upon huge amounts of research, and so, too, are our mortality expectations and other things. That research comes from academics, but it also comes from lots of other folks as well. And all of that, collectively, is what we use.

Heather Howard 40:15

Simon, do you see your work and research in that context?

Simon Levin 40:18

Let me answer also by giving you an interesting story, which is that 40 years ago, I testified for the Environmental Protection Agency, in relationship to power plants on the Hudson. The Environmental Protection Agency was partnering with the Hudson River Fishermen's Association and other environmental groups against Consolidated Edison. And they came to some agreements. They established something called the Hudson River Foundation to fund research. I went on the panel of the foundation to help fund the research afterwards. And an interesting transition happened, which was that Consolidated Edison and the scientists were now very aligned in their views, because they both wanted good science done. The power companies were never opposed to the research part. They didn't want to do these other measures, and they wanted to have the power plants, but they wanted to fund research. And so an interesting partnership developed.

When you talk about how we make it possible for people to compromise, I've found that even in the academic community, ecologists and economists were viewed as ends of a spectrum -- never mind ecologists and people in corporations, businesses, and insurance companies. I think that's wrong. And I think that the only way forward is to find the common ground that the scientists and Consolidated

Edison found once the Hudson River Foundation was formed. Working with the corporate sector for the win-win situations. How do we solve these problems that we're both concerned about?

Nick Silitch 41:40

With the caveat that you need to work with corporations that are well intentioned, right. Not all corporations have the same intentions. So if you look at the amount of research done on tobacco by the tobacco companies, you don't really want to pay attention to that.

Simon Levin 42:10

Back in the 70s or 80s, there was an article that appeared in Science that said that tobacco companies love to sponsor research meetings. You remember what Harry Truman said, "Give me an economist with one hand," because otherwise they're always saying "on the one hand this, on the other hand that." The tobacco companies love research meetings because there were always people who said this, and there were people who said that. But that's not what I'm talking about. I'm not talking about public meetings but about working with like-minded people. It's very similar to what came in our paper. If I think that Nick is coming to this issue with some of the same perspectives I am, then I think we can find ways to work together. He had a sector that he had to be thinking about, and I have a sector I need to be thinking about, but could we find common ways that were good for both of us? Obviously, we need that in Washington. I'm less hopeful there than I am that I can work with folks like Nick.

Heather Howard 43:09

Well, that's a wonderfully optimistic note on which to end, so thank you both for joining us today.

Nick Silitch 43:15

Thanks so much.

Heather Howard 43:18

Thank you for listening to the Princeton Pulse Podcast, a production of Princeton University's Center for Health and wellbeing. The show is hosted by me, Professor Heather Howard, produced by Aimee Bronfeld, and edited by Eden Teshoma, with additional support from Dan Quiyu and Kayce West. We invite you to subscribe to the Princeton Pulse Podcast on Apple podcasts, Spotify, or wherever you enjoy your favorite podcasts.

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