

RALPH NADER RADIO HOUR EP 338 TRANSCRIPT

Steve Skrovan: It's the *Ralph Nader Radio Hour*.

[Music]

Steve Skrovan: Welcome to the *Ralph Nader Radio Hour*. My name is Steve Skrovan along with my co-host David Feldman. Hello, David.

David Feldman: Hello, everybody.

Steve Skrovan: And the man of the hour, Ralph Nader. Hello, Ralph.

Ralph Nader: Hello. The program is going to challenge the intelligence of our very intelligent audience.

Skrovan: That is correct, and we're going to kick off by telling you that, well, if you don't know by now, Northern California is on fire. A lot of climate change action is stalled during the pandemic, but climate change hasn't stopped because of coronavirus. In fact, it's exacerbating our other crises. Our first guest, Robert H. Frank has some ideas to help with the climate crisis. He says that peer pressure is the most powerful influencer and social pressures to live bigger have accelerated climate change. But he has ideas about how to use peer pressure as a force for positive change. He wrote a book about this called *Under the Influence: Putting Peer Pressure to Work*. In it, he applies the lessons we have learned from how, as a culture, we were able to reduce dramatically the number of people who smoked cigarettes, to how we can reduce our carbon emissions. We'll hear more about that in the first part of our show today. In the second part, we'll talk about coronavirus and this is actually some good news for a change. There might be a solution to this crisis, finally, and it will only cost between one and five dollars a day per person. The proposed solution is to have cheap, at-home, frequent COVID tests, the idea being that everyone in the U.S. would take a test every day and we could catch contagious people before they spread coronavirus. Our second guest, Michael Mina, is calling for this solution. He is an epidemiologist and physician at Harvard and says frequent testing like this could have the same effect as a vaccine, and it is certainly our fastest way of resuming some sort of normal. This could be brought into reality within a few weeks. So, we'll hear more from Michael Mina about this in the second part of the show. In between, we as always, have some time to check in with our corporate crime reporter Russell Mokhiber. But first, let's talk about the power of peer pressure. David?

David Feldman: Robert H. Frank is the HJ Louis Professor of Management and Professor of Economics at Cornell University's Johnson Graduate School of Management. For more than a decade, his economic view column appeared monthly in *The New York Times*. He has published on a variety of topics including price and wage discrimination and public utility pricing. Dr. Frank is a *New York Times* bestselling author. His books include *The Winner-Take-All Society*, *The*

Economic Naturalist, and *Success and Luck*. His most recent book is *Under the Influence: Putting Peer Pressure to Work*. Welcome to the *Ralph Nader Radio Hour*, Robert H. Frank.

Robert H. Frank: Thanks, David.

Ralph Nader: Welcome indeed, Robert. When I was growing up, my mother would take notice of certain bad behaviors by my classmates, or bad talk, and she would say to me "Turn your back on the pack." Very rarely would she say join the pack for good behavior or good talk. And in your book you indicated that peer-group pressure often is more frequently not good than good. Before we get into the climate disruption analysis in your book, why is it among youngsters [that] the peer pressure is more toward bad behavior and bad talk and not good behavior and good talk? And in your book you seem to extrapolate that through all ages.

Robert H. Frank: Yeah, it's not limited to young people, Ralph. It's something that we see among people of all ages, but that's not to say that the example of good behavior has no impact. It has a very powerful impact to that too. A symmetry between the negative and the positive influences has been attributed by some to the fact that when we think about doing something that we know others don't approve of, we look for excuses or license to do it. When we see others doing it, that makes it easier for us to take the same step. When we, on the other hand, think about doing something that we know everybody approves of, we don't need any social approval for that. We know we can do that without fear of anybody chastising us for doing it, and so we're less dependent upon peer approval to take good acts. But the fact that we see other people doing socially useful things makes us more likely to do them very much so.

Ralph Nader: You make the point in your book that when people start putting solar panels in the neighborhood on their roof, there's a second order beneficial effect beyond X number of houses putting up solar panels. Can you explain that?

Robert H. Frank: Yeah. That's a great example. And to call it a second-order effect makes it sound minor when in fact the indirect effect of what you do is vastly bigger than the direct effect. So according to the seminal study in this area, which took place early in the solar adoption cycle in California, if one additional family put up a rooftop installation on its house then within four months' time, the authors estimated, there would be a copycat installation in that same neighborhood. They have ways of ruling out whether the second installation is one that would have occurred anyway independently of the first one. So the second one is a copycat. Then after another four months pass, each of those two installations spawns a copycat yet again. So, after eight months, we've got not two installations but four. And if you follow that out, after only two years' time, that first installation results in 32 solar installations just in that neighborhood. But that's just the beginning because each of those people is in contact with friends and relatives who live in other places. And we know from other evidence that conversations between relatives and friends have much more influence than the examples set by neighbors. So, the fact of your taking that step early in the process has orders of magnitude larger effects if we count in all

the other people who were influenced to behave in a similar way. It's a huge multiplier effect.

Ralph Nader: If that's so, why hasn't it spread throughout the country much, much faster? Although rooftop solar panels is a major industry now especially in California. If there's such a multiplier effect, why isn't it spread much faster?

Robert H. Frank: It is spreading very fast here in Upstate New York where we have a heavy cloud cover much of the year. It's not the ideal location for solar installations. The main solar installation business is way behind schedule that can't keep up with orders. Many people wanted to install solar panels and were told they weren't good candidates. We tried to install some several years ago and were told that our roof orientation and the trees on the property made us a bad candidate to do it. And so, it was only last year we learned that we were candidates to become part owners in a solar farm, which was actually a much more attractive arrangement than putting the panels on our rooftop. So, we've done that now and so we are consuming the rest of the lifetime we're in this house.

Ralph Nader: Well, let's go a little deeper on this. The nature of the contagion is very interesting. A lot of people you talk to who put solar panels on the roof are either persuaded by the advertising and the marketing by the vendors and/or they think they're going to save money and be self-reliant and not be dependent on uncertain sources of supply. Now, you say is the third factor and that is the proverbial neighbor is doing it. Let's talk about the nature of that third factor's contagion. Is it because they know the neighbor personally, or they just hear about it four blocks away or what?

Robert H. Frank: That's a great question and I think it's good to reflect on why seeing what other people do has such a strong effect on us and I think, ultimately, a big part of the picture has to be that it's a very uncertain and complicated world out there. I don't know very much of what I would need to know to navigate through it successfully; neither do you; neither does any other individual. But we know, at least intuitively, that collectively, the people as a whole out there, have a lot of experience and knowledge. And so when we see people confidently taking some action and seeming to know what they're doing, if you didn't at least have a strong impulse to say to yourself "I ought to investigate whether I should be doing that too," you probably would be ill-equipped to make your way in the world at all, I think. So the idea that there's a lot of information that you could profit by learning if you watched what other people do carefully is got to be a deep idea that we don't think about much but is a powerful driver of our behavior. I was asked once what was the best example I could cite a behavioral contagion and I thought immediately of a scene I had seen in an Allen Funt film. You're old enough to know who he is; your listeners may not know. He was the impresario of *Candid Camera*, the long-running show where he would put people in odd situations and film what they did. Well, he announced a great job, no hard requirements, great salary, short hours and of course many people wanted to apply for it. He invited candidates in to interview and a candidate shows up. We see him arrive; he's ushered into a room where four other people are seated,

waiting. The candidate doesn't know it but we the viewer know that they're confederates of Allen Funt. The film keeps coming back to them, nothing's happening, and then we get a close-up of the new arrival's face turning from passive indifference to sudden alarm. The camera pans back and we see that the reason he's alarmed is that the other four have, at no apparent signal, stood up and are taking off all their clothing. He gets more and more agitated looking as he watches this; then you can see him flip [and] a look of calm comes back over his face. He too stands and he begins taking off his own clothing and the scene ends with all five of them standing there naked, waiting for some sign about what to do next. And you think no way would I do that. That was my thought anyway when I saw that. But then I reflected for a moment, I said "Well, I've already got a job I like. I don't need a much better job than the one I have." These four, if anybody knows what the next step is, it's they, because they got there before I did. They think it's worth taking the next step. Would it be so irrational to conclude that it might be worth doing that too just to see how it plays out? I'm not willing to indict him for doing that. So it's a powerful impulse, and when we see people putting solar panels on the rooftops, that plays into that same impulse.

Ralph Nader: Well, let's get to the nub of your book, which is basically to provide tax incentives for prior proper behavior, both socially across the country in the aggregate and individually. You had an article in *The New York Times* a few days ago where you make the argument for a carbon tax. And of course, you acknowledged critics who think that that's not going to work because you'll never get enough of a carbon tax, big enough accepted, and there are ways that the companies can reduce other costs and not keep the price of fossil fuels high because of a carbon tax. So why don't you state your case for a carbon tax and then I want to give you examples where mandates, regulatory mandates, solve the problem without a tax.

Robert H. Frank: Sure, and I'll say at the outset, Ralph, that if we had only a carbon tax that would not produce the kind of changes we need to see happen on the timescale, we need to see them happen in. If we had had a carbon tax 50 years ago, I think that may have been the only measure we would have needed to adopt to avert the warming process we've seen unfold during those decades. Although it's too late for that to happen now. Even so, a carbon tax in combination with other policies that we do need to adopt, too, I think would make us arrive at carbon neutrality much, much faster and with much higher probability. So, the idea is fairly simple, the reason we put carbon into the air in the first place is that it costs money to filter it out. And the governments around the world have permitted us to dump it into the air for free. So of course, rational businesses will just dump it as long as that's the terms of the deal. If you charge people for putting those emissions into the air, suddenly, overnight, they got creative about finding all sorts of efficient ways to filter them out--ways they had never thought of before. We know that's true because of the example with the SO₂ permit process. When I came to Cornell in the 1970s, all I read about was acid rain. It was killing the forest; it was killing the fish in the lakes. We didn't see a day pass without more evidence of the destruction it caused. And it was all from H₂S, hydrogen sulfide being emitted from smokestacks in the Midwest from high sulfur coal that would blow east and rain down on us as H₂SO₄, sulfuric acid. The moment we started requiring tradable permits for

that, and it took 30 years for congress to act, that problem went away virtually overnight at about one-sixth the cost of direct regulatory intervention was estimated to take to solve it. It was solved much quicker and much more cheaply when we gave firms a strong incentive to figure out ways to cut back. So that's the case for carbon taxation. And the case is much stronger than the traditional case exactly because of the contagion multiples that we talked about up front. So if making coal-fired electric generators more expensive relative to solar and wind generation, a carbon tax induces me to put a solar panel on my rooftop, it's not just my action that we got to count as a benefit of having done that; it's the actions of those 32 copycat installations we're going to see in two years' time and all the others that we're going to see expanding from networks of friends and relatives that we all have in other places. So, yeah, the carbon tax, I think if it had been sold properly, it would have been attractive to virtually the whole population. We would call first for a revenue-neutral design, take in all the revenue, most of which would come from rich people since they use most of the energy. The key feature in advocating a carbon tax is to make it revenue neutral; what that means is that you collect all the revenue from the carbon tax, most of which would come from wealthy individuals since, worldwide, the top 10 percent of the income distribution emits 50 percent of all carbon emissions; they pay in most of the revenue. Give the revenue back to people in progressive fashion so that low- and middle-income families would get the revenue checks each month that would be bigger than the amount they pay in carbon taxes. So, as many as 90 percent of all families would get back more each month than they pay in. The wealthy would pay in more than they got back, but they, too, would be net beneficiaries, because they'll have to shoulder most of the tax burden for climate mitigation measures in the future. It's win-win-win-win. There's just absolutely no reason to oppose it.

Ralph Nader: Let's elaborate that a bit. And listeners should know that ExxonMobil has come out in favor of a carbon tax, (Chuckling) which has raised some suspicions among skeptics.

Robert H. Frank: (Laughs) Maybe I want to re-think.

Ralph Nader: Where exactly will the tax be imposed--at the well, the gas oil well, the coal mine? And the second related question is, if gasoline now sells for \$2.25 a gallon, under your plan, how much would the motorist have to pay for it?

Robert H. Frank: The carbon tax proposals come in all stripes; the most widely circulated version imposes the tax on the fuel where it's extracted from the earth or where it's imported into the country; there are other ways to do it besides that. The size of the carbon tax is a policy question. I think the argument is to make it as big as we can politically achieve, because if it's revenue neutral, we don't have to worry about it being a burden for families. It won't make it harder for them to make ends meet. All it will do is make goods with high carbon footprints more expensive relative to goods with low carbon footprints. It will induce people to shift from one to the other and they'll have plenty of money to meet all the needs that they need to meet each month, because their budgets will be bigger rather than smaller. So I would say if you have a choice, big or small on the carbon tax, go big.

Ralph Nader: Are you talking about 10 percent of the value of the oil at the well, 20, 30, 40 percent? The papers say yesterday a barrel of oil is coming in at \$42.50. I don't know what a ton of coal is coming in, but give some percentage to our listeners.

Robert H. Frank: One early IPCC estimate said that a tax that would double the price of gasoline at the U.S. would be sufficient to get to climate stability over the next couple of decades. I think the news that we've received on the climate front in the meantime has been pessimistic. That's probably not enough under current estimates, but suppose it were double or even triple the current price of gasoline, what we know is that in many countries around the world, gasoline is already double or triple what we pay at the pump. And what we know, too, is that automobile manufacturers have responded in those countries by producing cars that get 50, 60, 70, miles per gallon; that's just with current technology. They've just begun to really get to work in earnest and developing new technologies. And of course, in the end we're going to be powering cars, not with gasoline, but with electricity generated from solar and wind, which means there won't be any carbon tax to pay on that at all. So yeah, I think go big.

Ralph Nader: But in those countries like Western Europe where gasoline is at least twice as expensive to the motorist as it is in this country, they don't rebate. They use that money to build public transit, renovate their roads, bridges. Why rebate?

Robert H. Frank: Europe does spend the revenue from its carbon taxes on infrastructure and other public goods and those are very productive uses of that revenue. Here, we have not been able to convince the population to adopt a carbon tax. So important is that goal that I recommend a revenue neutral carbon tax just because it would make unambiguously clear that the carbon tax measure, viewed in isolation, would be a winning option for virtually every taxpayer. We would have to then turn to other sources of revenue, and the theory of behavioral contagion makes clear that we should be taxing only activities that cause harm to others. Once you see how the social environment influences us to do things that harm other people, it immediately becomes clear that we could raise all the revenue we need to fund even the most expansive version of a modern state by taxing only activities that cause harm to other people.

Ralph Nader: Yeah, otherwise known often as sin taxes, taxes on tobacco, taxes on alcohol, and...

Robert H. Frank: Those would be examples, but there are many, many other examples that aren't normally thought of in that way.

Ralph Nader: True. This is where I want to get into where mandates have worked. Barry Commoner, the late great environmentalist used to say, "You want to control pollution, prevent it." Once you start incrementally regulating it, you invite all the lobbyists to game the system and overpower the regulator. So in 1978, the U.S. finally, after a graduated process, banned the manufacture of lead in house-based paint, and in 1996, after a graduated process, the U.S. government banned tetraethyl lead in gasoline; subsequently tests by medical people have shown that Americans now have less lead in their blood. Would you have done it by taxation or would you favor what actually happened?

Robert H. Frank: I think those prohibitions were exactly the right way to attack each of those problems.

Ralph Nader: All right. Let's talk about seatbelts. When seatbelts were introduced they were voluntarily used and it reached about 20 percent of the motorists, and it just stagnated there. And when the federal mandate came in on seatbelts, it didn't take long for usage to go to 70 percent, 75 percent, and I think contagion took over especially with truck drivers; it's now about 90 percent wherever it's mandated.

Robert H. Frank: I like the mandate there, too.

Ralph Nader: Okay. Let's take asbestos, which before it was regulated was estimated to have killed 250,000 Americans from World War II on, starting in the shipyards where the workers would come home with their overalls loaded with asbestos dust and adversely affect their own family; they didn't know that at the time, but the companies did. And for many uses in this country, asbestos is now prohibited, banned. How would you have handled that with your tax approach, or would you prefer what actually occurred?

Robert H. Frank: There too, a ban was the right step. A tax approach is one that I like as a general matter. It's not an absolute that applies in all cases. Think about the question of how we get people to change their diets. Would it be better to tell people, as of January 1st you're no longer permitted to eat meat by law, or might we want to take a slightly gentler approach to achieving the very laudable goal of reducing meat consumption in the country? I heard Cory Booker interviewed; he was asked why he didn't recommend that people become vegan as he had done, rather than instead, recommending to them that they eat less meat. His response was illuminating. He said that if he recommended that people become vegan, hardly anybody would follow his recommendation; many people would bitterly resist it. If he recommended that they eat a little less meat, well, people already know they ought to be eating a little less meat and hearing one more person in an influential position say it might cause meat consumption to go down by five percent. What I like about the carbon tax as a way to discourage climate-dangerous dietary choices is that there's a very strong social component to what we eat. I grew up eating meat because I was around people who did; most of my friends eat meat. If I serve a vegetarian meal, there's at least some concern that people think I'm being a cheapskate, not showing respect for my guests. If meat were much more expensive relative to plant-based foods, we know that some people would shift away from meat and towards plant-based foods, not entirely, but that would make it the custom to eat differently and that would be easier for others to do likewise. And when they shifted their behavior, others would change too. And in very short order, we would see a huge swing in dietary choices. And I think we're much more likely to adopt the measure in that case than if we tried to take the hair-shirt approach by trying to pass a law banning meat; that's not going to get us there.

Ralph Nader: What I sense you're doing is carefully calibrating levels of popular resistance or acceptance depending on the kinds of products; I think that's a pretty intelligent way to approach it. One interesting point you make on page 262, let me quote, and you say the following, this relates

to climate disruption. I don't like the term climate change, it was coined by a republican wordsmith in 2002 to replace a more alarming phrase, global warming. Unfortunately, the democrats lapped it up like a cat laps up milk. So anyway, let's talk about climate catastrophe or climate crisis and you say the following "We will also need bold changes in public policy, but studying the power of behavioral contagion has persuaded me the conscious consumption may promote progress on the policy front in ways I had not previously appreciated. Installing solar panels, buying an electric vehicle, or adopting a more climate-friendly diet doesn't just increase the likelihood of others taking similar steps. It also deepens one's sense of identity as a climate advocate. In the process, it increases one's likelihood of supportive candidates, who favor strong climate legislation and of knocking on doors to help them get elected." In other words, you move from the consumer to the civic advocacy arena. Your thoughts?

Robert H. Frank: Yes. Yeah, I was in league with most of my fellow economists in believing for most of my career that individual actions like the ones you listed, while they were good and would be good if everyone took them; since they were expensive and wouldn't by themselves have any measurable impact, very few people would take them and in the absence of sterner policy measures to get to the goals we wanted to achieve, we wouldn't get anywhere with that approach. And I've changed my mind about that, not just because of the indirect effects of individual actions, which we talked about early in our conversation. But also, because I've rejected the standard economic assumption that we come into the world with fixed identities and preferences. That's not the way life works. We gradually become who we are. This was really Aristotle's main line of thinking. In the process of living our lives, our habits deepen [and] we become who we are. And so when you incur costs, costs that you have every reason to think are yours to pay and won't by themselves affect the overall picture significantly, that makes you, almost by definition, into more of a champion for whatever the cause is you're incurring those costs on behalf of.

Ralph Nader: You're conveying the contagion that can be described as practicing what you preach.

Robert H. Frank: Yes. You become what you do, and if you can't become a person who consumes as if the planet's fate hung in the balance without feeling an impulse to vote for politicians who behave as if they agree with you. And it doesn't take much to change things here, you know. Look at Virginia last year. Last year both houses of the state legislature flipped there. Virginia is not a radical hotbed state. Yet this year just a few months ago and last year, Virginia enacted the most ambitious decarbonization legislation of any state. We have candidates on the ballot who care about the climate. There are others who are not willing to take action. It's going to be a project to get out and vote and make sure your vote counts. But if you care about the climate and you're taking actions on behalf of it, you're much more likely to bear those costs.

Ralph Nader: Well, you're one of the founders of the behavioral economics movement, which has always amused me, because we had to deal early on with economists who monetized everything; you couldn't get them to talk about consumer irrationality, consumer non-maximization of their utilities. And the consumer groups kept putting out reports, putting out

studies, litigating, getting good factual judicial decisions, legislation, and these economists were never paying attention. They sort of looked down on consumer economics the way they looked down on home economics in courses in community colleges. So I'm very glad that you were a pioneer in this area, Professor Frank. But it is interesting that the Nobel Prizes are now being given out more and more to behavioral economists who see a qualitative dimension to their work, not just supply/demand curves and knee-jerk approaches like that of Milton Friedman, one of the most overrated economists in American history. Well, we're out of time and I just want to say there are hundreds of thousands of little neighborhood book clubs in this country and they have this atrocious rule, 90 percent of them, that they only deal with fiction, because they don't want to deal with non-fiction and have controversy. Well, let me tell you, if you're a member of a neighborhood book club, it's healthy controversy and healthy discussion to take up and adopt Robert Frank's book, *Under the Influence: Putting Peer Pressure to Work*. Thank you very much, Robert Frank.

Robert H. Frank: Thank you, Ralph.

Steve Skrovan: We have been speaking with economist Robert H. Frank. We will link to his new book at ralphnaderradiohour.com. Let's take a short break. When we return, we're going to talk to epidemiologist Michael Mina about new possibilities with COVID-19 testing. But first, let's check in with our corporate crime reporter, Russell Mokhiber.

Russell Mokhiber: From the National Press Building in Washington, D.C. This is your Corporate Crime Reporter Morning Minute for Friday, August 28, 2020. I'm Russell Mokhiber. The [US] Justice Department has charged Teva Pharmaceuticals with conspiring to fix prices, rig bids, and allocate customers for generic drugs. On May 7th, Apotex admitted to its role in the conspiracy and agreed to pay \$24.1 million. On July 14th, a grand jury returned an indictment against Glenmark for its role in the same conspiracy. Teva, Glenmark, Apotex, and unnamed co-conspirators agreed to increase prices for Pravastatin and other generic drugs. Pravastatin is a commonly prescribed cholesterol medication that lowers the risk of heart disease and stroke. Five previous corporate cases were resolved by deferred-prosecution agreements. And Teva's co-conspirator, Glenmark, is awaiting trial. For the Corporate Crime Reporter, I'm Russell Mokhiber.

Steve Skrovan: Thank you, Russell. Welcome back to the *Ralph Nader Radio Hour*. I'm Steve Skrovan along with David Feldman and Ralph. Currently, going to get tested for coronavirus is an ordeal. It takes hours. And it's not working as a public health strategy. About 9 out of every 10 coronavirus cases aren't even being caught. But what if you could test yourself at home every day and it took just a few minutes? Our next guest will tell us more about this possibility. David?

David Feldman: Dr. Michael Mina is an epidemiologist, immunologist, and physician. He is an Assistant Professor of Epidemiology at Harvard's T.H. Chan School of Public Health, as well as a core member of the Center for Communicable Disease Dynamics. Dr. Mina's research combines mathematical and epidemiological models to better understand the patterns of infectious disease in our population. His research also explores questions of immunity. Dr. Mina is currently advocating for a shift towards cheap, daily, coronavirus tests for everybody. Welcome to the *Ralph Nader Radio Hour*, Dr. Michael Mina.

Dr. Michael Mina: Well, thank you very much. It's a pleasure to be here.

Ralph Nader: Welcome indeed. And just to frame it a bit for our listeners, Dr. Mina, I want to just quote from a very long article that just came out in *The Atlantic* [magazine] and they described you as a Professor of Epidemiology at Harvard who studies diagnostic testing of infectious diseases, and I'm quoting now "He has watched with disgust and disbelief as the United States has struggled for months to obtain enough tests to fight the coronavirus. Tests permit us to do the most basic task in disease control, identify the sick, and separate them from the well. When tests are abundant, they can dispel the fear of contagion that has quieted public life." And to continue a couple more sentences, they quote you as saying, at the end of March, "There's little ability for a central command unit to pool all the resources from around the country. We have no way to centralize things in this country short of declaring martial law." And then *The Atlantic* continues saying "It took several more months for Dr. Mina to find a solution to this problem, which is to circumvent it altogether. In the past several weeks, he has become an evangelist for a total revolution in how the U.S. controls this pandemic. Instead of restructuring daily life around the American way of testing, he argues, "The country should build testing into the American way of life." Can you elaborate that?

Dr. Michael Mina: Absolutely. So, the beginning was really focused on...there were a lot of questions early on: Why isn't the U.S. where it needs to be with testing? Why was China able to get testing scaled up so quickly? Why was South Korea able to? And one of the major reasons early on is the approach that we have taken thus far to testing is to have the tests be performed in centralized laboratories. But essentially, to do this with the way that our FDA [Food and Drug Administration] process works, every laboratory that wanted to begin testing was essentially reinventing the wheel. You could have labs one block apart from each other and both would have to be doing the exact same test, but they would have to both be, sort of, reinventing the wheel, getting the whole test setup started from scratch and going to the FDA and applying for applications to actually perform the test. And this was a real departure from what other countries were able to do, which was truly centralize and use economy of scale to get testing up and going quickly. And we just had no ability because, you know, just the way that our country is fractured into states, alone, makes it almost impossible to actually use the economy of scale and bring all of these different tests together and sort of create massive assembly lines, if you will, to really gain efficiencies. And so that was sort of the whole beginning of all of this. And now, I've been really advocating for a whole different type of test, which is essentially to distribute the test. Don't funnel them through these individual laboratories; put them in people's hands, in their houses, and allow them to test themselves to know their own transmission status, so that they can then make good choices about whether or not they go out, or whether or not they go into that nursing home, for instance, or that school. And this is one way, with a virus that spreads as quickly as the coronavirus, just the mere fact of having to send in a swab to a laboratory puts an immediate 24-hour delay in getting results. In that period of time, somebody could go and create a super-spreading event and infect 30 other people. I've been very strongly advocating for a whole different approach and that is to distribute the tests in the same way that we have pregnancy tests can be picked up over the

counter, for example, and people know how to use them responsibly, we would have the same thing with these types of tests where you go to your local CVS, or Walgreens, or the federal government provides you with the test or whatever it might be, and everyone uses one of these every day or two to ensure that they are not transmitting virus before they walk out of their house.

Ralph Nader: And these are paper strip tests of saliva, so you can do it at home. Is that correct?

Dr. Michael Mina: That's correct. There's actually the saliva, it could also be a nasal swab, but a swab that just goes in the front part of your nose that you can do by yourself with essentially a Q-tip. So, the saliva or the anterior swab, are both collection methods that can be done by yourself at home and then exactly right, these are essentially paper strip tests. They might look just like a pregnancy test if you were to pull a lot of the plastic off of it, for example, and they actually do the same thing when you would put the saliva onto it and a red line will show up if it's positive and no line will show up if it's negative, for instance. So they can be made very, very cheaply and very easily.

Ralph Nader: And, you can get it in your local pharmacy store?

Dr. Michael Mina: Well, that's the idea. That's what I would really like to do. Right now, there's a lot of federal oversight of these products and there's this concern that people can't be trusted with their own results, and so there is this sort of unwillingness at the federal level and public health laboratories to necessarily let go of that control. But you know, people said the same thing about masks early on. They pretty much said if it wasn't a perfect mask, people can't be trusted to make the right decisions, and [if] they didn't have a perfect mask, they would have poor behavior of thinking that they were more secure than they are. Well, now we all know that everyone should wear a mask regardless of just how, you know, if it's a not a great mask or a perfect mask, everyone should wear a mask whatever they have. And that's the same thing with these tests, is they're not going to be as good as the laboratory-based tests but if we can get them into everyone's hands and we can trust that the average person will make the right decisions about it, then we can actually have some flexibility with some people who choose not to use it at all. That's not a huge problem if most people would...

Ralph Nader: So, if you wake up one morning and you use the test, you test yourself, you come out positive, what happens?

Dr. Michael Mina: If you test yourself, you come up positive, maybe then you pull out in the same box of 30 tests, maybe it will have 5 what we call confirmatory tests and that's because you want to make sure that it's not a false positive. So you then put some saliva on one of the confirmatory tests and if they're both positive, then you stay home. And if you're not symptomatic and you're not ill, we know a lot of people don't feel any symptoms from this virus, you stay home and you self-quarantine. You keep yourself away from other people. If you start to feel ill, then maybe you go to the doctor or you call up the doctor and ask what to do. And ideally, these tests would also come maybe with a website, you log in, if you're positive you log in to let your local

public health department know that you're positive. But it would be essentially voluntary, it wouldn't be mandated, and we would bank on the majority of people choosing to do that.

Ralph Nader: And you say you actually wrote an article in *The New York Times* with an economist professor, Kotlikoff, from Boston University. And it was printed on July 3rd, 2020, for listeners who want to retrieve it in *The New York Times*; it's called "A Cheap, Simple Way to Control the Coronavirus". And you mentioned some manufacturers, some small companies that are in the late stages of developing these paper strips and other simple, daily COVID-19 tests. But you're also quoted as saying that if your plan is instituted nationwide, it could bring the virus to heel in the U.S. in about a month. You still stick with that prediction?

Dr. Michael Mina: I do. And so, if we were to...let's say we start with hot spots, places where the virus is spreading quickly right now; if we were to roll these tests out and get them into the hands of say even just half of the individuals in a given community or a town, and most people who receive them use them every one to three days; doesn't have to be every single day. You would very quickly see a turnover of the virus where cases would start to plummet. And this is because the effect would not be an individual level effect, meaning the real benefit of these types of, what I call transmission-indicating tests, isn't just to give you information about yourself. And that's why I make the distinction that these aren't a [mere] diagnostic, a medical diagnostic test. The real benefit here of getting these out to so many people and having them use them frequently is that we actually sever transmission chains. We stop and it's that act of stopping a transmission chain, at sort of, a main branch, before it splinters out to create 10 more transmission chains is how we stop epidemics. And so it doesn't need to be 100% of people; it doesn't even need to be the vast majority. It just needs to be, say, 50%, in the same way that vaccines only have to achieve immunity in about 50% of people, and we will see a big drop in in the overall amount of virus in the population. These tests would essentially do the same thing, only it wouldn't be working by eliciting a strong immune response to stop the transmission from moving forward if somebody gets infected. [Rather] It's giving people information about their status so that they can stop the transmission willingly by staying home. And so I do believe that within weeks, if these could be introduced into any given population, that that population could get the virus under control.

Ralph Nader: Well, the crisis is only worsening. I mean just to compare it, listeners, the crisis of the coronavirus pandemic started in China and spread around the world. China imposed very serious controls. They claim 5,000 deaths. In the United States, it's just about 180,000 deaths; China has four times the population of the U.S. Trump has made a colossal disaster out of the federal response, undermining scientists, substituting his quackery, scoffing and delaying for weeks earlier this year, which allowed the multiplier effect to occur, and in all kinds of ways, creating a nightmare for the American people! A thousand people a day are dying from this virus as we speak, and to make matters worse, he's corrupting science. The FDA just said that people can use a plasma and it would cure a third of the coronavirus patients; the Centers for Disease Control [CDC], which is being politicized and the scientists undermined, just changed their guidance and said that asymptomatic people don't have to be tested. What do you think of all that, doctor?

Dr. Michael Mina: I think it's an abomination. It's...you know, politicizing an epidemic will help nobody including the base that is voting for Trump in this case; you know, whatever the group is that's politicizing it, in this case, one of the most harmful things that we can possibly do to Americans right now is bring politics into our approaches to fight this virus. This virus does not care; it doesn't care who you are with regard to anything really but your age. It doesn't care what political part of the spectrum you're on. And, you know, any inefficiency and any unwillingness to work together to fight this is just...it just sets us back so far. We are not just the laughing stock of the world with regard to our response to this virus, but we are in a position to...you know, we have been in the best position to potentially fight this virus and we very quickly squandered all of it for various reasons, many of which have been just political incompetence and unwillingness to work as a single unit to actually fight this. And we will continue to just drag our feet apparently and every day that we do that, more Americans continue to die. There are solutions on the table right now that we could be grabbing and using and we are going the exact opposite direction. And, you know, I wish that I could say that, for example, the CDC guidance to stop testing asymptomatic people was for a logical reason; I actually gave them the benefit of the doubt for a few minutes today, thinking maybe it was actually because they were taking certain supply chain considerations into...supply chain issues into consideration. But turns out it wasn't. It was a pressure campaign from above and, you know, this will kill people, unfortunately, willingly or not.

Ralph Nader: We've proposed legislation in Congress to establish a COVID-19 commission under the National Institutes of Health to take the place of the Trump/Pence boondoggle, and operate with pandemic scientists and managers, the federal government's response and its relation to the states to curtail the pandemic virus. And there hasn't been any pickup yet on Capitol Hill. It's basically a widespread consensus that Trump and Pence should step aside and let pandemic scientists and managers manage this horrific pandemic crisis. And I had a retired pollster say if that was polled, you' have 90 percent of the people supporting Trump and Pence step aside, even Trump voters, because they know he's bungling. They know he's a quack in this area. Do you think they should step aside in favor of something like a corona pandemic commission under NIH?

Dr. Michael Mina: Oh, absolutely. I think that there are...you know, I could, right off the top of my head, name a dozen people who could easily lead such a commission with much greater outcomes and better outcomes and you know what, it...they'd be smart to do it. Because right now all of what goes wrong is falling on Pence and Trump who just continue to make worse and worse decisions, because they continue to try to cover up how bad the response has been. And you know, this could have gone one of two ways. It could have been a spectacular win for this administration. We could have worked together; he could have actually taken leadership. And part of that, in my very strong opinion, would have been stepping aside as being...having his very close administration being in charge, because they are not scientists. They don't know the nuances of...and the ramifications of each decision that they're making and how it might have ripple effects across an epidemic like this. There's a reason why people get PhDs in these types of issues. And we need policymakers in place. But first and foremost, we need scientists to be calling the shots in terms of what are the right approaches to take. And we just haven't seen, unfortunately, much of

that at all and when scientists do come in with good solutions, they generally have been pushed aside for people like Pence or Kushner.

Ralph Nader: Well, there's been one criticism that you need to address for your proposal and you've heard it many times, and that is that the strip-type test is less accurate, but it's much more frequent, and the frequency makes up for the less accuracy compared to the traditional tests that people are taking in hospitals and clinics and have to wait days to get a result. Can you just summarize that response to someone who has raised it?

Dr. Michael Mina: Absolutely. So, this is a little bit of a confusing point, but I actually would say that it's not so much that these [tests] are less accurate. Accuracy depends on what your target is and there's an important thing that's...I don't have enough time to really go into detail, but PCR, the type of testing that most people are using will pick people up as positive long after they've actually been infected with the virus and long after they have been for weeks potentially after somebody is no longer transmitting the virus. So that's good if you're a physician trying to get every shred of evidence to understand what's going wrong with your patient. But if this is being used, for example, as a transmission-indicating tool in the wider population, we don't actually want to know who was infected two weeks ago; we want to know who is infected right now; specifically we want to know who is able to transmit the virus right now. And if that's the target, then these tests are very accurate. They will be able to tell you if you are potentially transmitting the virus. They won't necessarily be sufficiently sensitive to tell you if you have minute amounts of virus in you. But people don't transmit when, for example, the virus is at 10 particles per milliliter in your nasal passage. It transmits when it's at a million or a billion particles. So, these tests will definitely pick people up when they have such a high viral load that they can transmit. And so, I think it needs to be clarified that as a diagnostic tool, they are less accurate, but as a transmission-indicating tool, they do the job very well by letting you know when you are infectious. And that is what...that is actually what these things need to do at the community level. They don't need to tell you if you were infected two weeks ago. That would throw a lot of people off in terms of how they respond to it. We want to just know who is infected now and who's able to transmit now, and ask them to stay home those days. And so I would say, unfortunately the whole accuracy issue has gotten a little bit confused in the media. But I would say these are actually quite accurate for the task at hand.

Ralph Nader: And as many scientists have said, a PCR test that takes 10 days to get the result from is useless. Isn't that correct?

Dr. Michael Mina: That's exactly right. I mean I think, you know, especially as a public health tool, it's both the...a PCR test that takes 10 days to get, or even takes four days to get the result back is useless. Because most people's infectious window is going to be actually quite short. They're going to be primarily infecting others for just three to five days, not much more than that. So a four-day window to get results back is a terrible loss, even a three-day window, you know, so it gets better as you get down to one day. But none of it is as good as a few minutes. But the other big...the really big thing is that if you are testing people infrequently, which if we're being

honest, we can't get PCR-based testing, laboratory-based testing; there's not enough labs in the country to really test the populace on a very frequent basis like every three days. So if we are doing infrequent testing with a very sensitive test like PCR, people will say, well, that's good because, you know, we need PCR because we need to catch people early in their infection. Well, the point is if we're testing people infrequently, then just the chances of actually taking the swab out of somebody's nose, on a day when they are early in their infection, is very low; you're very unlikely to even test anyone on that day anyway. And so that's why frequency becomes so much more important than the actual analytical sensitivity of these tests. And if you're not doing frequent testing, you're just not going to catch people early on before they start spreading it to others. And so it's why it becomes...I would say in terms of priority, we should put frequency first and then the turnaround time to get the test should be a very close second, and things like sensitivity should be, as long as it does the job to catch people when they're spreading, the molecular sensitivity of it can be a distant third.

Ralph Nader: How can this be implemented nationwide? What else has to be done? You have to start with the congressional hearing, the FDA, the media; how do you turn it around from an idea and a proposal into a widespread application?

Dr. Michael Mina: Yeah. So we're doing it slowly; we've been talking to a lot of policymakers, senators, governors, congressmen and women, and we've been meeting with the CDC and the NIH. We just had what I thought was a pretty positive meeting yesterday with the FDA and it has to be...I think I would like to see it happen quickly, but I think it needs to, you know, short of that, it needs to happen methodically and we need to kind of lay out the groundwork and the evidence for why this approach will work. The FDA is an entity that when it comes to testing, are only familiar with the idea of evaluating medical diagnostic tests. So, they're not used to this idea of evaluating a test that is going to have a primary purpose of stopping transmission at the population level. And so it is going to take a little bit of effort to get them to...to get the FDA to understand that these types of tests need to be evaluated differently and it's conversations like the one we had yesterday with the FDA to really lay out the idea and get a feeling for where they're at in terms of how willing they are going to be to evaluate these in a new light, not a diagnostic, but a public-health light. And I think we're going in that direction. So the next steps are going to be we need to get some of the companies that are able to make these [tests] to create a sufficient number of them so we can do some pilot studies and gather even more data. We have a lot of data to theoretically say yes, this is going to work, but the FDA always wants the real empirical data which is hard for these, because these are public health efforts. It's hard to show herd effects, for example, or population-level effects before the product is actually being fully marketed. But I think we're going to set up some pilot studies and it's just going to be taking it one step at a time, hopefully on an accelerated timescale. I would like to see these starting to be introduced in the next month or two.

Ralph Nader: You've estimated cost of a dollar to five dollars a day. We won't know this of course until the product starts reaching the market. And for people who think a vaccine can replace all this, you don't see a vaccine available for hundreds of millions of people until when, next year?

Dr. Michael Mina: Yeah. I think that a vaccine will come out, especially given the political pressure. We're seeing the political pressure that can be exerted over the FDA and CDC, maybe the FDA less so; it's unclear. But I think a vaccine will come out. I think that we have to take a very measured approach to understanding what exactly it means when it becomes available. First, it will be available in very limited quantities. Second, it very well might not do as good a job; this isn't going to be like a smallpox, or polio, or measles vaccine. This is going to be a vaccine that probably will perform more like a flu vaccine, which we all know isn't perfect by any stretch. And so I think vaccines are not going to be the real out here. I think that they can't be the exit at least not this first iteration of them and that's why I believe that these paper-strip tests, that could be delivered to everyone's home using currently available technology, could be scaled by the federal government. These can actually take the place essentially of vaccine-derived herd immunity. These can create a different kind of herd immunity-like-effect where you actually suppress the virus at the population level. And then everyone becomes safer regardless of whether they're using these tests. In the same way that vaccines elicit herd immunity, I want to create a different kind of herd effect through these tests. But to answer the question bluntly, no, I don't believe that the vaccine is going to be our exit strategy, at least not within the next six months or so and maybe not even until mid or late next year.

Ralph Nader: We've been talking to Dr. Michael Mina who is Assistant Professor of Epidemiology at the Harvard School of Public Health. Thank you very much, doctor.

Dr. Michael Mina: Absolutely. Thank you very much for having me on.

Steve Skrovan: We are speaking with Harvard epidemiologist Michael Mina. We will link to his work at ralphnaderradiohour.com. I want to thank our guests again, Robert H. Frank and Michael Mina. For those of you listening on the radio, that's our show. For you podcast listeners, stay tuned for some bonus material we call "The Wrap Up". We'll have a little bit more with each of our guests. A transcript of this show will appear on the *Ralph Nader Radio Hour* website soon after the episode is posted.

David Feldman: Join us next week on the *Ralph Nader Radio Hour* when we welcome Barbara Freese, author of *Industrial-Strength Denial: Eight Stories of Corporations Defending the Indefensible, from the Slave Trade to Climate Change*. Thank you, Ralph.

Ralph Nader: Thank you, everybody. It's a great book. Looking forward to interviewing Barbara Freese.

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