

# POLICY Punchline

Covid-19 Series

A Year of Insights in Review

2019 - 2020







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# Introduction

*Policy Punchline* has completed its second year and what an impressive journey it has been! The most remarkable thing about it is that from the beginning it has been an entirely student-run effort. As this collection of *Policy Punchline* conversations shows, the initiative has gone from strength to strength. The great group of scholars interviewed, the quality and depth of the conversations, and the scope of topics covered are all a testament to the hard work and insightful thinking that went into this wonderful effort.

*Policy Punchline* is the brainchild of its founding president Tiger Gao. Tiger came up with the idea of starting a podcast series with the many brilliant minds that come through Princeton from academia, industry, and the government. It is impressive that not only did Tiger come up with this idea in just his sophomore year, but he then inspired and built a team of fellow students to convert his vision into reality. It is heartening to see that as Tiger prepares to graduate, his fellow students behind him will continue to expand this initiative.

*Policy Punchline* is now a truly collective effort. There is a team of more than 40 students who plan, organize and publish the content. The quality and content of the *Policy Punchline* podcasts are on par with professional productions. In fact, I consider it to be significantly better than many popular podcasts out there. The students put in an impressive amount of work in preparing questions, and the back-and-forth interactions are very insightful.

The collection of *Policy Punchline* conversations published in this volume includes podcasts conducted over the last year. The range of topics is truly impressive and timely. For example, as soon as news about Covid-19 hit, the podcast team was focused on this most important topic of our time. The Covid-19 crisis is covered from many angles in this series. Jessica Metcalf discusses the epidemiology of the virus as early as February; Dan Michelson speaks on the health care crisis; Markus Brunnermeier talks about challenges in the financial market and the role of the Federal Reserve Bank on April 1st right after serious disruptions in financial markets; and Emil Verner discusses one of the very first historical studies of whether we can expect a tradeoff between controlling the virus and the economy. The answer given by Emil Verner was prescient: No, there is no tradeoff. The better we are at controlling the virus through containment, the quicker the economy will recover. If only our governments around the world understood this message! *Policy Punchline* was not shy to seek counter-arguments, though. Paul Frijters presents the counter argument, that there needs to be a balance to how strict a policy response we choose in efforts to contain the virus. All of this helps the listener (or reader) gain a more nuanced understanding of the various issues involved.

I want to emphasize the breadth and range of the topics covered in this volume of interviews. Covid-19 was generally thought of as an economic and health crisis. But the *Policy Punchline* staff go beyond that and rightfully highlight the important ethical and philosophical dimensions. How does society decide how to ration health care in the middle of the pandemic? How do you balance the needs of the young with the risks facing the old? The conversations with Peter Singer, Arthur Caplan, and Keith Whittington about these questions are terrific.

While Covid-19 was clearly the topic of conversation in 2020, the podcast team did not lose sight of longer-term structural issues plaguing our society. Alan Blinder, Robert Frank, Branko Milanovic, and Ellora Derenoncourt discuss the challenges for economic and monetary policy in the face of rising and extreme inequality, and the further fractures created by Covid-19. Jake Shapiro and Frances Lee discuss the structural and political problems of extreme partisanship and “multiple realities,” and the political challenges that arise out of that. Melissa Reynolds, Merle Eisenberg, and Nicholas Lemann provide a sweeping account of history and how the Covid-19 crisis should be seen in this wider context.

There is just so much to nibble on in this brilliant *Policy Punchline* effort. Most of all *Policy Punchline* reflects the tremendous potential that our students have and what they can achieve when they come together for a common purpose. I very much look forward to the next series of *Policy Punchline* podcasts and conversations.

**Atif Mian**

John H. Laporte, Jr. Class of 1967 Professor of Economics, Public Policy and Finance  
Director of the Julis-Rabinowitz Center for Public Policy and Finance  
Princeton University

# Preface

## 1

Policy Punchline has truly come a long way since I wrote the preface for our last book a year ago. We interviewed 54 guests in the school year of 2019-2020, including over 20 guests for our special Covid-19 coverage. Our team has grown to over 40 student researchers, co-hosts, designers, and affiliated contributors, and we have added new segments in energy, fundamental sciences, tech policy, and intellectuals in the humanities and beyond. Most importantly, we are more focused than ever on our mission of “promoting long-form dialogues on frontier ideas and urgent issues” with our brilliant guests.

During the beginning few months of Policy Punchline, we questioned time and again whether it would be more convenient and commercially fitting to produce a shorter and highly edited podcast show that dealt more in generalities and with broad trends in the news. We eventually realized that the main benefit of listening to a long-form podcast (such as Joe Rogan, Sam Harris, Eric Weinstein, Ezra Klein, or Policy Punchline) is that it allows our guests to develop long trains of thoughts with nuances and subtleties that go well beyond the “bumper-sticker level complexities of legacy media,” as podcast host Eric Weinstein once satirized. Whether it’s a book discussion about a recent bestseller in economics or a debate on moral philosophy, it is much more difficult to have a nuanced, thought-provoking discussion within 15 minutes.

This goal requires a tremendous amount of dedication from our team members, who went above and beyond, setting us apart from other shows through the quality of our questions and extensive research that goes into each and every interview. On average, our team spends 20 hours preparing for interviews—researching the topic, learning about our guest’s background and thought processes, writing questions, and developing a framework for the discussion.

Our incredibly supportive guests have given us the space to explore the long-form podcasting format, often taking as much as two hours out of their busy schedules to discuss their ideas. They have also been graciously unreserved with their words of encouragement, often going on record saying that the interview experience with Policy Punchline is much deeper and well-reasoned than those they have done on book tours or with legacy media outlets.

The growth of our own team members’ depth of knowledge and our guests’ kind support made us realize who we are—not simply an extracurricular club, but rather a group of deeply curious students who grapple with pressing issues every day in and outside of our classrooms. All of us have a true passion for intellectual debate, and we don’t limit our political or epistemological framework to familiar or comfortable views. We are willing to ask the tough questions while drawing inspiration from the wide ideological spectrum of our guests.



## 2

Grounded in our faith that long-form podcasting is the best way to engage in deep discussions, we aspire to play a small role in contributing to today's media landscape and socio-political discourse. America is polarized today not simply because the Right and the Left are somehow "not talking to each other." One important factor to our divisions is that in our highly fragmented information age, people are easily manipulated by clickbait advertisements, targeted political messages, pseudo-empiricist statistics, and a wide variety of noise – to the point that it's extremely difficult to even sit with a thought and reflect on the merits of various arguments.

At normal times, such concerns might be relegated to the side, but we now live in a tumultuous era where norms are shifting rapidly, where citizens are debating topics ranging from the merits of "cancel culture" to how we should reform capitalism.

This is an age that requires social discourse conducive to thoughtful debate, yet this project is hampered by the perceived optimization and maximization of information intake through web surfing rather than book reading. Our presidential debates are reduced to 30-second responses; students are opting to get educated by Instagram posts rather than books; scientists have shifted their battleground to Twitter, and; mind-boggling "innovations" have emerged to help one read the summary of a book in 7 minutes. Rather than accepting the false premise that people are incapable of appreciating and digesting long-form dialogues, we want to help change the environment for the better and provide a thoughtful alternative to information consumption through our podcast.

## 3

In the over 95 interviews we have conducted in the past two years, we have talked to fascinating personalities from "techno-utopian" iconoclasts to thinkers deeply rooted in the political and business establishment. Having this unique privilege and flexibility of being able to speak to people from all ideological and academic backgrounds, we hope to present an integrated conversation where our listeners may learn about some of the most innovative ideas and bold positions in our world today.

This book is one such attempt, where we bring together analyses on the Covid-19 crisis in seven different segments—public health, economics, ethics, history & political science, industry perspective, greater reflection for our society, and additional op-eds. Our interviews touch on issues from the epidemiology of coronavirus to the ethics of triage; from the economic tradeoff of lockdowns to the Federal Reserve's unprecedented actions; from plague narratives in history to the viability of contact tracing technology; from the digital transformation of art viewing to fundamental reflections for capitalism...

This is the boldest project we have undertaken thus far, completed fully remotely in a span of four months. As you may soon see from our long interviews, our podcast's name Policy Punchline is somewhat misleading and counterintuitive because we are committed to

long-form deliberation rather than just the “punchlines.” We hope this book may withstand the test of time and inspire you with ideas for years to come.

As Princeton students, it’s easy for us to develop a naïveté about the scope and scale of the urgent problems our society is facing. Such disengagement could limit us into rather linear thinking about the purpose of our lives and careers. But if we learn from more frontier ideas and thinkers, we can cultivate a stronger sense of social responsibility, tackle a more diverse range of problems, and flourish in a more fulfilling and purposeful life. That’s the ultimate punchline I hope Policy Punchline can exemplify.

#### 4

I write these words with a tad bit of sadness, as I’ll be graduating in a year and this is likely the last preface I’ll write for our Policy Punchline books. But I’m incredibly proud of the growth of our team as more younger members are starting to co-host interviews, contact guests, and become an essential part of this podcast. I am no longer the only voice of the show, and when I graduate in 2021, our team will continue to present fascinating dialogues to our listeners.

I am extremely grateful to my hardworking teammates, who continue to inspire me every day, and to all our guests and mentors, without whom this podcast would not have flourished to this day. I sincerely hope that you’ll enjoy the conversations in this book and let your mind wander beyond the “punchlines” to an exciting and open world. Thank you again for supporting Policy Punchline.

**Tiger Gao**

Host & Co-Founder of Policy Punchline



# Public Health

Jessica Metcalf

Dan Michelson

# 1

## Coronavirus: An Epidemiological Perspective on the Growing Crisis

Jessica Metcalf

February 14, 2020

“ *In trying to understand the landscape of global health, it would be game-changing to understand the landscape of immunity. Who is protected against particular infections and who isn't? In order to get that information, we could collect blood samples, test them to see what pathogens people have been exposed to, and develop an understanding of what that landscape of susceptibility may look like. If we had a type of surveillance designed not to just look for cases, but also to look for vulnerabilities to cases, that would be very exciting. This is something that we increasingly have the technological ability to do, and I think that would help steer policy in interesting ways.* ”

— **policy punchline** by Jessica Metcalf

Jessica Metcalf is an assistant professor in Ecology, Evolutionary Biology & Public Affairs at Princeton University, and a demographer with broad interests in evolutionary ecology, infectious disease dynamics, and public policy.

***Q:** What are some of the questions that you and your lab are asking about humans, diseases, and the environment?*

**A:** There are two things we are currently focused on. The first is vaccine policy, mapping vaccination coverage, and thinking about the consequences for the burden of infectious diseases. This is being done with a particular focus on measles and rubella.

Secondly, we are investigating climate drivers of infectious disease, particularly in collaboration with our great colleagues in Geosciences and building on Princeton's unique strength and links to the Global Fluid Dynamics Lab. So, we've been looking, for example, at how climate drivers shape the dynamics of a respiratory syncytial virus, which is a nasty infection that has high morbidity and mortality in very young children, and we're thinking about how changing climates will affect the burden of this infection.

***Q:** In what geographic areas do you typically focus your work on?*

**A:** We're motivated partly by the questions and by the data that is available. So very generally, if there are beautiful data anywhere in the world, we will work with those data that apply to the relevant questions. I have a focus in my lab on Madagascar, partly because I grew up there. We've been doing work ranging from thinking about rabies and vaccination against rabies to studying poultry pathogens and how they spread across the country in the context of food security. Then you add in the location of Madagascar, which is an island, so in a way, it's kind of a contained situation that adds some nice features.

***Q:** How do you conduct your research? Where do you start? How do you include a policy angle when analyzing things from a technical or virologic perspective?*

**A:** One of the interesting questions that emerges in infectious diseases is considering aspects of the dynamics. For example, we add value when we map where vaccination coverage is or isn't adequate. Importantly, thinking about this adequacy in the context of the age profiles of cases helps us understand the likely burden of the disease. The challenge, of course, is in finding ways to provide useful guidance.

One example that builds on the extra insights you might get from building a dynamic model of these processes is thinking about the age profile of vaccination coverage. More specifically, most children are eligible to get vaccines between nine and twelve months of age. However, there are many settings in reality in which they might be getting their vaccines at a much later age, and the concern is that they might be getting it too late, such that they might have already been infected with a disease like measles.

At the same time, by not providing the vaccine for children who missed it in the first round, you create a vulnerable population of children with no immunity. These are the kind of tradeoffs we can frame in models, where we show that the benefit of just

widening that age range of eligibility could be really considerable. The value of that policy recommendation is that it's extremely cheap to implement—it doesn't require deploying 10,000 more vaccination teams; you just need to shift the upper age of eligibility.

With regards to virology, measles and rubella are viruses that are extremely easy to work with. This is because they have a relatively simple “life history” from a biology perspective. They are directly transmissible, so the only way to contract measles is if you were susceptible to measles and somebody who had measles sneezed on you. These viruses are also completely immunizing, meaning you cannot be re-infected. They also only have exactly one host: humans.

About 300 virus species have been known to infect humans. They each have varyingly complicated biologies. However, measles is perhaps the simplest biology you can target. The case fatality rate for measles can be as extraordinarily high as 20 percent in settings where people are suffering from other things like malnutrition. Measles vaccination has been referred to as a “best buy” in public health because the vaccine is cheap, it's effective, it's safe, and it gives you lifelong protection.

***Q:** Could you give an example of a virus that isn't completely immunizing, where one could be infected for more than once?*

**A:** Of what we know of existing coronaviruses, they mostly do not generate long-lasting immunity. We're still piecing together the evidence there, and there are many ways of being completely immunizing. You could be completely protected for the rest of your life from the disease showing the negative effects of infection on your health. However, you might still be getting infected, which would mean that you're still a risk for the population since you could transmit to other individuals—it's just you alone would not be suffering the consequences. We see this in rotavirus, for example, which is a diarrheal infection that is a very high source of morbidity and mortality in children.

***Q:** What was your reaction when you first heard about the novel coronavirus? Did you feel that it could be controlled?*

**A:** What we've learned over the last decade in global health is to expect the unexpected. There have been many emergent pathogens in recent years. Take, for example, the 2003 SARS pandemic and the 2009 influenza pandemic, which raised some concerns about pandemics because of the 1918 influenza pandemic that had such an extraordinarily high fatality rate.

Later, Ebola surprised us since we were not expecting it to cause a problem on the scale that it did based on what we knew about its biology and transmission. Then, there was Zika, which we did not know to be pathogenic. It was thought to be just another virus that had maybe fever and chills. Nobody expected it to come with the burden it did.

So, was I completely shocked? No, in a way. Since SARS in 2003 I think coronaviruses have been a source of special concern, in part because we do not have a vaccine, nor do we have very good antivirals. Would I have been able to predict it was a coronavirus? I don't think I could do that either. There is a uniquely complicated recipe for the things that will create an emergent pathogen. This involves the biology of the pathogen, patterns of contact between humans, and the potential zoonotic source of that pathogen (i.e. changes in land use, global connectivity, etc.). All these pieces have to come together to create the circumstances where a pathogen might emerge. Was it surprising? In a way, not. Was that specific pathogen predictable? It would have been hard.

***Q:** What are some of the first steps taken by researchers when evaluating and attempting to understand these infections?*

**A:** One of the first things people try to do is sequence the virus or identify what the etiological agent is. Next, they try to understand if there is human-to-human transmission. In the early days of the coronavirus outbreak, the people affected were mostly those who had been in contact with one particular market. So, human-to-human transmission and wildlife exposure seem to be at play here.

Sequencing the virus helps researchers get a handle on the biology and understand how it fits into what we already know of other viral pathogens. If it is a virus, they need to work hard to standardize their understanding of the symptoms and work up diagnostics. For example, in this case, we need to pin down which live bird market it originated in and perform contact tracing on the individuals who appeared to be showing these symptoms.

If it is a uniquely new virus, then they probably have to start working with Koch's postulates and go straight right back to the origins of biology. Once they see evidence of human-to-human transmission, they can then start to worry about what the trajectory is likely to be.

***Q:** You mentioned that there was contact with a wild animal market and it's quite well understood at this point that the virus originated from wildlife animals. Why was it a coronavirus? It seems to me that the process of spreading from farm animals to humans requires various intermediaries and is more complex from a virology perspective than contracting the virus after touching the animal.*

**A:** Probably. This isn't exactly my area, so I'm not entirely sure how that will have played out. In terms of "Why coronavirus?", I think that'll depend on the biology of every particular pathogen. Avian influenza is another one that we worry about a lot. Live bird markets probably play a role. We also worry about industrial farming practices and whether they



create little Petri dishes where viruses like these evolve and spill over to humans. The viruses probably just need the right kind of receptor or something. There is likely some sort of adaptive process, but that is going to be so dependent on the specifics of that virus.

***Q:** As you mentioned, SARS occurred in 2003 and is in the same family as the coronavirus. Why didn't we develop a vaccine for SARS and why have we not come to have a more detailed understanding of that virus fifteen years later? What are some of the challenges of vaccine development?*

**A:** I think you touched on a really interesting area, which is market failures around vaccine development. It's relatively hard to finance the development of vaccines because the rewards are relatively slim. This is especially the case if the vaccine is for an emerging pathogen that's relatively rare or unpredictable.

Many leaders in global health are thinking very actively about this problem, which is in part why I think we have got such an accelerated development of a coronavirus vaccine in the mix now. There is also a minimal time frame since you have to be able to test it. There's an upper bound on how long it's going to take, which is sort of unmodifiable, and it was extraordinary how fast we got the Ebola vaccine out.

It is also really hard to test vaccines, since, by the time we had the Ebola vaccine or the Zika virus vaccine, we didn't have the infection around much anymore. You have to be able to develop a test design that allows you to test the vaccine effectively and ethically when there are very few cases.

***Q:** Do you have a prediction regarding how quickly this vaccine could come out? Does the fact that we have sequenced the virus mean we are close to solving this or that we are more or less certain to solve this eventually?*

**A:** Knowing what the virus is one thing, but touching on everything to do with human immunology is a completely different thing. We are trying to show your immune system something that tells it to respond to the pathogen. Vaccines are an enormous global good because you can protect healthcare workers, which is game-changing in these sorts of situations. They are also a tremendous social good since by protecting yourself you are protecting others indirectly.

Vaccines are just magical. I think we're walking towards a more principled way of developing vaccines, but it's very hard to do trial and error with vaccine development when we are dealing with a very problematic pathogen. You typically start with animal models and then build up from there.

Your immune system is probably the most dangerous part of the equation. In the 1918 influenza pandemic, the flu virus per se was not killing people, but they were dying as a result of the cytokine storms that came around it. That is, people's immune systems were reacting so hard to the pathogen that they ended up dying. Because vaccines are explicitly alerting your immune system, it is a very difficult line to walk.

Just because your immune system is alerted does not mean it will help you survive the disease later on. You could alert your immune system, but it could not remember the vaccine in the right way. Alternatively, you could alert your immune system in ways that cause vaccine adverse events. That's extraordinarily rare for the vaccines that we have on the market, but it's something that you have to navigate around during the process of vaccine development.

This is one of the interesting statistical and design challenges that people have really made enormous progress on recently, as well as in the wake of the Ebola outbreak. That is to say, even if you have a "successful vaccine," it may not actually work the magic as you hoped it would.

***Q:** If short-term estimates are correct, we should get a coronavirus vaccine within one year. Do you foresee any issues with the production and distribution of the vaccine?*

**A:** I can imagine there being issues. I do not necessarily have a lot of expertise with vaccine production and supply chains. I do think making sure that [the] public health [system] is ready to meet a big surge in capacity is one of the big concerns about this virus. If health centers are completely overwhelmed by billions of people turning up or the healthcare workers are getting infected, then you have a real problem. Providing a vaccine for at least all of the health care workers is really important.

***Q:** Earlier in our conversation you mentioned antiviral treatments. Do you know of any medical treatments currently being used to treat coronavirus patients? More generally, what is the difference between an antiviral medication and a vaccine?*

**A:** Vaccines prevent infection. Antivirals help cure someone who is already infected but do not prevent spread. They do not have as large of an impact.

***Q:** How do epidemiologists try to understand the coronavirus and its spread? If I were to ask you to outline some of the major stages of coronavirus' development we should expect in the next few months, what would come to your mind?*

**A:** I don't have much of a handle on the treatment or vaccine side of the pandemic. In terms of understanding the virus, the spread, and the risks, there are a number of key quantities you need to know.

One of them is a value referred to by epidemiologists as  $R_0$ . This is the number of new infections per infectious individual in a completely susceptible population. For coronavirus, that number is estimated to be between 2 and 3 (as of February 14 when we recorded this episode).

We also think that the generation time of this infection, which is the time interval between me having symptoms and someone I've infected showing symptoms is about a week. By knowing that  $R_0$  equals 2 and the generation time is about a week, you can predict that the outbreak should double pretty much every week.

The issue is that this is a prediction based on this particular point in time under certain conditions of human behavior. If there is not much variation in human behavior, then we can predict the early phases of the outbreak. In this case, it is doubling every week. If you're in a more erratic context with more variability, the outbreak becomes much less predictable and therefore becomes much more stochastic and harder to get a handle on.

It is hard to make a long-term prediction since these numbers will only help us predict the early part of the curve. Later, more factors will kick in, like if individuals are immunized by infection. Immunization would reduce the substrate that the infection has to spread upon. If human behavior is changing, like it did during the Ebola outbreak, then we also expect the transmission to fall. Since this is all happening in the context of our complex social lives as well, it is extraordinarily hard to predict how those things will fall out.

The prediction is also based on averages. It could be the case that many individuals are infecting zero individuals and a few individuals are infecting very many individuals. This was a notorious characteristic of SARS, and we call such instances "super spreading events." If you know what sorts of features are aligned with super spreading events, you might be able to better control the spread of the outbreak.

Another thing we really need to know is how bad this infection is for our health. Here, we have a real problem, which I teach extensively, that numbers are very uncertain particularly in the early phases of an outbreak. This is in part because the people who are turning up at hospitals (and therefore entering your databases) are those who have worse cases. Therefore, your denominator might be a very small part of the size of the affected population, and you end up estimating case fatality rates that are rather too high.

Your numerator could also be slightly wrong. Since this is a rapidly evolving situation, the individuals you are counting in the numerator might die further down the road. There are uncertainties with both the numerator and the denominator, and those two pieces of information are extremely important in trying to anticipate how much we should worry about these sorts of infections.

Further, it seems that there is a spectrum of severity. There are a lot of problems caused by asymptomatic transmission. If people are wandering around with no signs of the infection, then it's very hard to understand how the disease is spreading around the landscape and how long it will take for symptoms to appear. In this case, it is much harder to contain the infection. It seems that for SARS, the transmission did not precede symptoms very much, and that might be in part what allowed us to contain it quite effectively.

***Q:** Do you know anything about the reliability of current coronavirus testing and the ability to test all of the people who might be infected?*

**A:** Having such a test that is easily deployable and making it available in all the hospitals is just going to be incredibly important. Without reliable effective diagnostic testing, hospitals will be overwhelmed unbelievably quickly. Developing an effective test seems like an obvious first step, especially if you are trying to quarantine people given that hospitals have limited capacities. The degree to which test development is regulated at the national level of the United States makes this process much more slow-moving compared to a system in which hospitals are allowed to produce their own tests.

This is an interesting policy question in and of itself. You might think of testing as dichotomous—either someone has this infection, or they do not. However, there is likely a wide spectrum of symptoms by which we refer to as “the disease.” This is the reason that it's so hard to contain the spread. The only way you're going to get coronavirus is if you come in contact with someone who has coronavirus, but you might not be able to tell, and they might not know because it's asymptomatic.

This emphasizes why it is so important to have good diagnostic testing. Implementing it into the systems of surveillance we have is a kind of a natural no-brainer, especially because there is a limited window of time to catch someone who is infectious. With coronavirus, an individual is infectious for about a week or two, and it is a race to catch them within that time frame through easily deployable and efficient testing.

***Q:** We see that even though China has really gone after containing the virus, cases there are still rising at such an extraordinary rate. Does this mean that even if we try our best to contain the virus, it may still keep going for a long time?*

**A:** These are incredibly chaotic and traumatic circumstances. Curating a database while the numbers are constantly fluctuating is very difficult. Doctors are producing different research efforts all while also being overwhelmed by patients and dealing with the fact that perhaps the symptoms associated with the infection are still under flux.

Of course, when there is a change in the case definition that causes a large jump in numbers, people claim it's a conspiracy. The first concern is to help people who are affected and try to reduce transmission. Getting the right numbers is important, but it's going to be further down on that list of priorities.

I think in the early days it was impossible to say whether the steps taken would have been effective in containing the virus or not. Of course, in hindsight, you can see lots of things you might do differently. For infections for which we have no clear vaccine or no clear way to prevent transmission, like airborne infections or direct transmission infections with a high  $R_0$ , it is really likely that the escape of the virus would be general.

Based on the fact that there is asymptomatic transmission and that  $R_0$  is around 2, I would be very surprised if this didn't go global. I might be wrong, but that's my sense just based on the fact that there is a lot of asymptomatic transmission and the  $R_0$  seems to be relatively high.

It is a bit mysterious that we're not seeing large outbreaks from the international introductions that have been around the place. That possibly has something to do with the over-dispersion in the heterogeneity in the number of new infections per infected individual, so there is a fighting chance that one could slow the virus.

I would not be surprised if this virus went everywhere. I think the evidence suggests that the case fatality rate is non-negligible, and the virus will likely impose a large burden on our health systems, killing huge proportions of our populations. If the asymptomatic carriage is high, it could be that it turns into another flu, which is something else that people have talked about. Or, it could be just another virus that we deal with every winter.

As for something like influenza in years where there's been a poor vaccine match, you can close the schools, which reduces transmission. But effectively the moment all the kids go back to school, everyone who was going to get infected gets infected. These things are just transmitting ready at high rates and are going to spread.

There has been some work suggesting that the quarantining of the cities slowed the spread by about three days. But who knows? Since there is a lot of uncertainty in those estimates. I think the chief medical officer in the United Kingdom came out yesterday saying that the hope was to delay the outbreak until the summer since health systems are currently laboring under influenza at the moment and that winter is a bad time for the health system. So, if you're going to be hit by a viral pathogen that causes respiratory ailments, you can't neglect the advantage that would be obtained just by simply delaying it a little bit.

***Q:** The rise in air travel seems to drastically increase the ability of viruses to spread from one part of the world to another really quickly. The W.H.O. tried to contain fears about travel, but a lot of countries, including the United States, are imposing either recommendations or travel restrictions around China specifically. What do you think about the effectiveness of reducing air travel?*

**A:** For this particular virus, I think the community is somewhat split, and I'm not sure that I know what I think specifically on this. The words we use and the way we approach these things are so important. Travel bans might create a context where people are going to be turning up at airports in lines, and I can imagine strong motivations to lie about travel history, which is not great. I think transparency is important. Every time we try to intervene with human behavior, we have to think about how human behaviors will change in accordance with the intervention.

**Q:** *Were there any notable headlines or stories in recent coronavirus news coverage that struck you as a misrepresentation of the truth from a scientific standpoint?*

**A:** My community gets irritated immediately when the press starts throwing the word "mutation" around. This is because it's often used interchangeably with "adaptation." There's always a rate at which mutation will be occurring in viruses and all RNA-based life. Adaptation is the degree to which mutations allow the virus to do something different, such as be concealed from our immune system, which helps the virus spread through the population. This pattern is not yet clear for coronaviruses.

Examining the phylogeny of these viruses might be helpful. Flu has a ladder-like structure where a new strain takes over every year. The coronavirus phylogeny does not look like that. We have data on four strains that have circulated in America. My sense is that there are probably many more. And they tend to have winter outbreaks, and they just stick around. So, there's not like a new one replacing it every so often.

**Q:** *The WHO recently declared a public health emergency of international concern. What does that signal to the global health community? How has the global health community reacted to this declaration?*

**A:** There is a reasonable amount of debate as to what it means for the WHO to declare such an emergency. From what I remember, they called it really late for Ebola, and calling it earlier might have really saved lives. For Zika, they potentially called it early.

In recent years, there have been debates over what it actually means to call the public health emergency of international concern and how countries rally behind that. I'm not actually sure what all the parameters are. So far, my community, the mathematical modelers, has been extremely rapid about sharing data and results, even posting them for open access. That has been one of the heartwarming triumphs of this process.

*Q: Are there any common misunderstandings people have about viruses?*

**A:** We have viruses around and in us all the time. High transmission rates in themselves don't make viruses terrifying. We need to understand transmissibility and infection fatality rates to determine the degree to which we should be concerned about a virus.

*Q: Are there any threads that tie together the diverse projects that you work on?*

**A:** I think one of the really exciting things about working in infectious disease biology is that there is a common set of principles. We have a lot of core theory that allows us to titrate what we think is going on. So, for example, I work a lot on measles. Madagascar just very tragically had a really large measles outbreak. Many of the principles we're applying to understand the coronavirus outbreak—the  $R_0$ , early levels of spread, the importance of human behavior, patterns of context—all matter in that setting as well.

My work is about having a more nuanced perspective when analyzing those different kinds of factors at play. I think I should also say that we're often working with patchy data, data that's coming in under different case definitions. We work with a lot of uncertainty, and we build a mathematical representation of that to try and figure out what the logic is, to try and pull together what we think is going on with a particular pathogen. Our models serve in order to predict and understand which health measures would be most effective.

*Q: Do you think the global response to pandemics has made progress since the earlier SARS outbreak? I ask this because there are many people in China citing evidence of how both the public and the government made many of the exact same mistakes they made during the SARS epidemic.*

**A:** I think one of the things that public health struggles with in messaging is the general struggle of preventive measures. I was at a meeting once where people were discussing whether the United States needed a National Disease Forecasting Center like we have a National Weather Forecasting Center. And the consensus was no, in part because we're not terribly good at it.

Another part is because if the National Weather Forecasting Center says, "a hurricane is coming," you would go batten down your windows and go into the basement, and afterward, the hurricane would come, and you would say, "thank you, National Weather Forecasting Center." In contrast, after the National Disease Forecasting Center tells everybody to go get vaccinated and people actually get vaccinated, nothing would happen afterward. So, you see that the successes of public health are rather invisible and are often simply accepted. That is a general issue.

It was reasonably hard to be certain that a coronavirus would become the next problem on the horizon, but I'm sure many more nuanced thoughts have been put in how we make public health systems more resilient. I think one thing everyone would agree on is to improve our capacity to meet surge, which will be important if these sorts of crises happen again.

***Q:** The name of our show is *Policy Punchline*, so we want to ask you at the end—what is your punchline here?*

**A:** Something that Prof. Bryan Grenfell and I are quite passionate about is: in trying to understand the landscape of global health, it would be game-changing to understand the landscape of immunity. Who is protected against particular infections and who isn't? In order to get that information, we could collect blood samples, test them to see what pathogens people have been exposed to, and develop an understanding of what that landscape of susceptibility may look like. If we had a type of surveillance designed not to just look for cases, but also to look for vulnerabilities to cases, that would be very exciting. This is something that we increasingly have the technological ability to do, and I think that would help steer policy in interesting ways.



# 2

## Why We Need to Support Hospitals and Healthcare Providers, Especially During a Pandemic

Dan Michelson  
March 24, 2020

“

*From a policy perspective, it is so important that we support those who are risking their lives to save ours. We need to get the appropriate amount of funding to support hospitals and healthcare providers who are on the front lines. That would be my push. Let's start the process of helping and thanking those who are there for us.*

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— **policy punchline** by Dan Michelson

Dan Michelson is the CEO of Strata Decision Technology, a cloud-based analytics and financial planning platform that helps over 1,000 leading hospitals and healthcare delivery systems to drive margin to fuel their mission.

***Q:** What does Strata do and what are some of the urgent issues surrounding healthcare costs today?*

**A:** If you look at things from a socioeconomic perspective, one of the biggest issues is, clearly, the cost of healthcare. This year the total cost of healthcare in this country will cross four trillion dollars and account for roughly 20 percent of our GDP. And for the most part, no one knows or understands where it all goes. We spend twice as much money on healthcare compared to any other industrialized nation, so clearly there is an opportunity here.

Our mission as a company is to “help heal healthcare” and we are approaching it by focusing on a very specific niche – the cost of care. If you think about search engines, the first thing that comes to mind is Google. If you think about coffee, you think about Starbucks. If you think about the cost of healthcare, what company comes to mind? Becoming that company is, really, the opportunity that we’re chasing. Currently, Strata supports roughly 25 percent of U.S. healthcare. We work with 220 different healthcare delivery systems and our application helps them to better plan, analyze, and perform. The financial side of healthcare can help fuel the clinical side of healthcare. You can’t have one without the other, especially when people try to determine value.

***Q:** How complicated is it to understand healthcare costs? How does Strata work to make sense of these numbers, especially when the amount paid by the patient is not usually the amount received by the hospital?*

**A:** The complexity of healthcare is pretty stunning. Our average customer is a one billion-dollar healthcare delivery system with tens of thousands of employees, thousands of departments, and hundreds of sites. If you look at the business model for the past 50 years, it has been essentially “more equals more.” The more that they do, the more patients they see, the longer the patients stay, the more services that they perform, the more money they make.

However, the dynamics in healthcare have changed dramatically over the last 36 months. In the past, hospitals would take a percentage of their charges and call that their cost. If you think about it, that really doesn’t make any sense. It’s like charging \$4 for a cup of coffee and you said 0.75x that is our cost, meaning the cost is \$3 and we make \$1 with each cup of coffee we sell. If you use that approach and we now charge \$8 for a cup of coffee, the cost estimate would now be \$6. Clearly, that’s not right. Before the pandemic, they were beginning to push hard to better understand their costs, but now that work is happening at hyperspeed.

Strata has become the default option in healthcare for understanding the costs side of the house. We have a cost accounting solution that’s part of our cloud-based financial performance system. Hospitals implement our system and are able to look at what the cost is for every patient and every provider across every site of care. The cost by itself is an

important number, but it really doesn't become vital until you marry that information with the clinical data in order to look at overall value. In other words, you can spend an infinite amount of money on something that has no value. That doesn't mean that the patient is being served better.

Everyone has essentially been flying blind in healthcare when it comes to understanding what things cost. They never have any data. So, if you go up to a physician and you ask them how much it costs to deliver a hip procedure or to see that patient in the clinic, they have no data and therefore no ability to answer that question.

***Q:** You said that it cost around \$3,000 for a company to cover the healthcare costs of a family of four 15 years ago. Today that number is around \$20,000, which is almost a seven-fold increase. Where does this cost increase come from?*

**A:** It's nobody's fault, but it's everybody's problem. When people get into the debate, they try to point the finger at somebody, often at pharmaceutical companies. But the cost of pharmaceuticals is less than 10 percent of the total cost of care, which is \$4 trillion. Even if the cost was 10 percent and we removed \$400 billion from the healthcare system, it is still a \$3.6 trillion system. At the end of the day, it's still extremely expensive.

There are a mixed set of circumstances that got us here. There are three times as many people over the age of 65 as there were 40 years ago, so we have many more people to care for. These patients are also much more complex. Fifty percent of Medicare patients have multiple conditions that need to be treated, which is clearly going to be more expensive. Also, there's much more that we can do for people now than we could do in the past. A diagnosis of cancer in the past was really a death sentence. Now people obviously live with cancer diagnoses and are able to thrive as a result of advanced treatment.

Another issue is that there is a real shift towards people spending out of pocket. There has been a rise of high-deductible health plans, which is an option where you can pay a much higher deductible for a lower monthly premium rate. While that may look really good on the surface, some of these high deductible plans have somewhere between \$1,000 to \$5,000 that you'll have to pay out of pocket. Because people now have to pay out of pocket, they're going to look at what the costs of things are in a whole different lens. There is almost a perfect storm of issues that have come together to increase the cost of healthcare.

***Q:** If hospitals and providers don't always have access to cost information, how are patients understanding the costs of their care?*

**A:** The cost of care depends on who you're talking to, since the provider, employer, and patient have a different perspective on what that actually means. It's really unfortunate that with these high-deductible plans, people are being put in a position where they have to,

at least from their own perspective, try to understand the cost of things. Now there are transparency laws where hospital providers are compelled to put information on the cost of different procedures online. But once again that is, in this case, the price; that's what they're charging, but it's not necessarily what the patient is going to be paying because patients have many different health insurance plans. It becomes extraordinarily confusing.

In my personal opinion, even though that genie is out of the bottle, it would be better to put it back in if we could, because I don't think patients should ever be in a position where they have to go shopping for something that is relative to their own personal health or to their family's or friends' personal health. It is just way too confusing of a position to put people in. Unless we can create a much easier approach for sharing meaningful information, I do think healthcare providers are going to have to play a more active role in providing a "financial prescription" for patients. But right now, this system does not work and it puts patients in the middle to muddle through with often disastrous consequences.

***Q:** How does the advocacy of insurance companies, which are very powerful entities, combine with the advocacy of hospitals and patients to deliver lower-cost care?*

**A:** It only works well when it's integrated. Kaiser Permanente, the largest healthcare delivery system in the country, and Intermountain Healthcare, the largest healthcare delivery system in Utah, are vertically integrated and so they also are taking on the risk. This means they're not only the provider but also the health plan. In that case, there is more of an inclination for them to get involved with population health. That involves trying to keep people out of the hospital and addressing the social determinants of health like hunger, homelessness, and other social conditions that contribute to the overall cost of care.

Unfortunately, outside of that model, I don't think there are many examples where health plans and hospitals are on the same side and share the same end goal. You're likely to see some disruption in that space and others might come in and try to make it stunningly simple for people to navigate the system. You are going to see more and more startups pursuing different angles on this, especially relating to telemedicine. Telemedicine is a great example of a technology that can lower the actual cost of care for many and also improve the convenience radically. Instead of having to take time off of school or off work to go see a physician, you can see them just like you would see a friend through FaceTime.

***Q:** Is addressing the cost confusion the fundamental way to go about revolutionizing the healthcare system?*

**A:** Let me make one point extraordinarily clear. When I talk about the cost of healthcare, I am not talking about the patient's perspective because I don't think that they should have to be involved in actively reducing the cost of care. I don't think that should be their role. That should be the responsibility of those who provide the care. When I talk about transparency in terms of the cost of care, I'm speaking about those that provide it and understand it. We

did a survey of 100 healthcare executives who are operating within the healthcare systems and asked if they ever get information about the cost of care, meaning the amount that it cost that organization to provide care. You can't drive out waste or reduce inefficiency without that data. Nine out of ten executives said that they never get it.

Think about this: if you have a healthcare delivery system that has five billion dollars in revenue per year, 80 percent of that spent is controlled by physicians and roughly 100 percent of them never get any information on it. If they're trying to decide between two types of therapy, evaluate their efficiency versus another physician, or understand different plans of attack for different diseases, they are making these decisions without ever having received any information. To use an analogy, it is impossible to know whether a flight from New Jersey to Chicago is \$200, \$2,000, or \$20,000 without access to any information.

You have the largest industry in our economy operating in an environment where nobody is sharing any information on the different alternatives and what they mean. There was a study that was published in Health Affairs where physicians were asked if they ever receive information about the cost of care and 80 percent said never. Then, they asked those same physicians if they would use that information while selecting a device, if they had it, and 80 percent said yes. That alone the single biggest opportunity to reduce the cost of U.S. healthcare.

***Q:** Some people argue that cost information would interfere with a physician's responsibility to choose the best path of treatment for the patient, regardless of the costs. How do you respond to this concern?*

**A:** This is what I tell every CFO that I speak to on this topic: get up in front of your physicians and make it extraordinarily clear to them to never make a single decision based on the cost. It could be my daughter. It could be my wife. It could be my mom. So, don't ever make a single decision based on cost, but also don't operate in the dark. We should know what these different options are and if they're cost-effective or not. So once again, when you asked physicians, would they like to see that information? They say, sure. But I don't think that any of us for a second would want a physician making a decision strictly based on the cost of care.

People are making an assumption that everything a physician does both is and always will be the right decision even though they don't have any information. For example, there's a drug called Exparel that is given post-surgery to function like a nerve block. It supposedly reduces the use of opioids and reduces the length of stay. The average hospital or health system spends anywhere from two to four million a year for this drug. Strata looked at 24,000 total hip procedures and then evaluated whether Exparel actually had an impact on the length of stay and reducing the use of opioids. We found that it actually didn't. Would this drug be effective for other procedures like a shoulder block? It would. But what I just described to you represents somewhere between one hundred to one hundred fifty million in savings, just across our client base, for using the drug appropriately.

I'll give you another example with clinical implications. As you probably know,

the common cold is a virus, not a bacterial infection, but antibiotics get prescribed for that purpose. Half of all antibiotic prescriptions are written for non-bacterial infections, viral infections, meaning that there is no way in any case that it could work. It's really being given to placate patients, a placebo effect more than anything. So, there are plenty of opportunities where things are going on based on inertia within healthcare. If we don't provide data to help people to make a more balanced decision, we'll never cut into the cost of care. It will never happen.

In an effort to examine this, Yale-New Haven Hospital combined clinical and financial data. They took data out of Epic, their electronic health record, and married it to data from Strata on the cost side. Then they looked at clinical events resulting in harm to a patient and found that when a patient safety incident occurs, the cost of care is actually five times greater than it would be otherwise. When you looked at the margin, even though they were doing more work, they actually made less money. Yale found that by mirroring cost and quality data together, they should be investing more in reducing those incidents because it has both a clinical and financial benefit.

The cost of care is the only story here. But the fact is, no one has even opened the book. Currently, they're operating without anything. All they have in their head is their experience and their intuition, but they can't see what other organizations are doing and how they're approaching it.

***Q:** Why hasn't it occurred to other people that it is really important to understand the cost of care?*

**A:** Even though there were some cost accounting systems out there, people barely used them. Even if they did use them, many had the wrong methodology, so no one trusted the data. What's happened in healthcare is the top line isn't growing anymore, so there's been a massive shift to the outpatient setting. The inpatient setting was a cash cow. A lot of these high value, high volume procedures now are done in the outpatient setting. Hospital margins over the last three years dropped from 4 percent to 3 percent to 2 percent. That's not a good trend.

Cost accounting has become cool now. You might be familiar with a methodology called "time-driven, activity-based costing" or TD-ABC, which was used for a while but was very manual and therefore not that helpful. New systems had to be built that were essentially the equivalent of a smartphone versus a cell phone. What put Strata ahead of the market was the realization that the approach needed to be different.

***Q:** A lot of healthcare startups really struggle to be successful. How has Strata conquered these odds?*

**A:** Over 15 years ago I was at a big healthcare conference, also attended by Sergey Brin, the co-founder of Google. He was trying to understand the role that Google could play within healthcare. At that point, they were playing no role whatsoever. He ended up sitting down at a demo station with us at our booth for about two hours, which was kind of surprising because I think he limits his meetings normally to 20 minutes with a clock in the corner counting down. I asked him why he was so interested in healthcare and what he responded was pretty striking because Google was a high-flying company. He said that most of Google's revenue came from search and advertising and that, "if that's all Google ends up doing, I will consider it to be a failure." That was a pretty bold statement.

They ended up launching something called Google Health. Some people might be familiar with it — it ended up folding after a couple of years. There really hasn't been any Silicon Valley companies that have gained market leverage on the healthcare provider side of the house. You see a lot of them chasing the consumer side of it now and I do believe that they'll get some traction there. But I think the inclination to treat the largest industry in our economy as a "vertical" is kind of restrictive because everything in healthcare is ultimately a component of the workflow. Unless you're willing to get down into those weeds and stay there and then dig deeper, you can't just float in and say, "healthcare is all screwed up and I got the answer".

Think of healthcare as a 17 by 17 by 17 Rubik's Cube. Every time you turn it, you'll screw up something else. But if you really understand how to solve a Rubik's Cube of that nature, all you have to do to really do is understand that it's a bunch of little Rubik's cubes inside. To solve it, start with the core of it and then move your way outward.

There's an incredibly complex set of problems in healthcare, but if you can niche your way through it and focus on one or a handful of them, you can really get some traction. I don't think Silicon Valley has had the patience to really work the Rubik's Cube which is healthcare and to dive that deep.

**Q:** *Do you kind of see the government as capable of coming in and really fixing this thing?*

**A:** I think they could be part of the solution and I think that's what we need to recognize. The Affordable Care Act, regardless of which side of the aisle you're on, has left a lasting positive impact in many cases. There's a whole variety of things that I think have been productive. If you have a pre-existing condition now, you can still get health insurance. There are no lifetime limits. You don't have to pay if you get readmitted to a hospital within 30 days.

But when healthcare becomes a political punchline, those of us who've been working on it for 30 years become pretty deflated because we recognize that that's just politics. You need to get in the weeds to be able to solve problems. People recognize that taking 150 million people or more off of their own health insurance and having that

subsidized through some type of tax or another type of approach is a pretty big leap and may be difficult for people to swallow regardless of how they feel about it.

I think every election will be a healthcare election from now until the end of time. That will always be, I believe, the number one or two or three issue on everybody's list. We should all recognize that there's no simple answer to this one complex problem, but there are many good answers to many important problems. We should be focused on those and really prioritize which ones we want to go after and try to get the most traction that we possibly can.

***Q:** Are hospitals even thinking about costs right now in the middle of the pandemic? Should patients be worried about costs?*

**A:** Clearly, there were many things that were much more pressing initially. But there's no avoiding the fact that this is also causing the biggest financial crisis in the history of healthcare. Tens of thousands of people have been laid off as elective surgeries were canceled and patient volume dropped. Strata just published a study that said, on average, for every Covid-19 case that comes in, a hospital is going to lose close to \$3,000. Some are going to be losing up to \$10,000 per case. You cannot sustain that over time. Some Federal funding was given, but more may be needed over time. This could be a calamitous moment for hospitals and healthcare providers if we don't get behind them in the right way financially to support them.

***Q:** What do you think of the government's response so far?*

**A:** The stress in healthcare is so extreme right now. The fact that masks, gowns, and other forms of PPE were not available for a long period of time was stunning as we were putting our healthcare workers in harm's way without the support they needed. Now the message has been sent and received and the right actions are being taken. The financial impact of this has been significant and we have to continue to help them financially.

***Q:** There are many people in the hospital for coronavirus. How is this resulting in a loss for the hospitals? Who is paying for the cost of care?*

**A:** The cost is falling on the hospitals. They initially canceled all elective surgeries, and many converted their ORs into ICUs. In New York, some were at capacity, but other hospitals were sitting dormant. Think of it like a restaurant. There is nobody coming in, but you're being asked to keep it open. So, they have to be able to be fully staffed and the expenses are there, but the revenue is not going to be coming in. That impact, nationally, is going to be crippling.



***Q:** What do you think are going to be some of the other effects on hospitals as a result of coronavirus? Will it change the way that they budget and the way that they prepare? How can the government support the changes that you see?*

**A:** Hospitals have taken a traditional approach to budgeting where they create a 12-month budget that is a kind of a wish list. A lot of organizations, both inside of healthcare and outside, are now moving to more of a rolling forecast type of approach. This is going to go mainstream because of coronavirus and because the original budget is no longer relevant.

A long-term effect of this on the clinical side will be the mainstreaming of telemedicine. You're already seeing it and I think you're going to see that increase over time. I think you will also see better support for hospital disaster plans.

From a public health perspective, I would say that's probably the most important lesson. I personally believe that this will be healthcare's greatest moment. In the same way as with 9/11, people were compelled to serve. We should be celebrating those in healthcare as heroes. We started a push online called My Healthcare Hero (#MyHealthcareHero) so people can recognize their friends and family members who are on the frontline.

***Q:** It seems that many people in the U.S. are feeling nonchalant about coronavirus. Do you think that after this passes people will revert to normal?*

**A:** I don't know about that. I think there will be a new normal. Never have we had an experience like this and we may never again, potentially, in our lifetime. This has not really happened on this scale for about 100 years and everybody on the planet is having the same experience at the same exact time. One of the things that I wrote the other day is what the world needed right now more than anything was a common enemy and it looks like we got one. We will get to the other side of this. When we do, there will be many stories of heroism.

This is like a combination of both of two seminal events: 9/11 and the 2008 financial crash. From a personal safety perspective, at least for many of us, 9/11 was the first time that we ever felt threatened on a scale across this country to that extent. From a financial perspective, the financial crash is what people now remember as an instance where their financial security was under attack. But coronavirus is combining both of those two things at the same time without any clarity of what the other side looks like.

I believe that in times of chaos or confusion or crisis, leaders emerge character is revealed. We're going to start to see that in a big way. Everybody has a role to play. We can be negative, or we can move forward, be optimistic, and contribute to making things better. There are so many different ways that people can help. Strata has published some research that could support hospitals and healthcare delivery systems as they get the funding that they need to. We've also launched a public awareness campaign called My Healthcare Hero to bring awareness to these folks who are risking their lives to save ours. At the end of the day, we'll get to the other side of this and there'll be many people to thank.

***Q:** What brought you into the healthcare space and why do you continue to stay there?*

**A:** The short story is I was a year out of college and had a first job and didn't really like it. Instead of looking for another job, I just decided to find a purpose and figure out where I wanted to spend my time. When I looked at healthcare, I saw both a social good, and the largest industry in our economy, that would give me the opportunity to work on big and important problems.

At Strata, we say, "What flows through our software is not bits and bytes, but human lives." The opportunity to work on something that affects our family and friends is pretty motivating. My career advice for everybody is that if you can find something you care about and work with people you care about, you will have a great career. That's what got me in the door and that's what had kept me so committed.

# Economics

Markus Brunnermeier

Alan Blinder

Ellora Derenoncourt

Emil Verner

Elizabeth Bogan

# 3

## Throwing a Covid-19 Liquidity Lifeline to SMEs

Markus Brunnermeier  
April 1, 2020

“ *We have a health crisis, an economic crisis, and a financial crisis. We have to control and manage them all, and we should call for an expertise-driven, scientific approach to help people, rather than an approach driven by feelings. And even if we may need more government interventions now, we should not go down the authoritarian trap.*

”

— **policy punchline** by Markus Brunnermeier

Markus Brunnermeier is the Edwards S. Sanford Professor of Economics and Director of the Bendheim Center for Finance at Princeton University. His research focuses on international financial markets and the macroeconomy, with special emphasis on bubbles, liquidity, financial crises, and monetary policy.

***Q:** Since the onset of the Covid-19 crisis, you have been conducting webinar interviews with some of the world's most renowned economists and policymakers, each focusing on a different aspect of the current crisis and trying to bring forth some of the most frontier ideas and solutions to the greater public. Why don't we start with your main takeaways from doing those webinars? (All of these webinars are available on the website and YouTube channel of the Bendheim Center for Finance).*

**A:** Essentially, there are three crises coming together—health crisis, economic crisis, and financial crisis. What I tried to do is to put some expert economists and people from other fields together to shed a light on all of these three aspects and, in particular, on the interactions between all three crises.

***Q:** Your first webinar was with Torsten Slok, then Deutsche Bank's chief economist and now chief economist at Apollo Global Management. In that webinar, you explained the nature of economic shocks, describing the difference between V-shaped, U-shaped, and L-shaped recoveries. These are some very technical terms. Would you mind giving our listeners a brief overview of some of those more technical aspects of the economic shocks and what kind of shock we're experiencing in this crisis?*

**A:** There is a big debate about how long the recession will last. If it's V-shaped, it means that the economy drops for a month or two and then recovers. If it's an L-shaped shock, it's a permanent shock and thus looks like the letter L.

We are still debating the nature of this economic shock, so there are huge uncertainties about this particular recession. How long will it last? This will also depend on if or when we develop a vaccine. Some have said that it will be 18 months until we have a vaccination. That's a very long period of time. We can't do a lockdown for 18 months. The key will be to do testing and then to find people who are immune to the virus and allow them to go back to work.

The other dimension is to distinguish between supply shocks and demand shocks. Typically, when you think of the Great Depression, you think of a demand shock. Prices went down because of this demand shock and there was a deflationary period. If you think about the 1970s, you think of a supply shock in which imported oil became much more expensive, leading to huge inflation. With regard to the coronavirus pandemic, there is a lot of uncertainty about the supply-demand dimension of the shock.

The initial shock was really a supply shock, especially in the labor supply that many people who wanted to work were unable to do so. But it also translated into a demand shock, when consumers are now unable to go to restaurants due to health considerations. Thus, there is a complicated mix between a supply and a demand shock. We still have to figure out which is more important in this dimension. Or, maybe it's not so useful to make this distinction in the context of this crisis.

***Q:** Some economists are saying that it's a purely exogenous shock in the sense that the underlying system is still fairly healthy, but the government has forced the economy to come to a stall and freeze all economic activities. Do you think in that sense the recovery will be fairly smooth whenever we unfreeze the economy, or will it actually lead to some dramatic internal consequences for the financial system?*

**A:** The last half-sentence of your question is really important. If it's really a V-shaped shock, which is short, then I think the problem will be contained. On the other hand, if it lasts for a long time, then businesses will close down and there will be a dramatic reduction in business activity, particularly in small and medium enterprises. This will take time to rebuild, making the damage permanent. It is really crucial to figure out some ways to reopen the economy fairly soon through better testing and perhaps some other medicine to really get the economy going again.

***Q:** In your second webinar, in which you speak with Nellie Liang, the former director of the Federal Reserve's Division of Financial Stability, you explain how financial markets can generally smooth out initial small shocks on their own. However, if the shocks continue and are fairly large, they will become destabilizing because they cause liquidity freezes. Do you foresee any immediate issue with the liquidity of the financial system right now, or do you think the shock will have to continue for another couple of months in order to see an effect on liquidity?*

**A:** You point out an important question. In a sense, if there is a liquidity problem, policymakers can intervene very aggressively and solve it. If they don't intervene, a liquidity problem might morph into a solvency problem, which causes much longer-lasting damage to the economy. That's why the Fed is so aggressively intervening, which is what we are seeing at the moment. However, if it's a long-lasting shock, policymakers shouldn't use all of their ammunition right away. Intervening with trillions of dollars of support could be dangerous if the shock lasts for a long time. Policymakers should keep some dry powder in the back just in case the recession is long-lasting.

***Q:** Some have criticized the Fed for spending the same amount of ammunition in one weekend at the beginning of Covid-19 as they did during the entire 2008 financial crisis. Do you think the Fed has already used too much and not saved enough dry powder?*

**A:** I think the Fed has the right approach for now. The important thing is to distinguish between the 2008-09 crisis and the current crisis. In 2008, there was some imbalance in the economy. We had a run-up of the housing bubble and the bursting of the bubble threw the whole financial sector into difficulties. There was some misbehavior on behalf of the financial sector. This time around, the economy was in pretty healthy shape apart

from the fiscal situation—because of the corporate tax cut, the fiscal situation was not sustainable. But otherwise, the economy was doing well. Unemployment was at a record low and everything was fine until the economy was hit from the outside by an exogenous shock. In that sense, the two crises are very different.

The other big difference is that in 2008 it was primarily the households, which had bought houses and took on mortgages, that were having difficulties. This time around, the corporate sector is very much at war. I'm talking about small and medium enterprises (SMEs), the mom-and-pop shops around the corner, who will be hit big time. This is a big difference because it is very hard to get support to small and medium enterprises.

In response to this Covid-19 crisis, the Fed reintroduced the programs that worked well in 2008. But last time, they didn't do anything on the corporate side. They didn't buy corporate bonds and were not very engaged in the corporate sector. One might offer a critique in that it is very hard for the Fed to reach small and medium enterprises because it has to go through the banks in doing so. The Fed doesn't have instruments to really channel liquidity to small and medium enterprises.

For example, if a big company wants to issue some bonds, they can issue commercial paper, which is like short-term debt, or long-term corporate bonds, both of which the Fed can buy. The Fed has now set up some special purpose vehicles to be able to buy corporate bonds. This immediately helps large companies, but small companies don't have the ability to issue corporate bonds and hence one has to find a different approach to reach small and medium enterprises. That's a huge challenge that still has to be sorted out and is an important difference from the last crisis—the Fed has to provide support to the corporate sector and in particular small and medium enterprises.

***Q:** In your webinar with Nellie Liang, you spoke about how the Fed's legal authority only encompasses buying Treasuries and, as such, the Fed must set up Special Purpose Vehicle (SPVs) to buy corporate bonds. However, these programs can only provide support to large corporations, leaving SMEs behind. You wrote an interesting proposal about how the Fed should pursue a strategy centered around evergreening in order to provide support to SME's. Would you mind describing this proposal?*

**A:** Indeed, I think Nellie Liang's presentation was very insightful because she went through all of the different programs. As you pointed out, the Fed itself should not take on any default risk. Once the Fed buys corporate bonds, even if they are investment-grade bonds, there might be some default risk. That is why the Fed sets up SPVs, where the taxpayers initially have to assume the risk of a default and then the liquidity is funded by the Fed.

Typically, bank regulators are very concerned that banks are evergreening loans rather than writing them off. What does evergreening mean? When a bank has lent to somebody who can't pay back the loan, it has to declare to its bank supervisors that the loan is going delinquent and is not going to be paid back. This is bad for the banks because the bank supervisors from the Fed would say, "You gave a bad loan that you have to write

it down, so now you have to have more equity cushion in your bank.” And banks don’t like that. So, instead of writing off the loan, they simply evergreen: providing the firm a new loan in order to pay off the old loan. Typically, the bank supervisors look for this, because they want banks to lend to new firms who create new jobs, rather than preserving unproductive firms that should go bankrupt.

Now, under today’s special circumstances, the regulators need to reverse the prescription they give in normal times. They should allow evergreening in order to prevent firms from going bankrupt. In my proposal with Arvind Krishnamurthy of Stanford, we essentially argue that the central bank should give banks an incentive to evergreen. What does this incentive look like? If a bank evergreens a loan, then it can take this loan to the Federal Reserve to be refinanced. The bank carries the default risk because it decides which loans to give and which to not give, but it can refinance the loans at a very low, potentially negative, interest rate. This makes it attractive for the bank to evergreen and to roll over loans.

***Q:** You also put forth a policy prescription for Europe. How does your proposal for Europe differ from the one you made for the U.S.?*

**A:** The situation in Europe is more complicated because they don’t have the SPVs, in which the U.S. Treasury takes on potential default risk. Something like this is not possible in Europe because there is no Europe-wide finance ministry that can take on this default risk. Thus, we have to come up with other elements in order to protect the central bank from default risks.

In my proposal with Ricardo Reis from the London School of Economics and Marco Pagano from the University of Naples Federico II, we argue that the central bank should give loans that are very, very secure, in that they are interest-free loans. Over the next 10 years, companies will pay them back as an add-on to their taxes. Therefore, if there is ever a bankruptcy, it gets priority to be paid back. It would be senior to all other debt obligations, so this lending is fairly risk-free. Then, this initial lending should be done through the European Investment Bank, which is like taking on the SPV structure that we have in the U.S. The European Investment Bank is thus taking on the default risk.

***Q:** Do you think that the E.U., due to its low interest rate environment and lack of a union-wide fiscal authority, will have measures that are inherently less effective than those of the U.S.?*

**A:** It’s much more challenging in Europe. If you look at the numbers, the U.S. is issuing \$2 trillion of initiatives from Capitol Hill. That’s a significant amount. Germany is doing about 4 percent of GDP, but Italy can only do 1 percent of GDP to help out its industries. There is a much more limited intervention, which will hurt industries in the long run. However, European countries don’t have a lot of fiscal space because they have taken on so much debt



before, which makes it more challenging. We have to come up with more creative solutions in Europe in order to support the economy.

The U.S. has this big advantage in that the U.S. dollar is a safe haven currency. Whenever the crisis becomes more severe, everybody wants to hold U.S. Treasuries and U.S. dollars. Thus, it becomes cheaper for the U.S. to go into debt because the interest rate is lower. This helps the U.S. support its own industries and to support its own small and medium enterprises.

On the other hand, Europe has a much more extensive safety net than the U.S. It is more expensive for the government, but on the other hand, it is automatically stabilizing. Thus, there will be much more hardship for the poor people in the U.S. because it does not have the social safety net that we have in Europe, adding another layer of complication.

***Q:** The U.S. just passed a \$2.2 trillion stimulus package [on March 25]. Combined with some of the previous policy measures, the U.S. has already spent around 13 percent of its GDP, with much of that earmarked for SMEs. Do you think the current measures for helping SMEs are sufficient?*

**A:** I think you still need the evergreening proposals. There is enough money on the table, but the problem is getting the money from the table to the actual SMEs that deserve it. And that's a big challenge. For example, in Europe, there is a credit register, which means that the official sector has all of the numbers for the loans that are taken out. Thus, they know which loans are due and which have to be paid off. All of the data is available.

In the U.S., there is not a centralized credit registry, so the government doesn't know which loans are due and which need funding. The U.S. is struggling with this. There are some private agencies that collect some of this information, but it's not working so well. Hopefully, some fintech companies will be able to help us get a better sense for that.

Part of the reason why this is such a big challenge is that a lot of the lending to small and medium enterprises is done through trade credit or other arrangements. For example, a farmer might buy a tractor from John Deere and John Deere might lend them some money to afford this tractor, which they pay back over the years. John Deere, of course, knows that they were lending to this farmer, but no bank knows it. This poses a challenge, especially compared to European countries with a centralized credit registry, where the official sector knows exactly who is having difficulties and who needs to receive some money, allowing governments to inject the money in a more targeted way.

***Q:** Some academics have said that the current crisis is an opportunity for the U.S. to engage in long-term reforms that may transform the country to be more of a welfare state with more extensive safety nets and social cohesion. What are your thoughts on this idea?*

**A:** I think, in general, this shock will transform the economy. It will lead to much more digitalization, both on the private side and the public side. Teaching over Zoom, for example, might affect the educational sector to a large extent. There might be much more online teaching in the future. It is a shock that will shake the system but will also lead to new innovations.

The same thing will be true in the financial sector. There will probably be a recognition that there's a need to have some centralized data, so that if you want to disperse funds, you may actually know where to disperse them to. In the U.S., this will probably take place on the private side, in which a private entity begins to compile this data. There are some entities out there, but there's no interplay yet between the public sector and the private sector to really share this information. The crisis will probably help with this.

We saw something similar in the last crisis. Before 2008, the Fed didn't have the data on mortgage situations. Because of the crisis, there was a huge effort within the Federal Reserve system to get better mortgage data and understand what's going on. A similar thing will now happen for small and medium enterprises. We will have a much richer data environment and data collection system, which then helps for future crises.

***Q:** After 2008, there was an emergence of unconventional monetary policies, like quantitative easing and forward guidance, due to the low interest rate environment. Do you foresee new monetary policy frameworks emerging from this crisis, especially if our current policy toolbox will be further constrained?*

**A:** Essentially, the Federal Reserve System was reviewing its monetary policy framework before we went into the Covid-19 crisis. We are now in a much lower interest rate environment and the distance to the zero lower bound is much, much lower. So, they were reevaluating all the crisis measures anyways. In times of crisis, you just try everything and even invent things on the fly. Later on, you rethink and make a more systematic evaluation of what worked, what didn't work, and how do we make everything coherent and consistent with each other.

But now, of course, this Covid-19 crisis is throwing up totally new questions. As I mentioned earlier, this is a very different crisis compared to the crisis of 2008-09. It requires new tools and more focus on the corporate sector, as opposed to the household sector and the mortgage sector. This makes the whole thing more challenging, but it will surely lead to a rethinking. There are many economic models emerging now that combine epidemiology models with economic models. If you want to shut down an economy, how long will it take? What is the associated uncertainty? What are the economic implications and how do the economic implications feedback into the health aspect? For example, you can shut down the economy and save some lives by slowing down the contagion. But, at the same time, this could cause other economic dangers. In the worst-case scenario, people will die of starvation, which is happening in India and other countries.

It is important to remember that shutting down the economy has some costs, which is why we have to balance these things. To what degree should we shut down the economy? How should we shut it down? When should we open it up again? To what extent can we guide the policy response by having better testing; not only tests for infected people but also tests for immunity. For example, innovations might emerge that allow us to track immunity and infections through smartphones. People are very creative and innovative, which is an advantage for the U.S. That is why I hope that we can get out of this crisis fairly smoothly without having to wait for vaccines to come out in 18 months.

***Q:** There is some debate in the U.S. about the costs of shutting down the economy and whether they outweigh the benefits. Princeton public economics professor Elizabeth Bogan has argued that the U.S. rushed into its Covid-19 response without an understanding of the costs to society of such a response. What are your thoughts on this debate?*

**A:** The problem in the U.S. is that the number of ICUs per capita is fairly low. Other countries, like Germany, have double the number of intensive care units. We have to flatten the curve, or people will die in very large numbers. There was probably no choice but to call for social distancing in the initial phase. The questions are, how quickly can the economy be opened up again and can you open it up in a smart way? That is where the testing comes in.

As I mentioned before, countries must test not only whether you are sick or not, but also whether you've had it before. I think there has to be creativity in how we measure this and how we implement this in smart ways, so as to give people the right incentives to come back, but not come back too early. We have to react in a smart way.

I am not of the view that most of the people who will die from this disease will be elderly people and hence we shouldn't worry so much because they only have a few years left to live anyway. I think it has to be a joint effort. It's also a nation-building effort, to some extent. We need to come together and do this together, even though it's primarily for elderly people. We slow down the economy, flatten the curve, make sure that everybody gets some intensive care who needs it, and we make special efforts. Once we have flattened the curve, we come up with innovative ways to open up the economy. There are of course a huge number of negative side effects of shutting down the economy, but there will be some technological revolutions that will help us to overcome the situation.

***Q:** You mentioned that the effort to combat the virus is, in a sense, a nation-building effort. How does social solidarity play into this idea?*

**A:** There must be solidarity between the young and the old. The people who are really affected by this crisis are elderly people. What does solidarity mean? It means, for example, that young people don't have a big party over spring break.

Another component is rich versus poor. The virus is not discriminating between the two, but it will probably have a greater effect on the poor due to worse nutrition and other aspects. For example, in my third webinar, with Ramanan Laxminarayan, we discussed how in India, Covid-19 was essentially an elitist disease because it was affecting people who use airports and fly from place to place. It's hitting the well-educated and the rich people harder than the poor people in the countryside.

***Q:** How might the lack of universal health care in the U.S. affect its response to the virus? Do you foresee a change in the country's attitude toward health care as a result of the crisis?*

**A:** It typically takes a crisis for radical change. In the U.S., there might be an attitude change toward public healthcare. In my view, everybody should have some right to good health insurance, but there are different attitudes to that. There is a lot to admire about the healthcare system in the U.S. A lot of innovations and new drugs are invented here.

However, if you look at the percentage of GDP spent on healthcare and the life expectancy gained from this spending, the U.S. has a very inefficient system. There is a lot of overtreatment in the U.S. in certain areas and certain diseases. I'm not an expert in health economics, but there are a lot of things that could be done to fix that. This will then free up money to incorporate and cover everybody with a decent amount of healthcare, which I think is definitely necessary.

I hope that this crisis is an eye-opener for many people. If we provide healthcare for poor people that become infected, then they will be less likely to infect others as well. If these people don't get healthcare and are still forced to go to work, then they will spread the virus to others. Universal healthcare makes the entire society much more stable and less susceptible to viruses. From a purely egoistic perspective, some people might realize that providing healthcare to poor people would benefit themselves in that their chance of infection decreases.

***Q:** In your webinar with Ramanan Laxminarayan, the director of the Center for Disease Dynamics, Economics, and Policy, you discussed the psychological effect of thousands of deaths in a short period of time and how these effects can snowball and lead to worse and worse outcomes over time. How should policymakers go about evaluating potential policies? What details do they need to consider, aside from broader economic projections?*

**A:** Shutting down the economy is hard for many people in the U.S., but it's much harder for people in India, which has decided to shut down its economy. The migrant workers will essentially starve. They are now walking hundreds of kilometers to get home in the countryside and, by doing so, they are also bringing the disease into the countryside.

All of these details matter. As an academic, you might not focus on all of the details of a policy measure, but as a policy maker, you have to take all of these responses of individuals into account.

The side effects from the shutdown are much more severe in countries like India compared to the U.S. As I said earlier, India does not have the same resources as the U.S. It doesn't have the capacity to go to the bond market to issue trillions of dollars of debt and nobody will lend it to them at a low interest rate. That makes it more challenging. Even though the U.S. has a lot of hardship as well, it is much less dramatic than it is in India. The only hope in India is that the population is much younger and younger people are less prone to catch this disease. That's an advantage India has compared the U.S., but that's the only one.

***Q:** I guess the greater question here is, how can policymakers and economists come up with good policies when they don't have a lot of data or a complete understanding of the issue?*

**A:** Typically, policymakers have to make a lot of decisions under uncertainties or in situations in which they don't have a lot of information. What's new here is that there is very little data and policymakers must rely on models to project what will happen in the future. They are relying very much on highly complicated scientific models.

What's interesting is that before this crisis, we had a lot of populism and many people didn't believe in experts. And suddenly you see the experts coming back in the forefront and really guiding major decisions in the economy. I think it's actually a surprising U-turn in this regard.

The crisis also has implications on economic models, due to its fast, exponential movement. Typically, in economics, we like to take averages. When you look at the data here, you have very few data points in the initial phase and then you project it out exponentially. Many economic models have to adjust to that. It's a different environment, but of course, we as academics like these new challenges.

***Q:** When we talk about making projections based on very few data points, that is a process that involves a lot of variations by construction. I would love to hear your thoughts on how you, as a theorist and practitioner, take specific steps to make sure that the models you rely on give you the most accurate information. Were there certain economic or epidemiological models that you have primarily relied upon so far?*

**A:** One very influential model was the study from Imperial College London. Boris Johnson, the prime minister of the United Kingdom, initially wanted to pursue a strategy aiming for herd immunity. Then, the Imperial College experts wrote a paper on the

implications of such a strategy. How much of the healthcare system will collapse? This caused a U-turn in policymaking. We saw very clearly how science made a huge impact in policymaking, causing a total rethinking of how the whole thing should be approached.

I personally have worked a lot on financial crises. There is a famous idea from Rudi Dornbusch. Initially, the crisis is much slower than you think. Then suddenly it comes very fast and it's hard to control. The same idea applies for this problem as well. However, I have not, personally speaking, incorporated a formal model which can be brought to estimate and test some epidemiological elements. I am not a health expert. My expertise is in financial crises. Rather than focusing on the health crisis, I have focused on the financial crisis and the economic crisis. What proposals can I bring forward to alleviate the problems coming as a knock-on effect of the health crisis? And that is why I wrote the two proposals we previously talked about.

***Q:** Since you're from Germany, I wanted to ask you about the recent pessimistic economic projections from the ifo Institute for Economic Research in Munich, Germany. They believed that the German economy could suffer from a steep drop in GDP and even step into the territory of a long recession. What are your thoughts on the economic prospect of European countries?*

A: Nobody really knows. That's why most projections are done in scenarios. People make an adverse scenario, a less adverse scenario, and an OK scenario. They don't specify one particular path. The same thing is true for the ifo Institute in Germany.

It's generally very hard to make these projections, but it's difficult for Germany in particular. Germany depends on a lot on exports. It's a very open economy. It imports a lot, but it exports even more. If things go wrong in China, it is felt in Germany much more than it is felt in the U.S. And that makes the German economy very vulnerable to disruptions anywhere in the world.

On the other hand, Germany is managing the crisis internally fairly well. It has put up a program fairly swiftly and efficiently. In terms of testing, it is one of the countries that tests the most and it also has plans for how to open up the economy with significant immunity testing in order to have a pass distributed to people who have immunity so that they can work again. So, there's an efficient way of organizing things. That's a strength of the German economy. The weakness is its exposure to the global economy at large, much more so than the U.S.

***Q:** You mentioned that you expect new technologies and innovations to emerge out of this crisis. Do you have more faith in the private sector or the public sector to develop these innovations?*

**A:** Typically, for small and medium sized shocks, the private sector is good at handling that. But for very large shocks like this, you need some government support because it can essentially levy taxes in the future and then bring resources to the current period that has extreme hardship. In general, there has to be an interplay between the private sector and the public sector. The private sector is valuable in that it provides innovation, while the public sector internalizes externalities, such as putting forth policies like requiring social distancing.

*Q: Do you have any contrarian views about the crisis that you think many others might disagree with?*

**A:** I don't think there's really a mainstream view to be opposed to since there are so many views out there. In terms of economic policy, I would stress to not ignore the small and medium enterprises. I think the U.S. has gone this way. Now, that's a question of effectively implementing policy goals. Will we have enough data and professional attitude to disperse the money efficiently or will it just disappear?

Coming back to the topic of populism, you see in many countries that the current governments are gaining popularity. For example, in Germany, the right-wing party AfD really lost big time in popularity because it's actually much better to be governed by a serious technocratic government, rather than a government which is constantly driven by some popular statements and other things.

*Q: The name of our show is Policy Punchline, so I have to ask you at the end—what is the punchline here?*

**A:** We have a health crisis, an economic crisis, and a financial crisis. We have to control and manage them all, and we should call for an expertise-driven, scientific approach to help people, rather than an approach driven by feelings. And even if we may need more government interventions now, we should not go down the authoritarian trap.

# 4

## Is the Fed Secretly Behind the Stock Market Rally? Alan Blinder on the Federal Reserve, Inequality, and Financialization

Alan Blinder  
June 24, 2020

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*Economic recovery would be easier if we could get people in the administration to stop telling the population, “This is over. Take off your mask, go to a bar, and have fun.” That message is going to kill people. To tie that to economics, we are only going to get the economy functioning when we get the disease under control. We have to do things before we get the vaccine and if a spokesman for the U.S. government keeps telling people, “It’s over; go back to partying,” that just makes the situation worse.*

”

— **policy punchline** by Alan Blinder

Professor Alan Blinder is the Gordon S. Rentschler Memorial Professor of Economics and Public Affairs at Princeton University. He previously served as the Vice-Chairman of the Federal Reserve System and has written many bestselling books, including his latest, “Advice and Dissent: Why America Suffers When Economics and Politics Collide.”



***Q:** During this Covid-19 crisis, the Fed has not only pledged to buy an unlimited quantity of government debt but also decided to support even corporate bonds. It lowered the target rate to 0 to 0.25 percent and announced in the June FOMC meeting that it is not even thinking about raising rates. As of the time we are recording this interview on June 24, there are many important questions to be answered, from whether an injection of liquidity is propping up the financial markets in very unhealthy ways to whether the lack of coordination between fiscal and monetary policies could potentially exacerbate inequality like after the 2000 financial crisis. What is your initial perspective on the Federal Reserve's response to the Covid-19 crisis?*

**A:** A little bit of background first. The Fed recognized fairly early on—I would not want to say before everybody, but before some people—that there was a potential economic catastrophe on our hands. This potential economic catastrophe turned out to be an actual economic catastrophe. Unlike the economic catastrophe we had over a decade ago, the financial crisis, this crisis began on the real side of the economy. The pandemic affects both the ability of American businesses to supply goods and services and the willingness of American consumers to buy goods and, especially, services. The crisis started there and then began to infect the financial system.

I am making a distinction between the two crises: in the financial crisis, bad things happened in the financial world, and they started to infect the real economy, and we had a recession. This Covid-19 crisis is the opposite. The real economy started going to hell, to use a technical term, and the Fed figured that this was going to wreak havoc in the financial system. You may remember that the stock market crashed in March, although it has come back. Risk spread, the interest rate differential between risky securities and treasuries widened, and a whole lot of other things either threatened to happen or started to happen.

The Fed cannot cure a pandemic. If they could, they would have done it already. The Fed cannot even replace the lost purchasing power of tens of millions of Americans who lost their jobs. It can lower interest rates, and it did, but when nobody wants to go out the door to go to an auto showroom or go out with a realtor to look at houses, lowering the interest rate does not do a lot of good for spending. So, what the Fed could do is make sure that the damage to the financial system was limited to the stock market, or almost limited to the stock market.

As I said, the stock market did tumble, though it has gotten most of that back. The Fed made sure that other financial markets did not fall into disarray, as happened mostly in the early days of the financial crisis in 2008 and even into 2009. The Fed either bought or said they were willing to buy a variety of assets. Not just Treasuries, as you mentioned, [but] risky—you said the riskiest, not quite the riskiest, but anyway—risky corporate debt, commercial paper.

***Q:** What attracted your attention as the most noteworthy or shocking response to the crisis?*

**A:** The Treasury tasked the Fed with the so called Main Street Lending Facilities. Now, this is a very big misnomer. Main Street suggests the pizza parlor and the bookstore and the little clothing store on Main Street. The Main Street Lending Facility was aimed for much, much bigger businesses than that.

When the Fed first announced its terms, the minimum loan was going to be a million dollars. You can try to imagine how many barbershops want to borrow a million dollars. They are now down to 250 thousand dollars, which is relevant to smaller businesses, but still not relevant to very small businesses. Small businesses do not want to borrow \$250,000.

This is an area of lending where the Fed has never, ever in its history been involved or anything close to it. And really, it was starting from ground zero, trying to develop a team, a methodology, terms and so on to do this. It took it a long time. I am not sure they have made a loan yet. They are open for business. They have circulated terms. They are inviting applications. Whether they have yet made a single loan, I do not know. But they will.

***Q:** What do you think that instituting Main Street quantitative easing (Q.E.) policy means for the future power, authority, and public perception of the Fed?*

**A:** That is a really good question. We could look back 10 years ago after the Fed did many things to rescue the economy. In 2008, 2009, beginning in 2010, there was a backlash against the Fed because, first, some people had never heard of the Fed. All of a sudden, there was this big agency doing all sorts of things. Even the people that had heard of the Fed did not know that it had the kind of powers to lend in an emergency that it did. And there was a negative blowback both from Republicans and Democrats at the time. Why should a bunch of unelected technocrats have this kind of power? Those kinds of decisions are up to the Congress, right?

During the debate over what became the Dodd-Frank Act, there were many suggestions and provisions and amendments to clip the Fed's wings in a variety of ways. Chairman Bernanke somehow—and one day there will be a nice magazine article or book about this—managed to wriggle out. At the end of the day, the Dodd-Frank Act gave the Fed more regulatory and supervisory power. I thought the limits the Act imposed on the Fed's emergency lending authority were vague and unimportant, though other people did not agree. Instead of being able to pick a particular company—you may remember, AIG, the big insurance company that got a huge loan—the Fed can only legally lend to broad classes of companies, and the Secretary of the Treasury has to give them permission. The first test case of that came this March. Boy, the Treasury Secretary was falling over himself to give permission to do this, that, anything to try to save the economy.

An interesting question is whether there will be another blowback against the Fed once the dust settles on this horrible episode. The Fed has shown even more power

to lend to an even greater variety of companies than it did in 2008 to 2009, and it remains to be seen if we will have political sentiment on either side of the aisle saying the Fed is just too powerful.

This relates to potential effects on inequality. One thing that saving the financial system does is give a big boost to the stock market. It is not like the Fed is trying to boost the stock market, but if you come in as the fire brigade, and put out the fires in the financial system, people that trade stocks say, “Whew, thank you very much. I feel much better about the safety of the financial system,” and stock prices go up.

Stock prices did go up. Obviously, that enriches the rich. Poor people do not own stocks. Only about half of Americans own stock, and a lot of that is inside their pension funds, which they do not even know about, frankly. So, when the stock market goes up, the rich get richer. That was one of the side effects of what the Fed did in the financial crisis. It is one of the side effects of what the Fed is doing right now, and that will be one reason, I think, for potential blowback some time down the road.

***Q:** Do you expect a blowback against financial elites or major corporations, similar to the one we saw from the 2008 crisis?*

**A:** Yes, and you can see evidence for that already. This issue arises every time Chairman Powell faces questions, including one in which somebody asked him about helping the people that do not need help, helping the rich, and exacerbating inequality. He gives a good answer to that, I think, which is that, to the extent that the Fed can mitigate the severity of the recession, it should.

Recessions in general, and this recession in particular, hit low wage workers really hard. “Essential workers” is a great term. They are essential. They stack grocery shelves, they deliver Amazon packages, and they work in the kitchens of restaurants that are doing takeout. These are not rich people. His answer to that is one of the things that the Fed's policies are doing is helping to provide more jobs to those people, bringing them back to work. And that is true, but it does not obviate the fact that the Fed is lending to big institutions, major corporations.

I should have said before that the distinction between what puts a loan into the Main Street facility versus somewhere else is that Main Street companies are too small to go to the public markets and float bonds. Only a very small number of companies can do that. The Fed is now taking care of the companies that can float bonds by propping up the bond market. You could think of that as the S&P 500, not literally, but something like that. The Fed is helping them. Even the Main Street facility is going to be helping companies that have ten, five, two thousand employees once it gets started. Meanwhile, the corner grocer is going bankrupt. I think there is a real potential for blowback there.

**Q:** *Do you think that compared to the financial policies in 2008 and 2009, the policies now are doing a better job of getting money into Main Street rather than just getting money to the financial systems, to the banks?*

A: Yes, the Fed is doing a better job but only a little better. If you think of the pipes that the Fed has into the economy, they attach to big financial institutions, especially banks. That is the easy thing for the Fed to do: to shoot up money, to go into the capital markets, to go to the banks, and so on.

I hate to use this phrase, but some of that will trickle down to smaller entities, and it does. And it helps. Believe me, small businesses in America would be in even worse shape today were it not for what the Fed is doing. That is one thing to say, but people in those small businesses can look out the window and see or read the newspapers and see the huge amount of support that the Fed is giving to gigantic financial institutions and feel a little jealous about that. That is very understandable.

**Q:** *Why does not the CARES Act (Coronavirus Aid, Relief, and Economic Security Act) require more conditions in order for companies to secure a loan from the Fed? For example, the Fed could have required that businesses commit 15% of the money received to R&D, CapEx, or union demands?*

A: I am tempted to give you a one word answer, which is “Trump.” You can imagine a different administration that would have had a lot more sympathy with the kinds of strings and provisions you are talking about. The Trump administration has no sympathy.

The Fed has little to no ability to move the administration. The Fed deals mostly with the Treasury, so when we talk about the administration, we mainly mean the Treasury, but the Treasury is literally half a block away from the White House and, figuratively, it is even closer. You are dealing with the Secretary of the Treasury, who is the representative of the President of the United States, and he has shown himself to be not very sympathetic to this or even smaller things like monitoring and reporting or being transparent about who is getting the loans.

The Fed wants to be transparent about things like that. The Treasury has been very unwilling to be transparent. It is like pulling teeth. They would rather fire the inspector-general or not have an inspector-general to look over their shoulders and there is not too much the Fed can do about that. What could the Fed do about it? The Fed could say, “Look, if those are the terms you are putting, we are not going to participate in this. We are taking our marbles and going home.” Well, they are not going to do that. They are not going to do it. One, for governmental reasons—you could call them political reasons, the Fed is not elected. The President and the Congress are. Two, you could say it is for very important optical reasons. The one sure way to cause a financial panic is for the markets to see the

Treasury and the Fed at war with one another. You could really tank markets with that, so the Fed is not going to do that.

The Fed is going to have to live with whatever terms the Treasury sets out. Now, you have probably noticed that in the second wave of the Payroll Protection Program (PPP), there was an amount set aside for small businesses, minority-owned businesses. It remains to be seen how effective that is. If there is a third wave of PPP, which is not certain at this point, but I think it looks likely, there will be more trickle down. You probably also noticed early on that there were some big companies that understood the ins and outs of banking and Washington, and those companies jumped into the PPP right away. A number of them were shamed out of it and gave the money back.

I am sounding a little unforgiving. These things were concocted on the fly very fast. When you do that, you are going to make some mistakes. Just think of the difference between having a term paper that you could work on for two weeks and then giving you the same assignment, saying you need to have this by five o'clock tonight. You can do a better job when you have more time. That is true of students writing papers, and that is certainly true of members of Congress writing laws.

***Q:** In a recent op-ed in *The Wall Street Journal* you labeled a lot of questions that you are commonly asked about the long-term effects of the Fed's policies as "Scarlett O'Hara questions." Why aren't those questions about the deficit or inflation particularly troubling or worrisome to you?*

**A:** We can first tackle the deficit. The budget deficit is not about the Fed. It is about the political government. The Congress and President decide how much to spend and how much to tax. A huge amount of spending has been necessary and appropriate in this pandemic. We are likely to have a decline in GDP of approximately half what happened in the Great Depression. In the Great Depression, it took four years from the top to the bottom. In this case, it has taken about two months from the top to the bottom. This is an incredible calamity and people need help really badly.

The question for the political government is, how much are we willing to spend on these things? In the U.S., the answer so far has been a lot. The other question is, what is our borrowing capacity? Can we actually go to the world capital markets and borrow this much money? The reason I call this a Scarlett O'Hara question as in, "I'll worry about it tomorrow," is that the answer to that question is clearly, "Yes." You only have to look at the interest rates on Treasury debt to see that we, the U.S. government, are not having to pay a high interest rate to borrow this money. Eventually, there may be some capacity [constraint]. If this keeps up for years, people in financial markets will start being less willing to buy U.S. government debt. I think we are a long way from that.

The other Scarlett O'Hara question is worrying about inflation. You heard much more about this in the financial crisis 12 years ago and you hear a little bit about it now.

The Fed is acquiring assets like mad, which means it is blowing up bank reserves like mad, creating tremendous amounts of liquidity all over the place. If you like to look at the money supply, the money supply is growing fast, though not too many people pay attention to the money supply any longer.

The question is, “Will not that eventually lead to inflation?” The first point is eventually, and that is why it is a Scarlett O'Hara question. This is not going to happen in a weak economy. We are now having a—no one knows what to call this yet—mini depression, a super recession, whatever. You do not get inflation in an environment like this. Businesses are scrambling for customers. They are not going to be jacking up prices, with a few exceptions here and there, like Purell. Even in that case, I do not think it was the Purell company, but rather people trying to resell it at a higher price. Basically, an economy that is struggling so badly is not going to produce inflation.

Now, this super recession or mini depression is not going to last forever. As the economy improves, the outlook for raising prices will improve for businesses. And with all that liquidity, you could see inflation going up. If you do see inflation going up, it is going to be up to the Fed to stand against that inflation by withdrawing some of the liquidity that it has provided on an emergency basis, and that is sort of why I call it a Scarlett O'Hara question. Maybe three, four, five, or seven years down the road, the Fed will have to do something like that to prevent inflation. That is the main answer.

The secondary answer is a little bit puzzling even to economists. It is this: We had a similar sequence of events in the financial crisis. The Fed wound up buying huge amounts of assets, blowing up banks' balance sheets, the money supply increased, et cetera. That all happened between 2009 and 2014. On the eve of the catastrophe in winter 2019-20, we were still waiting for any signs of inflation. Like what I just said, many years from now, the Fed may have to take action to curb inflation. After the financial crisis, it never did. Maybe, it never will need to again.

***Q:** What are your thoughts on the Fed's expanding balance sheet?*

**A:** Between 2008 and 2014, the balance sheet blew up by a lot. If you look at percentages, the expansion seems much more dramatic. It started at about \$900 billion, went up by a factor of five to \$4.5 trillion. We are not going up by a factor of five in the pandemic, though we are going up a lot. In 2015, the Fed gradually, gingerly, cautiously began shrinking its balance sheet. It did not get very far. I would have to look up the numbers, but I think it shrunk the balance sheet by about one-sixth or something like that. It would have kept doing that if it was not for this calamity that we have fallen into. You shrink the balance sheet only when the economy is strong enough, and you do it cautiously so that you do not cause a recession.

*Q: After decades of American economic history and the current dramatic movement of financialization in the past few years, do you think that America's economy is effectively being front run by finance rather than the real economy right now?*

**A:** This question is a good one, and it has been asked for a long time. This shift has nothing to do with the pandemic. If anything, the pandemic is pushing the other way. The real side is getting all the attention, but I think you have a very valid point. Not everybody agrees with this, but I think in a number of dimensions we have let or encouraged—it is a combination of the two—the financial system to grow too large. We are almost to the point where the tail is wagging the dog, not now during the pandemic, but at other times.

Finance is supposed to lubricate the economy and make the real side work better. That is the basic idea. Instead, the financial sector has grown tremendously and it is a bigger share of the economy than it was. I hate to say this in front of two Princeton undergraduates, but the financial system gobbles up a huge amount of young talent. They may not be you two fellas, but many of your classmates, when they graduate, are going into the financial system. This is not new and has been happening for two decades or something like that. That means so much less talent is going into science and engineering and a variety of other things that people could do or even just non-financial corporations.

I can show you how old I am. When I graduated from Princeton right after the Civil War, a very large number of graduating seniors went to work for non-financial corporations like General Electric, General Motors, or Procter & Gamble. That sort of stopped in the 1980s and the students just started flocking to Wall Street. So that is one aspect of it.

The second aspect of it is the huge amount of attention that is paid, let us just say to the stock market. There are worse things than that, I suppose, and it is not harmful per se. But it does get a number of people identifying the stock market with the economy. When the stock market goes up, the economy must be great. When the stock market goes down, the economy must be bad. It is not true. The stock market bottomed on March 23. It was a very sharp crash. It has risen and gotten most of that loss back. It bounces around. But by and large, it has gone up quite a bit from, let us just say, March 23 to June 23. That does not mean the economy became great during that period, far from it. We are having a catastrophic rise in unemployment, but you have people—I could start naming names in the administration—that want to convince you and other Americans that because the stock market is good, the economy is good. It is not true.

*Q: What would you say to some critics' assertion that the market is no longer driven by economic fundamentals but rather Fed announcements?*

**A:** I do not think it is true. However, the Fed's actions or potential actions are some of the many things that are relevant to the valuation of financial assets. Yes, people and markets look at what the Fed is likely to do, and that can have serious effects on stock and bond prices. But the other thing you probably noticed over the past months is that announcements about vaccines or whether the pandemic curve is going up or down is also moving the stock market, as those news items should. Those things are probably actually important to the health of the economy over a period not measured in days but measured in months and years, than what stock prices are or what the Fed said on Tuesday as compared to the previous Friday. But it is certainly quite rational for financial prices to move, and maybe move sharply, in response to the Federal Reserve actions or statements.

**Q:** *What are your thoughts on the rising expectations for the Fed, leading to mission creep and potentially even leading to the Fed being given Mission Impossible?*

**A:** We have already mentioned the Main Street facilities, which are now incipient, where the Fed is basically working through banks, making loans to medium-sized businesses. This is a business the Fed is going to want to get out of as soon as the emergency is over.

The same could be said about, first of all, less than top quality corporate bonds, and, after that, corporate bonds in general. The Fed does not want to be buying things like that. It is doing this only in an emergency. These are examples of mission creep, where the Fed is becoming a major player and, in some cases, the major player in a number of financial markets.

The Fed does not believe that that is their business. It is not what they want to do. But they also understand that when markets are on the verge of collapse—and if they collapse, that would have tremendous deleterious effects on the real economy—the Fed may have to step in and prevent those collapses. So, all of those are mission-creep.

There are other things. Even before the crisis, I get several emails a week with suggestions for what the Fed should do, like help the poor, build infrastructure, climate change, any good cause. These are all good causes, but we have a division of labor in our government, and those things are not the job of the Federal Reserve.

**Q:** *The name of our show is Policy Punchline, so I have to ask you at the end—what is the punchline here?*

**A:** Economic recovery would be less hard (I wouldn't say easier) if we could get people in the administration to stop telling the population, "This is over. Take off your mask, go to a bar, and have fun." That message is going to kill people. To tie that to economics, we are only going to get the economy functioning when we get the disease under control. We have to do things before we get the vaccine and if a spokesman for the U.S. government keeps telling people, "It's over; go back to partying," that just makes the situation worse.



# 5

## Racial and Economic Inequality from the Great Migration to Covid-19

Ellora Derenoncourt  
April 27th, 2020

“ *Reducing inequality should be seen as a form of social insurance to bolster our society as we enter the rest of this century when we will undoubtedly face other large negative shocks—whether they are pandemics, economic recessions, or crises related to climate change. Reducing inequality is a form of strengthening everyone. It is about the health of our society overall.* ”

— **policy punchline** by Ellora Derenoncourt

Ellora Derenoncourt is an Assistant Professor in the Department of Economics and the Goldman School of Public Policy at the University of California, Berkeley. In 2019, she received a Ph.D. in Economics from Harvard University and was a postdoctoral research associate at Princeton University from 2019 to 2020. Her research interests lie in labor economics, economic history, and inequality. Her work has been featured in *The Economist*, *The New York Times*, National Public Radio, and *The Wall Street Journal*.

***Q:** Can you speak a little bit about your interest in economics and specifically about the intersection of migration, labor economics, and economic history? What motivates you to research these topics?*

**A:** I became interested in the topic of the Great Migration and its long-run effect on upward mobility and racial gaps in graduate school. At the time, The New York Times was publishing maps of the “different lands of opportunity” in the United States based on the research of Raj Chetty, an economics professor at Harvard. His work used detailed tax returns data to show the different patterns of upward mobility across the U.S.

From my training as an economic historian, I noticed two things immediately. First, the U.S. South was a region of concentrated low upward mobility. And second, there were also these pockets of low mobility in urban areas in northern and western United States. It was hard to ignore the role of race in that map. In particular, I was struck by these pockets of very low mobility in places like Chicago, Baltimore, Los Angeles, or New York. These cities were popular destinations of Black migrants from the South to the North during the Great Migration.

This realization immediately sparked a series of questions for me: What happened? What went wrong? In the middle of the 20th century, millions of African Americans were moving from the South to the “Promised Land,” where they were more likely to achieve parity with white Americans. What happened in the intervening years? These locations now exhibit some of the worst outcomes for black families. That’s how I got interested in the topic.

***Q:** In your research, not only did you find that Great Migration cities are no longer the “promised land,” but also that as a result of the migration, the outcome for Black families worsened while the outcome for White families did not change significantly. Could you elaborate on your results, especially on those that are contradictory to traditional beliefs?*

**A:** The Great Migration was a massive internal population movement. I often refer to it as “the largest natural experiment in moving to opportunity in U.S. history.” Some six million African Americans left the South and moved to cities like Baltimore, Chicago, and Detroit—booming locations at the time. But they now rank among the worst places for Black families to raise children. I was interested in understanding how the migration itself may have altered the trajectory of upward mobility in the North.

In order to answer that question, I leveraged the fact that migration patterns were strongly set by families following members of their community who had migrated earlier, from specific Southern hometowns and counties to specific Northern destinations. This meant that patterns in Northern in-migration were partly driven by Southern factors alone. For example, places in the South that specialized in cotton experienced significant job losses as that industry mechanized, thus prompting more out-migration compared to

others. By contrast, counties that received investment during World War II, in terms of war contracts and defense production for the war, retained migrants. Northern cities that were more strongly linked to Southern cotton planting counties and less strongly linked to war production counties—by earlier waves of migrants—saw greater inflows of Black migrants during the period I study, 1940 to 1970, or the peak of the Great Migration.

Thus cities in the North experienced more or less growth in their Black population because of these migration patterns. Indeed, some locations experienced such drastic changes that the racial identity of the cities changed. Historically homogeneously white cities in the U.S. were becoming much more diverse.

I noticed that the gains from growing up in different cities in the northern U.S. today are lower in places that experienced more historical Black in-migration during the Great Migration. The differences in upward mobility across northern cities, however, are not driven by the kinds of families that were moving in from the South, who you can imagine were often relatively poorer. Rather, if anything, it seems like the families leaving the South were “positively selected.” In the South, these families were not able to provide their kids with all of the opportunities they wanted for them, like public education in segregated school districts that often lacked high schools for Black children. Moving North, therefore, was one of the ways migrants helped not only themselves but also future generations.

Rather than being driven by the characteristics of Black migrants who’d arrived from the South, changes in destination cities can be mapped to the behaviors of white incumbent households at the time of the Migration, to reductions in urban neighborhood quality, and to the responses to urban decline by local governments. There was both an increase in “white flight” from shared urban neighborhoods and a decline in white children’s enrollment in public schools. At the same time, Black students were increasingly concentrated in public school systems.

In terms of the quality of the urban environment, murder rates and crime rates rose in Great Migration cities starting in the 1970s, and local governments in these metropolitan areas specialized in one form of response—increased police spending—while not increasing investments in other types of public services. When state and federal policy changes opened the way for mass incarceration a couple of decades later, former Great Migration cities were the places to take this policy up. Accordingly, incarceration rates are higher in these locations.

Growing up in this environment disproportionately affects Black youths and has downstream effects on their position in the income distribution. By contrast, I see no adverse effects of growing up in these locations for white men and women. Both of these factors contribute to an exacerbation of the racial gap in upward mobility in these former Great Migration cities.

*Q: In your paper, you also write that beyond a better understanding of specific policies in locations that contribute to intergenerational mobility, we would also need a more concerted effort aimed at reducing disparities within locations. Are you suggesting that*

*we cannot consider policy responses only in one dimension, but rather that we have to think about their ripple effects and include other normative and social considerations?*

**A:** Certainly, there is a need to consider local policies as being important for certain locations, rather than abstracting to “neighborhoods” as the point of policy. For instance, you cannot simply say that we can solve the problem by moving people to better neighborhoods. In this project, I show that the quality of neighborhoods, or how high-opportunity they are, is itself a function of decisions of local governments and local residents. It’s not a fixed quality, like the air or the soil, that makes a place good for families or children, but the institutions in those places.

This relates to my second point: it is worth investing in place-based policies, not just policies that subsidize moves to better neighborhoods. Since we do know how much these local ingredients matter, if we roll out policies that target those local ingredients, we can potentially reach many more people than can be reached via a housing lottery system. This is why targeting places and local policies are important for reducing large-scale disparities.

***Q:** How important is the idea of intergenerational mobility when we talk about issues related to inequality? Even though more people are talking about the wealth tax today, do you think the conversation about intergenerational wealth gaps is still largely missing from contemporary debates about inequality?*

**A:** Fortunately, there has been a lot of talk about the many dimensions of inequality in the economics community. While there are many economists focused on it, it is not clear how likely we are to see the conclusions from these studies actually enter into the policy realm.

There is plenty of interesting material being published about the wealth gap, but there is still work to be done. The wealth gap is shockingly large; it is orders of magnitude larger than income gaps and education gaps when categorized by race. We absolutely need to be thinking about it because of its intergenerational effects. When we talk about the coronavirus crisis and this period of economic shutdown, people have to rely on their reserves. However, there is a very unequal distribution of those reserves across the population.

***Q:** Would you mind telling us a little bit more about your research on how minimum wage laws affect racial earning gaps between white people and Black people?*

**A:** Broadly, I’m interested in understanding the evolution of U.S. racial inequality in the 20th century, during which there have been big moments of change.

The Great Migration was an important turning point in the promise of the North—and helps us understand where we’ve ended up today. Another striking fact about racial inequality in the 20th century is that the earnings gap between Black and white workers

has been pretty much stagnant for the last 50 years. Looking back over the past 70 [years], the gap closed only once in a narrow 10-year period, approximately between 1965 and 1975. During that 10-year period, the unadjusted earnings gap shrunk to half its former size, a significant decrease.

Economists have long puzzled over this rapid period of racial convergence. What could have caused it? This is during the Civil Rights era, so people have pointed out that improvements in schooling for Black students and the anti-discrimination laws that were passed during this period played a role. My coauthor Claire Montialoux, who is also at UC Berkeley, uncovered another critical source for this improvement in relative Black earnings: changes to federal minimum wage policy in the US.

The minimum wage was first introduced in the U.S. during the New Deal but only covered certain industries. The stated reason for this was to avoid stepping on states' toes and only regulate industries involved in interstate commerce. In reality, racism played a key role. Southern politicians fought very hard against a minimum wage that would affect their large pool of cheap Black labor and successfully lobbied for exclusion of the region's key industries.

In the 1960s, federal minimum wage law was reformed to include precisely these industries that had been left out of coverage, which ranged from agriculture to retail and services to laundries, hospitals, and schools. These were industries where Black workers were overrepresented. They were rolled into coverage at a time when the federal minimum wage was reaching its peak in real terms. The minimum wage in the late 1960s is still the highest real federal minimum wage that we've had in the U.S. The reform benefited Black workers disproportionately because they were concentrated in the lower part of the earnings distribution and concentrated in these industries. As a consequence, the law dramatically reduced the racial gap in earnings. We estimate that roughly 20% of racial earnings convergence during this period was the result of the minimum wage. This had been a missing piece of the puzzle of rapid convergence and had been essentially overlooked until now.

*Q: I want to extend your point about minorities working retail to today's economy where low-skilled labor can be replaced with automation. Since employers today would have the incentive to automate retail jobs if the minimum wage were raised, would ethnic and racial minorities today be more likely to lose their jobs if the national minimum wage were raised?*

**A:** That's an interesting question that to my knowledge hasn't been looked at directly. In the late 1960s, Black workers were concentrated in low-wage jobs and were not easily able to move into positions up the job ladder. Employers simply refused to hire Black workers into managerial positions. Furthermore, white workers and Black workers largely occupied different jobs in firms. Because of this, increasing the minimum wage did not lead to Black workers being replaced with white workers. For example, if you were a Black custodian at

a school, you were never going to earn what white teachers made (nor were Black teachers, for that matter), but now, being a custodian did not imply poverty wages. It was also unlikely that schools would find white workers willing to work as custodians or alongside Black custodians. This is why we think there were such large and positive effects of the minimum wage without accompanying relative Black disemployment.

It's not entirely clear what the effects of a similar increase in the federal minimum wage would look like today. The answer depends, however, on this same question of substitutability between labor or capital inputs. We have certainly seen major low-wage employers raise the specter of automation in reaction to proposed minimum wage increases. We do not know yet if this is a real threat.

***Q:** What are your views on the debate on whether raising the minimum wage would actually hurt or improve the employment of the working-class people?*

A: We did look at the employment effects of this reform, as I briefly discussed earlier. Although the reform introduced a wage floor in affected industries at the highest level the minimum wage had ever been, we observed a close-to-zero effect on overall employment. This finding violates the neoclassical theory of perfectly competitive labor markets and is more in line with recent empirical evidence that there must be some degree of employer monopsony power in the labor market, such that they are essentially setting a wage and a level of employment.

When you impose a minimum wage in this context, the impacts of the minimum wage are ambiguous. If wages are set below workers' marginal product, then a minimum wage can actually lead to positive effects or very minimal effects on employment. That's consistent with what we saw in the economy in the late 1960s, but it's also consistent with what studies from recent decades have shown.

***Q:** How does your research help you navigate inequality and political issues today? There are many scholars who say America is currently facing astonishing levels of inequality and argue that there must be a bottoms-up approach to change the system and fundamentally change people's livelihoods. Do you have any policies that you would advocate for in today's political environment?*

A: Sometimes I give very frustrating answers to this question: "Well, I need to write a few more papers and see." In the Great Migration project that I described, I document all the ways the Great Migration cities have transformed, but it is a lot harder for me to say how much of the decline in upward mobility comes from segregation and the housing market versus the increase in crime and the negative effects of being exposed to crime as a child versus from the decisions of local governments to invest in police and incarceration as a response to urban decline.

Because the effects are especially pronounced for Black men growing up in Great Migration cities, and less so for Black women, I would argue that we need to rethink criminal justice and public safety policy in particular. Great Migration cities have been carrying out our national policy of mass incarceration. If we experiment with reducing prison populations and finding alternative modes of ensuring public safety, we would also see reductions in racial inequality.

***Q:** Are you more of an optimist or pessimist, especially in these times? Many people say coronavirus is springtime for pessimists when it comes to how we expose some of the underlying fractures of American society.*

**A:** There's a famous quote by Antonio Gramsci, who was an Italian communist and political activist: "One should have pessimism of the intellect and optimism of the will." I think those are very wise words. We need to remove our rosy glasses when looking at the data, the condition of people's lives, our political system, and what kind of policies are possible. At the same time, it is imperative to continually work toward finding solutions and policies that could alleviate suffering and inequality.

Perhaps not federal policy, given the current administration, but we can think of state and local policies as a testing ground and observe what happens to inequality in those locations. For example, we can look at places that have effectively implemented school desegregation programs and see if there are long-run effects on a variety of dimensions. We can take those lessons and build up the body of evidence. When we have the political power to implement them, we'll be ready and know what works, in order to best alleviate inequality.

***Q:** In a recent UC Berkeley webinar, you spoke about how WWII is analogous to our current situation, as consumer production was also slowed to benefit the war effort then, similar to our current economic freeze. What policy prescriptions should we glean from this historical analysis? Is it safe to expect a post-pandemic boom similar to that of the postwar era? Is this analogy complicated by the fact that there is no war effort toward which we are redirecting economic output that could serve to stimulate the economy?*

**A:** These are very, very different historical moments. During World War II, the crisis was the war, and employment in war production skyrocketed, causing overall employment to increase. In today's health crisis, employment has plummeted by millions. What can we possibly learn from World War II? Back then, in order to rise to the challenges of the war, the government had to wind down civilian consumption so that enough raw material could be diverted towards war production. So, the big challenge was "how to pay for the war."

British economist John Maynard Keynes wrote about how governments should rise to this challenge. Strikingly, he said we should not take this crisis as a moment to postpone necessary reforms for addressing inequality. In fact, we should go further than

we would have done in peacetime. What sets apart a free and democratic state when the pie is necessarily fixed due to the war and civilian production being wound down, is an overwhelming concern for how that pie is distributed. In contrast, an unfree state might say we can devote everything to the war effort and not care about who is suffering at home.

Therefore, Keynes argued that we should institute a steep progressive tax, tax excess profits made by any companies that benefit from the wartime economy, provide a universal basic income (UBI), and create incentives for workers to save whatever money they're making either in war production or through UBI. This way, we have an economic boom when we come out of the war. And this is roughly what happened. Savings rates increased dramatically during World War II. Tax rates were made steeply progressive and the period after the war was a time of reduced inequality, unlike anything we've really seen over the last hundred years.

We are facing a choice at this moment. If we invest in poor and working-class communities—well beyond what would have happened in the absence of the pandemic—we pave the way to a more rapid recovery and a less vulnerable economy that is better able to face future crises. The fewer people that go under now, the more they'll be able to spend when we can resume normal operations. Additional relief on top of making people whole can translate to broad-based savings and stimulus after the pandemic. We can also analogize the war effort to efforts to control the virus. Imagine diverting workers and increasing employment in health care and testing and tracing to get the virus under control.

***Q:** Do you think economists today have reached a consensus on how economic policy should be conducted during the pandemic? Many of the measures you mentioned are expansionary, and there are certainly many political scientists who worry about the expansion of big government during times of crisis.*

**A:** I would say that there is actually remarkable consensus among economists from across the political spectrum on what needs to be done now. First and foremost, we need to tackle the health crisis. There is no economy without health, and as a result, the notion of a tradeoff between the economy and health is a false one. Second, in order to preserve public health, we need to provide for workers who are told to stay at home.

There are debates on how best to do that, but a large number of economists have focused on what's being implemented in certain European countries. For example, the U.K., Germany, and Denmark kept workers on their payroll and had the government provide all or a portion of their paychecks. Programs like that would aid our recovery because there would be less disruption of worker-job matches. As of now, that is not the path the U.S. has taken, and it is quickly becoming a huge question: When we come out of this, are people going to be able to return to their former jobs or will various frictions slow down or erase some of those matches or will some large fraction of employers have gone under? These types of changes could lead to a much slower and incomplete recovery.



*Q: While there is a consensus among economists regarding economic policy, there does not seem to be a sense of social solidarity traditionally embedded in American culture during a time of crisis. How do you think America is doing right now in terms of being aware of and discussing inequality issues and implementing measures to address them? Are we making progress?*

**A:** There is a lot of consensus in public opinion. For example, a majority of people support universal health care [as its] known under the popular slogan of “Medicare for All.” Certainly, there’s a growing consensus that healthcare should no longer be tied to one’s employment status, an incredible liability during this particular crisis. Likewise, there’s also a broad consensus on raising the minimum wage. I think people are ready for policies that benefit them, especially since we have seen a steady erosion of the middle and working-class outcomes over the last 30, 40, even 50 years.

I think the real question is: on a national level, will those of us advocating for this kind of change have the political power to carry out these policies? Even as the majority of Americans support policies that would dramatically reduce inequality, the wealth of the wealthiest has increased over these last four months, and Congressional relief to everyday Americans has been grossly insufficient. Companies like Amazon have benefitted spectacularly from the pandemic, and the wealth of Jeff Bezos alone has skyrocketed to unprecedented levels. Yet Amazon ended its pandemic bonus pay of \$17 an hour to its workers. There’s a divergence between what’s happening in terms of inequality and what the vast majority of people would like to see happen. I am not sure how we bring those back together.

*Q: What are you reading right now? What would you recommend to those who want to learn more about economic inequality in America? What articles have interested you the most? Who are some of the intellectuals we should follow?*

**A:** Right now, I’m reading a new book by my colleagues at UC Berkeley called *The Triumph of Injustice*. The book looks at U.S. tax policy and how the wealthy and high earners have captured the tax system. Today, the average American pays a higher effective tax rate than the wealthiest Americans. This book is a great place to start for those who are interested in learning about how we are going to get out of the hole that we are in right now. There is a huge source of revenue that is being missed out on in the form of a wealth tax and a more progressive tax system overall. We need that revenue as we will be facing major challenges that require massive investments, such as combating climate change. We need to invest in reducing inequality, but it is going to cost money. I think that book is a great place to start. There is also an interactive tool on the book’s website <https://taxjusticenow.org/> that everyone can access to create their dream redistributive tax policy!

I also spend a lot of time reading historical, sometimes science fiction. I'm a big fan of Octavia Butler's work. She has a book called *Kindred*, which represents actual U.S. history and slavery as science fiction, laying bare all its horror. The book brings to life for modern readers the unbelievable experience of slavery as the stripping of one's freedom.

Another book I recently read that relates to my interest in housing markets and discrimination is called *The Street* by Ann Petry. It was written in the 1940s and set in Harlem. I believe it was the first book by a Black woman to sell over a million copies. The novel documents the struggles of a young Black woman trying not to get constantly swindled in the rental market. We have documented evidence that black families have paid higher rents for the same quality housing in U.S. cities. Inequality is so enduring that whether we're studying the history of slavery and its economic effects, or redlining, or segregated housing markets, these are still questions and concerns that are relevant to inequality today.

***Q:*** *What would your policy punchline be?*

**A:** Reducing inequality should be seen as a form of social insurance to help our society as we go into the rest of this century when we will undoubtedly face other large negative shocks—whether they are pandemics, economic recessions, or crises related to climate change. Opponents of redistribution like to prop up the specter of the undeserving poor. But wages have not kept pace with productivity, which means the gains from economic growth have not been justly shared. Furthermore, reducing inequality is a form of strengthening everyone, not a transfer from a “deserving” group to an “undeserving” one. It is about the health of our society overall.

# 6

## Health Interventions Do Not Depress the Economy: Evidence From the 1918 Flu

Emil Verner  
April 10, 2020

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*There isn't a tradeoff between these public health interventions that save lives and the economy because, by using these public health interventions, you're addressing the root of the crisis, which is the pandemic itself...The pandemic itself is so destructive for the economy that any policy that you can use that directly mitigates the severity of the pandemic can be good for the economy by allowing the economy to come out on the other side of the pandemic with lower mortality, with lower morbidity. With a healthier population, we can then resume growth.*

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— **policy punchline** by Emil Verner

Emil Verner is assistant professor of finance at the MIT Sloan School of Management. His current research focuses on the connection between financial markets and economic activity, both in advanced and emerging markets. In several recent studies, he has examined the role of household credit markets in amplifying business cycle fluctuations. In related work, he has also studied the real economic consequences of banking sector distress during financial crises around the world over the past 150 years. Finally, in ongoing research, he is currently exploring what role financial distress has played in the recent rise in populism.

***Q:** There is a big debate going on right now. Are we overreacting or underacting to the Covid-19 crisis by shutting down the economy? The shutdown and similar policy measures are nonpharmaceutical interventions (NPIs) designed to speed recovery from the pandemic. A lot of people are wondering if the negative effects of the mandated quarantines and economic shutdown will end up causing more disruption to people's livelihoods than the potential loss of lives from Covid-19? This is a tough question to answer, but I'm glad to introduce a timely research paper on this topic just published by MIT's Emil Verner and two coauthors. Your most recent research paper, Emil, is titled "Pandemics Depress the Economy. Public Health Interventions Do Not: Evidence From the 1918 Flu." Would you mind starting off this interview by giving us a quick overview of the paper?*

**A:** In the paper, we look at how the economies of different U.S. regions, cities, and states fared during the period of the 1918 flu pandemic. We examined two things. One, the impact of the pandemic on the economy and, two, how the economy responded to different public health interventions. I think the main takeaway in the paper is that in the 1918 flu pandemic there didn't appear to be any tradeoff between using public health interventions to reduce mortality and the economy.

It does not have to be the case that saving lives by using public health measures and the economy have to be at odds. The places that introduced public health interventions did not fare worse economically. If anything, they came out stronger from the pandemic. We discussed why that might have been. When you intervene with these public health measures, you're benefiting the economy indirectly by making the pandemic less severe, which allows the economy to come out stronger on the other side of the pandemic.

***Q:** It seems that the key point is that the economic recovery after the pandemic had passed was quicker in places that had rapidly enacted fairly extreme NPIs. Doesn't that still imply that, in the short term, the economic pain was quite acute?*

**A:** Because we used data from roughly between 1914 and 1923 in our paper, we don't have high-frequency data that would have let us analyze high-frequency dynamic costs and benefits of a pandemic. What we can say is that, when we looked at annual data, we didn't find any evidence of any cost in 1918, and we found some evidence of some benefits in 1919. Now, you might ask, how can this be? There must have been some costs in the very short term. I think that intuition is correct. If you react quickly and aggressively, there will be some costs relative to the counterfactual of doing nothing. However, because pandemics can infect people at an exponential rate, a pandemic can take over an economy very quickly.

Imagine that you do not do anything, and you let the economy keep going as normal. Then, for two or three weeks, your economy would do better than a counterfactual without NPIs. However, after two, three, or four weeks, the economy would suffer because

of the direct negative impact of the pandemic itself. Or, you can implement NPIs to mitigate the severity of the pandemic. NPIs can be good for the economy, even in the medium term, a month or two after the start of a pandemic.

***Q:** It sounds like short-term economic pain is almost inevitable. Even if you do not shut down the economy, people will be less inclined to go consume or shop, or people will lose their jobs anyway. You might as well engage NPIs to alleviate the medium- and long-term effects of a pandemic.*

**A:** You're right. This is another key point of our paper and some other research. The counterfactual of introducing NPIs is not to have a normal economy. The economy is not going to be normal during a pandemic. People are rationally afraid of contracting the virus, so they are going to change their economic behavior. We have seen during the Covid-19 pandemic, that, even before social distancing measures were put in place in the U.S., many private businesses and individuals decided, on their own, to stop going to restaurants, stop going to movie theaters, stop going to sports games, or to work from home.

Without any intervention, people are going to alter their economic behavior, cut back on their spending, cut back on their labor supply, in ways that are going to be harmful to the economy in the short term because they are afraid of contracting the virus. The downturn in the economy isn't primarily due to public health interventions. The downturn is equally due to these behavioral responses.

***Q:** Regarding the methodology of your paper, would you mind telling us a bit about how you conducted the research?*

**A:** Our analysis is actually quite simple. You can essentially think about it as comparing treatment and control places in the U.S. Think about one part of the U.S., like the state of Pennsylvania. Pennsylvania was hit hard by the 1918 flu pandemic and mortality was very high.

We can compare a place like Pennsylvania to a state that was less affected, like the next state over, Ohio. Our analysis compares the evolution of economic outcomes like manufacturing employment, banking assets, and consumer durables in places like Pennsylvania to places like Ohio.

We saw, not too surprisingly, that more severely affected places experienced a decline in economic activity around the 1918 flu pandemic. Interestingly, that decline lasted for several years. The negative impact of the pandemic was persistent. Pennsylvania did not exhibit a V-shaped recovery. Rather, Pennsylvania lagged behind places like Ohio for several years after the pandemic. While the United States as a whole was growing very quickly after the pandemic, the areas that were affected more severely lagged behind.

The second part of our analysis looks at public health interventions, mainly put in place across U.S. cities. We looked at 43 cities in the United States that varied in the speed and intensity with which they implemented these public health interventions, or non-pharmaceutical interventions. Then, we essentially did the same thing. We compared the evolution of economic outcomes in a city like Philadelphia, which was quite slow to implement NPIs and had them in place for a relatively short amount of time, to a city like Minneapolis, which reacted very quickly and had stricter measures in place for a longer amount of time. We can compare how the economy performed in more- and less-affected places and that is how we reach our conclusions.

*Q: I'm taking an econometric applications class in Princeton with Professor Henry Farber and we constantly talk about omitted variable biases—other factors that could influence the outcome of a study besides the factors you want to examine. On that front, Princeton Economics Professor Elizabeth Bogan has a contrarian perspective that we are overreacting by shutting down the economy. Regarding the 1918 flu, she speculates that the hardest-hit cities— Philadelphia, Scranton, Pittsburgh—also experienced the worst economic recoveries later because coal mining was a major industry in those places and lung disease would have dominated. That would be an “omitted variable” in that case, I suppose, so I would love to hear your thoughts on how you selected your variables, how you made sure that the causality is there while taking the factors that could influence your study, especially a century ago, into consideration.*

**A:** I'm happy to hear you're taking Econometric Applications (ECO 313) with Professor Farber. I was a teaching assistant for that course many years ago when I was at Princeton. In these types of studies, we want to think about all of these types of “identification concerns” or “limited variable bias.” The concern is essentially that other things were going on in the places we examined that happen to be correlated with the severity of the pandemic, or these public health interventions and these other things led to the economic performance of these cities changing for other reasons.

There are a variety of different ways we can address limited variable bias. The first step in a study like this is to take a look at what are the average characteristics of places that were more versus less affected. Is it the case that the places that were more affected are much richer or much poorer? Or [do they] have a very different sectoral composition in terms of agriculture versus manufacturing? Are they more urban or more rural? In general, we find that the places look reasonably similar. We found that places more severely affected by the pandemic, places that showed higher mortality rates, tended to be clustered in the east, as Professor Bogan noted, because the virus traveled from east to west. However, even within the east, there were a lot of differences in the severity of the pandemic. Some differences were due to differences in climate, immunological factors, and socioeconomic factors. Just like today, some cities were hit harder than others for a variety of different reasons. Our findings reassured us that the places we compared are relatively similar.

The next thing you can do is try to think about all of the potential omitted variables that might be driving your results and try to include those in your analysis to see if results substantively change. For example, we looked at differences in income in different places, differences in the composition of employment, and differences in population density. We looked at differences in how much cities were exporting, especially because the 1918 flu happened during World War I, and exports to warring nations were important drivers of U.S. economic growth.

In general, we find that we can go through all of these different factors and we do not find any meaningful differences in the results. We try to do our best along that dimension. It does not look like the places that were more severely affected by the flu have more severely affected economies because of other factors. Also, we do not find that the places that intervene more aggressively are performing better economically for another unobserved reason that we can account for. Now, of course, that is not proof of our results, but it is somewhat reassuring.

***Q:** You mentioned the different economic recoveries of different areas. Can you talk a bit more about the difference between V-shaped and U-shaped economic recoveries and how these concepts relate to your findings?*

**A:** Whenever you have a really bad economic crisis, you're always hoping for a V-shaped recovery. That is a recovery where you essentially bounce back to where you were and continue on the same growth path that you were on before the shock. We know that in other types of crises, like financial crises, we do not often get V-shaped recoveries. Instead, the economy never quite catches up to where it would have been if it had followed the previous trend. For example, following the 2008 financial crisis, the U.S. economy never seemed to fully recover. We were curious: after the 1918 Flu, did the economy bounce back? The U.S. economy in aggregate performed quite well after the pandemic.

However, even after Pennsylvania's economy started growing again, they never fully caught up to where they would have been if they had not been hit by the pandemic, relative to a place like Ohio. That tells you that these types of episodes can have long-term economic costs in the sense that they mean that your economy performs persistently worse relative to what would have happened without the pandemic. This also suggests that benefits from any policies that you can use to mitigate the crisis are going to be stronger because they lead to more lasting benefits.

This raises the question, why might there be these persistent impacts? Why didn't the economy bounce back after the 1918 flu pandemic? Our paper cannot definitively answer that question, but we can speculate a little bit. So, the first obvious direct impact is that the 1918 Flu not only led to an increase in mortality but also had persistent effects on people's health and general wellbeing. There were negative effects on morbidity that we know have negative impacts on productivity and on human capital. These factors can hurt the economy for years beyond just the negative persistent health effects that you can imagine.

## Health Interventions Do Not Depress the Economy

There are lots of other reasons why the economy was not able to catch up. For one, it can be very hard to reconnect employees to the jobs that they had before they were laid off in the pandemic. Maybe the businesses have closed or been taken over by new owners. Similarly, the balance sheets of consumers and businesses are going to be severely impaired by a big economic contraction. We know from finance that when business and consumer balance sheets get weaker, sometimes people default or businesses go out of business. Even if businesses do not go out of business, they become less creditworthy. Banks become less interested in lending to those businesses because they are less safe, making it harder for those businesses to grow. That can take a long time to recover from. There are a variety of direct and indirect propagation mechanisms that can lead to more U-shaped or even L-shaped type recoveries.

***Q:** A lot of people are saying that recovery processes favor big banks and corporations. Then, the inequality mechanism kicks in and poor people are much worse off. I would love to hear more of your thoughts on how the pandemic relates to the financial crises you've researched.*

**A:** One of the important things, whenever you have a crisis, is that the burden of adjustment is shared throughout different sectors of the economy. In 2008, we saw that some sectors of the economy, like homeowners, did not receive as much relief from their losses compared to other sectors, like the banking system. There is this classic political-economy problem that concentrated and powerful sectors or industries can tilt policy to benefit them. One of the risks is that, in the medium term, there can be a popular backlash against the government and policies, if the policies benefit major corporations and the shareholders of major corporations instead of ordinary people. That is definitely a concern with the current crisis management policy. After 2008 and other crises, we learned that these sentiments can have lasting implications for politics.

***Q:** Turning toward your paper's relevance in the Covid-19 pandemic. Why did you pick the 1918 pandemic to study? What can we learn about today's economy from an event that happened more than a century ago?*

**A:** As someone who has done a lot of work on financial crises, we learned a lot in 2008 by researching the Great Depression. That was also almost 100 years ago. In general, there is a lot to learn from economic history. With this particular case, pandemics are relatively rare examples in history, fortunately. We live in an age where epidemics seem to have become more frequent, but we haven't had an episode that is as severe as what we are seeing today since 1918. So, the 1918 flu pandemic is an interesting case because it was so severe and provides, perhaps, an upper bound on how bad it could get today.



***Q:** Would you give us an overview of your thoughts on the NPI measures we see today in the U.S. versus the NPI measures in place during the 1918 flu pandemic?*

**A:** The NPI measures in the 1918 Flu that we looked at resemble some of the measures that we've seen put in place around the world today. The measures include school, church, and theater closures, public gathering bans and quarantine and isolation of suspected cases, as well as some guidance on mask-wearing. Even back in 1918, they understood that mask-wearing might be a way to protect other people, especially in crowded places. These and other measures were put in place and have been studied extensively in the epidemiology literature.

Generally, comparing the NPIs that we have today to 1918, the NPIs today are stricter and more draconian. For example, the closure of nonessential businesses is not something that you saw in 1918. In 1918, they staggered business hours to reduce crowding in trams, public transportation, that sort of thing. I think, perhaps, today's measures have been too aggressive. Part of the reason why they are too aggressive today is because policymakers simply do not have the data to be able to calibrate these measures in a smart way. We don't have a good understanding of which NPIs lead to high health benefits and low economic costs. This is where we need to think a lot harder.

We are far from an ideal point in terms of these public health interventions. It's clear that restaurants should probably be closed, but there are other types of businesses that could continue to operate, perhaps not as normal, but with staggered hours and social distancing measures in place that wouldn't be quite as disruptive as what we have seen. Instead, public officials have had to take very drastic measures, in part, because of a lack of preparedness and a lack of data.

***Q:** The results from your research have huge implications, especially when we have politicians and opinion writers and journalistic outlets decrying these policies for slowing down the economy and putting people out of jobs. Your results are very important for intervening in this debate. However, can we really draw comparisons between what happened in 1918 and what happened today? Are there enough similarities? Can we say that these results are relevant to the economy today?*

**A:** That's a great question. The first thing that we want to say is that we do not want to naively extrapolate our results from 1918 to today. In a pandemic, things are a bit more complicated. This idea that the root cause of the economic problem is the policy response and not the pandemic itself appeared in the 1918 public discourse as well. Our results definitely cast down that type of logic.

Regarding the comparisons between 1918 and today, there are a number of similarities and a number of important differences. In terms of the important differences, the 1918 flu pandemic was significantly deadlier than the coronavirus, at least based on the current estimates. In particular, it was significantly deadlier for prime-aged adults.

The 1918 Flu had what is sometimes referred to as a W-shaped age profile, where it killed higher fractions of younger individuals up to age 5, working-age individuals between ages 18 and 40, and older individuals above age 60. The economic merits of doing public health interventions like NPIs, are going to be stronger if you're in a pandemic that's deadlier for the most productive members of society. Because Covid-19 does not have a W-shaped age profile, the benefits of NPIs might be weaker today.

On the other hand, there are other factors that suggest that the merits of NPIs might be stronger today. One difference between 1918 and today that I want to highlight is the structure of the economy. That affects the analysis in different ways. So, on the one hand, the role of services that require interpersonal contact is greater today than it was back then. That suggests that the impact of a pandemic is going to be more severe for the economy today than it was in 1918. The economy today is also more urban, so there is higher density. So, policies that can mitigate the severity of the pandemic have even more merits today than they had in 1918.

Additionally, in many ways, the coronavirus outbreak is more salient today and leads to stronger behavioral responses in people who are not at high risk of dying from the virus. We all know many people who have drastically changed their behavior because they are afraid of contracting the virus and passing on the virus to older family members. Even though the virus is not as deadly as the 1918 Flu, the behavioral responses today are still significant.

We should be able to do better today than in 1918. We should be able to design smarter NPIs than what was put in place in 1918. I don't think we're there yet, but with the use of a variety of forms of technology, the most important one being testing, we should be able to set up NPIs that have the least economic cost and the most health benefits. If we were able to do testing at a scale that we've seen in other countries like South Korea, we would be able to use NPIs effectively to isolate suspected cases while economic activity takes place. With mass testing, you can convince people, credibly, that going outside and partaking in normal economic activity is safe. That speaks to the fact that NPIs might even be less costly today than they were in 1918, at least if we do them in a smart way, with data, technology, and testing.

***Q:** You mentioned how mass testing has been proven to be quite successful, such as in South Korea, and we should come up with smarter strategies, responses, and NPIs compared to our reaction in 1918. I know you are not an epidemiologist, but what are some feasible recommendations for the government to be effective? What would be some NPI measures that won't hurt the economy in the long run?*

**A:** If we are able to ramp up testing to a much higher rate and if we can test not only people who display symptoms, but also test more people at random to have a sense of how severe the outbreak is in different places. More random testing would give policymakers the data to calibrate local public health interventions to the severity of the outbreak in different

parts of the country. Testing is essential. Even without testing, we can still get a sense of the rough percentage of the population in different parts of the country that are potentially affected by the virus.

In a number of parts of the world, take Italy for example, they are now implementing technologies such as apps that ask people to share their temperature and other symptoms. The government can then get a sense of where the hot pockets are—the cities, counties, and zip codes with people reporting correlated symptoms. That can give you a sense of where the coronavirus is more or less prevalent. In those places, you can then decide to take more or less drastic measures as opposed to having measures, like some of the ones we have right now, that are too extreme relative to what would be appropriate.

Once scientists and policymakers have that information, it's very useful to communicate that information to the public. In one place, people can rest assured that, "We're in a place with relatively low risk right now. We can go on with relatively normal economic activity and not shut everything down." And then in other places, the policymakers can communicate, "Here we know that the outbreak is very severe. Let's try to turn on some of the most aggressive measures and social distancing that we have." By designing policies in that way, we could be getting more health benefits with less economic disruption.

***Q:** One of the main fears that policymakers and epidemiologists have is that as soon as social distancing policies are lifted, the virus will return. Is that something that you saw in your study of the 1918 pandemic? Were there instances of cities lifting social distancing policies and then having another wave of infections?*

**A:** We didn't look at this in our research, but the epidemiological research has looked at it. They find that places that lifted, in hindsight, too early saw second waves of the outbreak. The lesson here is that it makes sense to be conservative in terms of how we lift, especially once we have the data to evaluate where the number of infections is still relatively high. The health costs of lifting too early are obviously high and the economic costs of lifting these restrictions too early are also going to be high. If you have a second wave, then that's going to be extremely costly for the economy, especially as we alluded to earlier, going into the second wave of a shutdown or the second wave of strict social distancing. We're going to be even less prepared or resilient in terms of our balance sheets than we were going into the first wave. That's why I think it's better to be on the side of caution when opening up and to take small steps, rather than opening up too quickly and undoing all of the good work that we've done through this first shutdown. We have to be prepared for a second wave or multiple shutdowns. I think the best way to prepare is, again, to scale up testing capability so that we can put out those embers before they turn into a fire of rapid outbreaks.

*Q: Our conversation has stepped into the realm of economic recovery measures and what we could do months ahead from now. What measures can be taken now and later to reduce a decline in manufacturing output and employment? We would love to hear your thoughts on what we could do weeks and months down the road.*

**A:** What's really important is, first of all, to solve the root of the crisis, the pandemic. Once consumers and businesses feel that the risk of contracting the virus and the risk of potential other outbreaks has declined substantially, I think there will be, to some extent, a natural recovery. We know that that recovery might be incomplete or might not be as quick as it could be for a variety of reasons. Then, we turn to a macroeconomic stabilization problem. Unemployment is too high relative to potential, so we can resort to a more traditional macroeconomic stimulus by targeting the sectors that were more severely affected by this shock. Once we get to that stage, I think we'll be in much better shape and we can pull out tools from previous recessions and crises, which we know how to deal with better than a public health crisis.

*Q: Professor Markus Brunnermeier brings up the same point that you mentioned. If you don't act with decisiveness and swiftness, the potential extra level of loss that you could have from a slower recovery could be way worse down the road. You were also talking about this propagation mechanism throughout the financial system, which I find really interesting. I know a lot of your research connects financial markets with the macroeconomy. A lot of people are worried about liquidity spirals and the credit crisis right now. If the banks don't get money, they can't lend money, eventually leading to a solvency crisis for the entire economy. That's why the Fed or the Treasury needs to swiftly inject liquidity into the system. You included state and city level banking data in the 1918 study. I'd love to hear your thoughts on how you assess financial stability today.*

**A:** First, I'll speak about what we found in 1918. In places that are more severely affected by the pandemic and have this economic downturn, banks see a gradual reduction in the size of their assets, so they are gradually making fewer loans. You also see that banks have to start recognizing losses. That suggests that households and businesses are defaulting on their loans because the economy is doing worse. Luckily, in 1918, the banking system seemed to be relatively resilient to this. There was no big increase in bank failures. That, I think, mitigated what would have been an even worse crisis from breaking out in 1918.

Today, we have to be very alert to the factors leading to bank failures. If all of a sudden the financial system has to absorb very large losses, then we know that can lead to spirals of even larger contractions in lending, even larger contractions in asset prices, making everything worse. It's very important that we make sure that businesses and households have the liquidity they need to get through and that banks don't start realizing losses during this crisis.

*Q: So, the idea is that if we see households and businesses defaulting on banks, then banks' balance sheets contract. The banks cannot lend to other people, so the economy eventually shrinks overall. Tying back to what you brought up about the 2008 financial crisis, a lot of people criticize Europeans for not saving their banks as swiftly as the U.S. and that is why the European recovery after the 2008 financial crisis was much, much slower.*

**A:** That's exactly right. Fortunately, we're going into the crisis today with a banking system that is much better capitalized than in 2008 because of all of the regulation that was put in place. On one hand, the banks themselves seem much more resilient to shocks. On the other hand, in the United States, there is a bigger fraction of financial intermediation that is done through shadow banks or through the non-bank system. Shadow banks and non-banks are large pockets of the financial system that could become quite vulnerable to a shock like this. However, it is very important to make sure that the banks remain healthy and that they have enough capital to get through the crisis. That also suggests, for example, making sure that banks that might be undercapitalized are not paying out equity in the form of dividends during this; that they retain the equity that they need so that they can absorb some losses so that they can come out on the other side and really start lending to businesses again as the economy tries to take off. We need to create an environment where the economy can take off as uninhibited as possible.

*Q: This question is maybe a little bit beyond the scope of your research, but, in your opinion, what should we expect for the economy once we were able to halt this initial spread?*

**A:** I think it's difficult to say. There are still some concerns about what the recovery is going to be like after this. It is still, in my view, a little bit early because we do not know how bad this outbreak is really going to be. We don't know whether, once we start relaxing social distancing, there are going to be second waves. We don't know how quickly we can implement policy responses such as testing, tracing, and having more well-calibrated local public health interventions. If all goes well, we could see a reasonably strong recovery, maybe not a pure V-shaped recovery, but still a strong recovery.

My sense is that, in China, the recovery seems to have been reasonably good in parts of the country. We can hope for that in the United States and in other countries around the world. My concern is that if second waves break out after we begin to relax social distancing, we might have to implement shutdowns or social distancing again. Then, going into those second rounds, many businesses and consumers are going to be in worse shape than they were going into the first round. That's when negative kinds of propagation mechanisms of defaults, business closures, business failures, and losses for lenders could become even more severe. It's difficult to forecast right now. It's hard enough to do now-casting! Policy has to stand ready on the other side to provide stimulus and support for the economy to grow, once that the public health environment is such that we are ready to grow.

***Q:** We have been comparing the 1918 situation to today's situation. You mentioned some of the similarities and some of the differences. What about the comparison between developed countries like the U.S. versus underdeveloped and developing nations? We interviewed Princeton Professor Peter Singer, an eminent bioethicist. He said that the moral dilemma in terms of an economic shutdown is very much present because, in an underdeveloped country, if you have an economic shutdown, people will die because of starvation, migration, or because they can't meet their paycheck.*

*Those occurrences are far more severe than in a place like California. No doubt, people in California would still suffer if they lose their job or if they cannot get health insurance, but the impact on most people's lives is far less drastic in a place like the U.S. In a place like an underdeveloped country, he contended that the debate over whether or not to shut down is very valid. We should prioritize the greater good. I'd love to hear your thoughts on that.*

**A:** These challenges are even more difficult in developing countries than they are in developed countries. That's why figuring out how to calibrate these social distancing policies and other public health measures around the world is even more important in developing countries where some of these public health measures have more economic costs. In some ways, the United States in 1918 is quite instructive for developing countries today because the U.S. then had roughly an income per capita of a country like Morocco today, a lower-middle-income country.

In 1918, we saw that cities didn't put in place quite as strict or draconian measures as what we're seeing in developed countries today. There is an argument for using the public health measures that we know have the most health benefits and the least economic costs. There is a whole spectrum of different policies, right? Where hygiene measures, including mask-wearing, are perhaps the measures with the most benefit relative to costs. Other measures, like banning public gatherings, have relatively high benefits and know milder economic costs, whereas business closures or shutdowns have the most economic cost relative to their health benefits. In developing countries, where you set the line is going to be different relative to advanced economies like the U.S.

***Q:** When you set out to do this study, was there any impact on the global policy response that you hoped to have?*

**A:** At the outset of the study, we weren't nearly so ambitious or optimistic. We wanted to understand what we should expect from a pandemic. What can we learn from history about the expected economic impact of this pandemic? To what extent are there similarities between that experience in 1918 and today? What's the right way to think about different policy tradeoffs? We didn't go into the study with strong priors about what the impact of

the 1918 pandemic itself was or the impact of these policy measures on the economy. In general, that's how research should be done. Our findings have combined with a lot of great theoretical research to give us a better understanding of what to expect and what relevant policy options and policy tradeoffs, or maybe lack of tradeoffs, face us.

# 7

## Do the Negatives of the Economic Shutdown Outweigh the Benefits?

Elizabeth Bogan  
April 8, 2020

“ *My review of the costs and benefits of current policies is somewhat contrarian. I present my analysis here because it is my job to make you think about policy evaluation. In summary, the data look to me like nearly closing the economy will cause more suffering and deaths than would the Covid-19. And far more young and middle-aged people will suffer. People completely miss that the world is full of tradeoffs. They say every life matters and I say they don't really understand there are tradeoffs.* ”

— **policy punchline** by Elizabeth Bogan

Elizabeth Bogan is a senior lecturer in Princeton University's economics department. Her research and teaching interests include business cycles and monetary policy, socioeconomics, healthcare economics, the economics of education, income distribution, and government regulation of business.



On March 18, in an email to the students of her ECO 101 class (Introduction to Macroeconomics), Princeton University economics professor Elizabeth Bogan offered an analysis of the recent economic shutdown in the U.S. as a result of Covid-19. She argued, in what she characterized as a “somewhat contrarian” position, that the shutdown was premature, excessive, and would ultimately result in an exceedingly high amount of unnecessary economic loss and death.

From a simple cost-benefit analysis perspective, Bogan believed the costs of the shutdown far outweighed the benefits at the time. She also expressed frustration for such a high degree of response despite the unavailability of information and data on the severity of Covid-19, noting, “What is disturbing is that we are risking lives and suffering from shutting things down about a disease that we never gathered the data to know how deadly it really is.” Her full thoughts and the entirety of the emails can be read below after the Q&A section of this chapter.

In a recent interview with Policy Punchline on the ethical dilemmas surrounding the Covid-19 crisis, Princeton professor Peter Singer framed a similar argument from a moral-ethical dimension. Especially in the context of developing and underdeveloped countries, it is not at all unlikely that the government-induced economic shutdowns will, in the end, cause more loss of lives due to poverty, starvation, and migration than otherwise by Covid-19. From a utilitarian perspective, therefore, is a lockdown the more optimal choice?

Aiming to further explore those issues, on April 1, Policy Punchline reached out to Bogan to pose some follow-up questions on her policy ideas. In our conversation below, which transpired via email, we discuss and assess the U.S. economic response to the global pandemic as well as possible future actions.

***Q:** There was an initial debate a few weeks ago about mitigation versus suppression strategies. The U.K. initially adopted the mitigation one but quickly found itself overwhelmed by patients and public panic long before a possible “herd immunity” could emerge. They adjusted their strategy based on some projections by Imperial College that questioned the short-term efficacy of mitigation strategies. Does this case demonstrate how mitigation strategies would not work? Or is the U.K. example not indicative?*

**A:** I am well aware of Neil Ferguson’s work and the prediction of 2.2 million deaths in the U.S. But his death rate estimates [that were] behind the prediction were way off. [Numbers of] deaths and cases have little meaning if you are getting case data only from testing the very sickest patients. What if those without symptoms or with only mild flu-like symptoms who had Covid-19 were not tested, as we know was the situation? Then the deaths predicted from the very sick only sample would be grossly too large compared to the infected population.

In fact, Neil has walked back his own numbers from getting more case numbers (which are still too low). Now his model predicts 80,000 to 120,000 deaths in the U.S. I believe this number is still too large and am awaiting a study that Eran Bendavid at Stanford

is trying to do. He wants to get 2,500 people to do drive through blood samples of healthy people in Santa Clara County, CA to ascertain how many people carry the antibodies that show they have had Covid-19 and didn't know it. That is to statistically estimate the actual [number of] cases and get a new estimate of the death rate to put into the models.

President Trump has taken to quoting the 2.2 million, so that when our deaths are much lower, he will take credit. If we had tested sooner, we could have isolated the carriers of the disease who didn't stay home because they didn't know they had Covid-19.

***Q:** Are you concerned that unfreezing the economy would potentially overwhelm hospital systems as we're seeing in Italy?*

**A:** Not if we had isolated the carriers and the vulnerable. Unlike earlier pandemics this one in Italy and New York was 99 percent on people with serious chronic health issues like COPD, diabetes, etc. and old. As an aside, we know an Italian doctor who says fewer would have died if they hadn't tried to hospitalize so many. The doctors didn't know at first that they were dealing with Covid-19, so they weren't careful enough to separate them from the really sick people with other ailments in the hospital. Many of those already in the hospital got Covid-19 and died.

***Q:** Wouldn't that be a worse outcome, both economically and from a public health perspective? Wouldn't the sudden influx of Covid-19 patients deprive poor Americans of their routine healthcare?*

**A:** Not just poor, but everyone faces lower hospital access. Not good, but perhaps not preventable. We can't put Covid-19 back in the bottle. We can only try to optimize policy for most people given the reality of Covid-19.

***Q:** A Wall Street Journal piece arguing against economic shutdown says that we wouldn't have a functioning health system without a functioning economy. How would the economy function if people were worried about the virus and believed that they wouldn't have access to care when they get sick?*

**A:** The public has been panicked by nonstop news coverage and predictions of millions of deaths. Imagine if starting in January the news showed every automobile accident and the number of deaths from auto accidents everywhere with crying family and friends interviewed. And highlighted cumulative death numbers since January 1 on every news show. And predicted the death rate from driving on the highway from the death rate only from auto accidents. Closing the roads would reduce deaths but destroy civilization as we know it.

***Q:** A recent economics paper titled, “Pandemics Depress the Economy, Public Health Interventions Do Not,” finds that “cities that intervened earlier and more aggressively do not perform worse and, if anything, grow faster after the pandemic is over.” Do you think this lends evidence to how nonpharmaceutical interventions are necessary now and will not hinder economic growth in the long run?*

**A:** There is an earlier paper on the 1918-19 flu pandemic that shows that the hardest-hit cities were Philadelphia, Scranton, and Pittsburgh. It doesn't say, but I will speculate that they were the worst because coal was mined there, so lung disease would have dominated. Much of the argument for shutting down today is based on a 2007 study of the Great Pandemic flu of 1918-19 published on May 1, 2007 in the Proceedings of the National Academy of Sciences (PNAS).<sup>1</sup> The following quotation is from this article:

“Early implementation of certain interventions in 1918, including closure of schools, churches, and theaters, was associated with lower peak death rates... These findings support the hypothesis that rapid implementation of multiple non-pharmaceutical interventions can significantly reduce influenza transmission, but that viral spread will be renewed upon relaxation of such measures... cities that had low peaks during the first wave were at greater risk of a large second wave.”

The cities with the interventions flattened the curve but didn't reduce the cases or death rates significantly overall. Of the 17 cities studied that used interventions, they did so for about six weeks. Maybe if they had done it for months the result would have been different. When would it have been safe to stop? No one knows.

***Q:** What do you say to critics who contend that the choice between economic ruin and public health sacrifices is a false one because the government could simply step in and pay people's wages until the economy is unfrozen, which would mitigate the economic damage while also enabling lockdowns to continue?*

**A:** This is the strongest argument for mitigation. It confirms the tremendous economic costs of a shutdown, but definitely reduces the alternative deaths I was most concerned about. Given the huge real suffering from the shutdown, I am very thankful that monetary and fiscal policies have been so aggressive this past week. It is scheduled to cost about \$4-5 trillion or roughly a fifth to a quarter of GDP. But that is necessary to keep even more people from dying of stress-related diseases, suicide, or not qualifying for food stamps and shortening their lives and their children's lives from hunger.

However, even unemployment insurance and small business aid in the stimulus package cannot save all the dreams of people who had just started successful personal businesses. It is not clear that they can be made whole. The longer we have locked down, the longer it will take to recover, and the more dreams that will be permanently ruined; and the more lives that will be lost prematurely over the next few decades from stress-induced

illnesses that shorten their lives. For example, we know there were significant deaths among the millions who lost their houses to foreclosure during the Great Recession.

***Q:** What are your specific recommendations for how we should be handling this?*

**A:** The government should have been ready for mass testing and done it and quarantined the ill. Leaders should have pushed washing hands, keeping our hands off our faces, staying home if at all sick, extending sick leave benefits, isolating vulnerable people, personally avoiding crowds, sanitizing metal and plastic surfaces, wearing face cover, and canceling events that draw large crowds into close contact.

***Q:** Should some industries or events, such as large sports/entertainment gatherings remain shut down while restaurants for example continue to operate?*

**A:** Yes.

***Q:** What about public transportation?*

**A:** No. It would not have been as expensive as what we are doing now to have hired people to walk through subways with sanitary wipes for all handgrips and requiring riders to wear masks or scarves over their nose and mouth.

***Q:** Given your opinions on the scale of this crisis, what are your thoughts on the \$2 trillion relief package passed by Congress?*

**A:** As mentioned above, it is absolutely necessary. Since the government-induced this recession, it owes [it to] the public [to] try to counter the worst outcomes. Also, note that the Fed will spend about another \$2 trillion or more to keep the financial system afloat, which is essential to avoid a Great Depression.

***Q:** How do you think it compares to the responses of other nations such as the U.K. or South Korea?*

**A:** South Korea did a better job than the U.S. It was prepared to roll out tests quickly and quarantine sick people.

Our biggest failure was we were not prepared to roll out massive numbers of tests and thought the 200 tests that had to be sent to the CDC was okay. Had we tested and done what I just suggested earlier, I do not believe we would be seeing surging numbers today.

I am also intrigued by the suggestion of President Trump to get a bill to spend \$2 trillion on infrastructure. I don't know how long U.S. Treasury bonds will only need to pay less than 1 percent to get people to buy them. But this is the time to run up some debt if the funds are well spent to make the economy stronger so that the borrowing is self-financed in the long run from higher tax revenues on a stronger economy. The time to do infrastructure projects like roads and railroads is in a recession when public spending doesn't crowd out private spending.

Prof. Bogan's original email to her students, titled "Comments on policy toward coronavirus" and sent on March 18, 2020:

First, I want to emphasize that I am complying with everything the administration and governmental units have asked of us, as you should also do. Still, I am an academic economist and my training is to examine policy with cost-benefit analysis based on available data. Economics has a lot to offer in understanding today's policies. Our objective should be devising policies that maximize social welfare given the constraints.

My review of the costs and benefits of current policies is somewhat contrarian. I present my analysis here because it is my job to make you think about policy evaluation. (I am totally comfortable that some of you will not agree with my analysis. I don't have all the data I'd like and may change my own mind in real-time as new data becomes available.) In summary, the data looks to me like nearly closing the economy will cause more suffering and deaths than would the Covid-19. And far more young and middle-aged people will suffer.

People completely miss that the world is full of tradeoffs. They say every life matters and I say they don't really understand there are tradeoffs. Cars kill about 40,000 people a year. The seasonal flu in 2017-18 killed more than that and we didn't decide to shut down the economy in 2017-18. Hospital mistakes are estimated to kill 40,000-80,000 patients a year. The point is these awful costs can't be eliminated. But each is out-weighed by superior benefits. The question today is: Should we continue shutting down the economy?

I believe we should have told people over 65 that they were endangered and should self-isolate. Old peoples' homes should have stopped taking visitors. Certainly, it was correct to get people washing hands, etc. Then we should have left the schools open and let the coronavirus run through the schools. It appears that most kids who get this virus don't even know they are sick. But that would build "herd immunity" to the virus. What we have most likely done with closing the schools is guaranteed that the virus will spread again whenever we open the schools. That is what happened in 1919 to the 1918-19 flu epidemic.

Much of the argument for shutting down today is based on the 2007 study of the Great Pandemic flu of 1918-19, published in PNAS (Proceedings of the National Academy of Sciences) on May 1, 2007.

Let's look at the macroeconomic policies today, first monetary policy, and then fiscal policy.

1) The Federal Reserve is taking stimulative actions as it did in 2008-9. It plans to inject \$1.5 trillion into the economy. The Federal Reserve said it would establish a new lending facility to reduce the strains from the accelerating economic damage from the coronavirus. The Fed dropped the Fed Funds Target Rate a full percentage point to 0-0.25 percent. Zero to 0.25 percent is where it was from December 2008 to December 2015. The low rate encouraged businesses to invest and in time the economy recovered. But this time we have a government-induced slowdown of many businesses. The Fed's actions can't do much about that.

2) Today the Trump administration is seeking an \$850 billion stimulus package, which is what Congress did in 2009. The problem this time is that financial markets weren't frozen and businesses were doing well, then the coronavirus caused the government to close much of the economy in the name of saving lives. We are in a government policy-induced recession and stimulus can't solve the workers' problems, at least not stimulus alone.

The only thing that will really make a difference is a drug or a vaccine. The best thing the government has done is to speed up drug and vaccine trials. I believe the benefits of shutting down the economy will not exceed the costs.

What are we doing?

Closing schools has disrupted the lives of 30 million kids and their families. Closing bars, restaurants, athletic events, theaters, etc. is having a negative impact on small businesses and their employees. Yes, the government says it is offering small business loans, but meanwhile it will be really difficult especially for their former employees.

California closed all its restaurants except for take-out. The restaurant business in California employs 1,830,000 people according to [restaurant.org](http://restaurant.org). That's 11 percent of California's employment. Probably about a million of them have lost their jobs. How will they pay their rent? How sick will they be from stress? How much will their children suffer? Even if the government plans to compensate them it will be a mess. Many live on tips and there may not be records of what they usually make. How will the government even find these people? Also, the incentive to make false claims will be high, while others suffer from not knowing how to get compensated. Most high-income workers can at least partially work from home, but service workers can't. Shutting down the economy will cause terrible harm to hard-working low to middle-income people. Many will die from stress-related heart attacks, which happened in 2009 among people who lost their homes. Someone needs to be weighing the opportunity costs of people suffering and dying from the partial shutdown of the economy against the damage of the possible Coronavirus epidemic.

What is disturbing is that we are risking lives and suffering from shutting things down about a disease that we never gathered the data to know how deadly it really is. Since we only had 200 test kits at first and still are only testing people who present with major

symptoms, we have little idea what the actual number of cases is. For example, was the light flu running through northern California in February actually cases of Covid-19? No one was tested. To my knowledge, the only country where random testing is occurring this week is Iceland.

The first roughly 1000 Icelanders tested by deCode Genetics for Covid-19 are running just under 1 percent positive (0.89%) and that's been stable the past two days of widely available testing. These are all people not in their "travel-related exposure plus close contacts" national quarantine, so it is the population-wide "unexpected" community-acquired infection rate.

Since the introduction of Covid-19 to Iceland was from the Alps in Europe (mostly Italy) and also from Denver, Colorado, it seems likely that they were seeded weeks after California and Washington. So, if anything, our general population rate should be higher than theirs. If their number is correct and not subject to sample bias, then in California alone it would be almost 400,000 infections right now (and potentially 8x that nationwide). But California's deaths so far are at 6 on 454 reported cases, or just over 1 percent reported fatalities per reported case. If the number of cases is off by 3 orders of magnitude, which would be true if our true data looked like Iceland, then the new coronavirus death rate would be way less than routine seasonal influenza. I'd like to be certain that was not the case before we continue to shut down the economy.

Two comments from the rest of the world: In Italy, the average age of deaths from Covid-19 is 81. Life expectancy in Italy is 82. How much suffering of their entire population from shutting down the economy is one year more of old age (for a small number of the old people) worth?

The Wall Street Journal just reported, "Marriott International, the world's largest hotel company with nearly 1.4 million rooms world-wide, said it is starting to furlough what it expects will be tens of thousands of employees as it ramps up hotel closings across the globe."

If you are interested in the 1918-19 pandemic, here is a second study of the 1918-19 flu epidemic: "Economic Effects of the 1918 Influenza Pandemic" is a study by the St Louis Fed authored by Thomas A. Garrett, published in November 2007. [https://www.stlouisfed.org/~media/files/pdfs/community-development/research-reports/pandemic\\_flu\\_report.pdf](https://www.stlouisfed.org/~media/files/pdfs/community-development/research-reports/pandemic_flu_report.pdf).

# **Ethics**

Peter Singer

Arthur Caplan

Paul Frijters



# 8

## The Ethics of Covid-19: Triage, Shutdown, Wet Markets, and More

Peter Singer  
April 5, 2020

“

*Try to think through what's the right thing to do. Don't necessarily just accept the conventional wisdom but try and get all of the relevant information and assess what's the right thing to do on the basis of what will have the best consequences.*

”

— **policy punchline** by Peter Singer

Peter Singer is the Ira W. DeCamp Professor of Bioethics at Princeton University. Considered by many to be the world's most influential living philosopher, Professor Singer works mostly in practical ethics and is known for his controversial critique of the sanctity of life ethics in bioethics.

*Q: What are some of the most pressing philosophical challenges posed by the coronavirus?*

**A:** The most obvious and urgent one is that the coronavirus pandemic raises the question of triage. That is, do we have more patients than we can treat? And if so, how do we select who we will treat? This has certainly happened in Italy. Some of the reports indicate it is happening in the U.S. and others suggest that if it's not happening yet, it will be happening as the number of cases continues to increase. There is a shortage of ventilators in particular, and patients with coronavirus, especially the most severely affected, often need ventilators. So, you have that question where you have more patients whose lives could be saved by putting them on a ventilator than you have ventilators.

This is an example of the kind of question that bioethicists have been talking about for a very long time. I myself taught it in classes with healthcare professionals as hypotheticals often. They recognize that sometimes they encounter this issue even in normal day-to-day practice as the intensive care unit is full and more patients are arriving. You could send patients to another hospital, but particularly if they're in a rural area, they might die in transit, since it takes time.

These are well-known questions and in normal medical practice, the rule is, essentially, first come, first served. If you come into the emergency room and you need a ventilator, or if you need a bed in the ICU, they will do that. The fact that somebody else comes in later who maybe has better prospects of survival doesn't mean that they take you off and put that person on. Normally, what they would try and do is to ring around, find another hospital that has an ICU bed, or something of that sort. But, if you have a lot of patients in this situation, then you really can't do that.

I don't think first come first served is a good principle. It's a kind of a lottery; it depends on what time you got into the emergency room. Lotteries are not the best way for deciding how to use scarce healthcare resources because some people will benefit from them much more or have a much higher probability of benefiting from them than others.

Reasons not to use this system could be because a person's underlying health conditions mean that they're unlikely to survive even on a ventilator. It does give them a greater chance of surviving, but it's still a small chance. Whereas if you have a young, healthy person with a temporary need for the ventilator and a bigger chance of survival, it seems better to put them on the ventilator. Also, since the person will need the ventilator for a shorter time, you can get them off it and use it for someone else.

I think life expectancy ought to play a significant role here, too. I think in general, you ought to favor younger people over older people. Covid-19 particularly is killing people mostly over the age of 70, even more over the age of 80 and those with underlying health conditions as well. You have to take that into account. If someone is over 80, their life expectancy is clearly smaller than that of somebody in their 40s, and I think you ought to give preference to people who you're likely to save more years of their life rather than just lives. This is one of the big issues that people are talking about.

The other and larger issue is that of the lockdown. The lockdown is clearly a tradeoff between saving more lives and putting more people out of work and damaging

the economy in other ways. Those tradeoffs are very difficult—how do you get a common unit to compare putting tens of millions of people out of work with saving, let's say, tens of thousands of lives? If somebody is losing their job, do you weigh all the hardship that entails as equivalent to one-thousandth of saving a life or less than or more than that? Essentially, that's what we're trying to do when we ask if the lockdown is worth it.

And, now that pretty much every country is into lockdown, how long should the lockdown last? When do we start to release the brakes to allow some people to go back to work? Again, that might increase the risk of infection spreading, but it would create a lot of benefits as well. That's a deep philosophical question. My suggestion is we try to get more empirical data. We try to work out the effect on general wellbeing of the lockdown, of unemployment, of social isolation. Is it causing mental illness and more depression and so on? President Trump suggested it would cause more suicides. Is that true? All of those factors need to be weighed.

***Q:** Let's talk more about triage. In a scenario of two patients and one ventilator, you said that if one patient had a greater chance of survival, one principle would be to favor that patient. What are the different factors that go into making decisions when you have two patients who are equally sick? What really do you have to consider and how would you personally weigh all the different factors that seem to matter?*

**A:** Suppose that you were what's called an ideal observer—someone who is neutral, detached, without any kind of connection with one or the other patient, and fully informed. It's not so hard to be not connected to the patients, but it is very hard to be fully informed, so it's impossible to be an ideal observer. In that position, what do you decide? That's one question. The second question is: what rules should doctors follow, given that they're not ideal observers because they can't be fully informed?

I think if you were fully informed, you would take into account a whole range of things, including things specific to the health and prospects of the patient, such as life expectancy, probability of survival with and without the ventilator, and quality of life. For instance, does the patient have underlying conditions that mean their life is not going to be that great anyway and they'll be still quite ill after recovery? Or, are they going to recover and be healthy?

But you would also take into account things like, does this person have dependent children? Is there going to be a great hardship to the children or to the family if this person dies? You might also consider, at least in some cases, whether this person is going to be able to help the community a lot if they survive. Is this person a healthcare professional who will be able to go back to work with a certain measure of immunity and play an important role in dealing with the crisis?

But I think that's too much of a burden to put on healthcare professionals in this situation. So, I would suggest they should go by life expectancy as a rough rule. How many

years do you think this person is likely to live if they're treated? That would mostly mean you treat younger people rather than older people. But if there was a young person who also had a serious and possibly terminal underlying condition, such as a younger person who had cancer and the doctor said they would probably only get to live six months to a year, then you wouldn't give that younger person preference over somebody who was, let's say, 70 and healthy and could well live for 10 or 15 years.

***Q:** Given the complexity of this decision, it seems like it makes sense to simplify the decision-making process as much as possible for healthcare professionals. Do you think that it is possible to write a rules-based algorithm that automatically does triage by weighing the different factors? Can we completely automate the system that helps take the moral burden off of the healthcare professionals, or is there some flexibility required that demands a human stay in the loop?*

**A:** I don't think that humans are indispensable in the loop, but the problems are going to come into those weightings that you mentioned. Humans are going to differ as to how to form those weightings. Maybe what you would really need to do, before this crisis struck, is to have a lot of people try to form focus groups, inform them, try to work out what weightings they would put on different qualities of life using really good information.

For example, we know that when healthy people judge the condition of people with certain disabilities, they tend to think those disabilities are worse and the quality of life must be lower than when you ask the people with the disabilities themselves. You would want them to at least have the information about how people with certain disabilities rate their lives before you allow healthy people without those disabilities to decide the weightings. There would be a lot of things that you could and should do like that.

Then, maybe, you could get a sort of average or median as to what weightings you would give, which you could plug into the algorithm. Individuals will certainly disagree with this algorithm in various cases, but you could argue that this disagreement might just be because they're on one side or the other of the midpoint of the different range of opinions. Since these opinions were well informed and well considered, it's reasonable to go with the algorithm rather than with the individual healthcare professionals' judgment.

***Q:** This crisis has raised urgent questions about triage on a global scale. Do you foresee permanent alterations to the medical practices down the road in terms of how people think about issues like triage?*

**A:** I hope that people will be less inclined simply to follow the "first come, first served" idea and will realize that there are other situations where we should give preference to those with better prospects, better life expectancy, and shorter likely use of scarce resources.

I'm hoping that it does lead to a more open and explicit discussion about the existence of rationing, particularly in the U.S., where it has not been acknowledged as openly as in some other countries like the U.K. This, in turn, will hopefully lead to a bit more honesty in the discussion of how we allocate healthcare resources.

***Q:** What are your thoughts on the economic shutdown and the tradeoff between jobs and lives?*

**A:** I think many people would think about that question in a utilitarian way. I suppose what would be contrary to utilitarianism would be to say every life is of infinite value, so we can't do anything that causes a life to be lost no matter what the cost. That's a piece of rhetoric that you do occasionally come across. I don't think many people who really sit down and think about that would take it very seriously.

If that were the case, then we would think that our governments should only spend in areas where they're saving lives and not spend anything in other areas that are not saving lives, whatever that might be. You could try and stretch some things and say, well, education does save lives. Maybe education does in the long run, but does protecting wilderness and national parks save lives? It's hard to say how it does. So, anybody who thinks that we should spend a dime on those areas seems to be saying saving lives is not infinitely valuable. It doesn't outweigh everything. So, I think that kind of rhetoric is not one that emerges from reflection at all.

Therefore, most people would be prepared to say, yes, there must be a tradeoff at some point. Let's say the whole population is unemployed, sunk down to the lowest levels of poverty existing on bread and water, and not much else. Let's also suppose we were doing that because if we didn't, there would be an extra hundred people across the U.S. who would die. I think probably most people would say that is too high a price to pay, even if you assume that there would be more lives lost by that. There is that element of a tradeoff. The question is just really how you weight the values, which means people are already thinking somewhat inside a consequentialist framework—that is, they are broadly looking at the consequences, even though they might not be only looking at the consequences for happiness and misery, which is what a utilitarian would do.

Therefore, the questions are essentially: What are the values you're trying to maximize? And how are you going to do the empirical work which will tell you to what extent those values are maximized by either continuing the lockdown or easing the lockdown?

***Q:** Many people also present the argument that the tradeoff between health and economy is a false dichotomy. Right now, it seems there are plenty of things that governments can do to mitigate the economic damage while saving many lives. Do you think that the false dichotomy argument is sound and that the current course of action*

*is valid, given that the risk and the potential for long-term damage are very high if we don't take the kind of drastic action that we have taken or are taking right now?*

**A:** I don't think it's a false tradeoff. There is a real tradeoff between preventing deaths from Covid-19 and keeping the economy as strong as possible because while recessions may not immediately lead to a higher death rate, they do reduce the size of the economy. That means they'll do things like reduce the amount of money that the economy has to spend on healthcare, training healthcare professionals, setting up hospitals, and so on, and people will die because of that.

The other thing that's really important that we should not forget in talking about this is that this pandemic is not only affecting affluent nations. In developing nations, the effect of the lockdown will clearly cause death from poverty and hunger. It will accentuate and accelerate deaths, which are already occurring. Small children and families will get poorer; children will die as they become less well-nourished. So, I think that if you include low-income countries, then it is pretty clear that there is a tradeoff between preventing deaths from Covid-19 and harming people in other ways by the lockdown. There will arguably be more deaths occurring through the lockdown than otherwise would have occurred through the disease.

That's very hard to calculate. There is a paper by economist Paul Frijters, which has been criticized for having a very low fatality rate for Covid-19. He claims the lockdown is going to cause 70 times as many life years lost in the long run as the virus would have caused. Now, maybe those estimates are completely wrong, but are they wrong by a factor of 70? It's not impossible that they are, of course. But, even if they're wrong by a factor of 70, that still suggests that the costs and benefits are equally balanced. So, it's still an open question. You would have to think that he's clearly off by a larger factor than 70 to say the lockdown is justified.

***Q:** It sounds like you have some skepticism about the severity of measures that have been taken. There is some evidence that maybe the death rate for Covid-19 is not as high as reported because of individuals being asymptomatic. Do you have any personal opinions about whether even just the U.S. and other affluent countries have gone too far? Have we taken too drastic measures that will have long-term negative effects?*

**A:** I'm sorry—I don't think I'm enough of an expert to comment on that. I think that requires more expertise, both in the health field itself and in the long-term damage that the economy is going to sustain.

But let me put it this way. Since the measures are in place now, whether they were justified or not, there is a question of how long they should continue. That's already been discussed. President Trump at one stage said that they wouldn't last past Easter. Now, I think they're clearly lasting to the end of April and some people are saying they're going to

take six months or more. In fact, in Australia, where I am, the Prime Minister said to expect six months. So, is that too much?

Again, I guess it depends a little bit on what kind of lockdown you're talking about because there are stricter and less strict ones. But those are the debates that we need to have. Essentially, I'm saying we need to try to get more information. We need to look at all of the variables and try to get good information about all of the costs and benefits. One of those important factors is how lethal is the virus? We don't really know that yet, partly because there hasn't been enough testing done of people who are not symptomatic.

***Q:** You've written quite extensively about the lives you can save and our obligations to save them. How do you see your philosophy placed into this? How do you see this issue given that, from a utilitarian perspective, there might be a greater cost to shutting down the entire economy rather than letting some people die, however, despite this possibility, we might still have the moral obligation to step in to help those vulnerable people and bring that social solidarity forward? Do you see an ethical dilemma there?*

**A:** Yes, there certainly is. Paul Frijters quotes figures indicating that the average age of somebody dying from coronavirus in Italy was 79.5 years, and many of them had underlying health conditions, so he estimated that each of those deaths cost three life-years, whereas obviously, the death of somebody who was 30 would cost 50 or more life-years if they were otherwise healthy. That is a big factor to take into account.

I think that kind of calculation does apply here because we're comparing the deaths that would occur from Covid-19 with some of the deaths that are occurring anyway—the deaths of children from malaria, that could be very cheaply prevented by distributing bed nets, or a variety of other conditions that cause younger people to die, for example.

We're very focused on Covid-19 now. It is a serious threat. It is killing people. But we're very focused on it because it is killing us—affluent people living in affluent countries. If it were only killing people in low-income countries, we'd be much less focused on it because there are other diseases—malaria, tuberculosis, diarrhea—that are killing many more people than so far have died from Covid-19. These diseases have been going on for decades and people have not been doing enough to save those lives. In that sense, Covid-19 is a distraction from the good work that many organizations have been doing in saving larger numbers of lives in low-income countries.

***Q:** You've called for the closing of wet markets to prevent future pandemics. Can you speak a little bit more about wet markets, why they pose these dangers and moral dilemmas, and why you believe they should be shut down?*

**A:** A wet market is a market at which there are live animals being sold. Usually, they're sold in cages and the consumer goes along and says, "I'll have that one." Then, the animals are hauled out of the cages and killed on the spot. It's an area where a lot of different species of animals mix together. They're crowded; their feces are all around the floor. When they're slaughtered, of course, their blood is all around the place as well. This is clearly a horrendous place for the animals themselves, but it is also an ideal environment for the spread and development of viruses. The general view is that the Covid-19 virus originated and spread to humans from wild animals in the Wuhan wet market.

There is a specific risk with wild animals producing new viruses, but there is clearly a risk with wet markets in general because of the animals mixing there and unhygienic conditions. So, yes, I've called for wet markets to be prohibited everywhere. It was very interesting to see just the other day that Dr. Anthony Fauci of the Center for Disease Control agreed with that during an interview on Fox News. It's good to get this eminent medical opinion acknowledging the global health risks and saying they should be shut down. I'd like to see an international coalition of different organizations, public health groups, and no doubt animal welfare organizations joining together and saying that this should be a worldwide ban.

***Q:** Doesn't that go against certain people's claims of freedom—saying that it is my right or choice to do certain things such as trade and eat certain products? Surely it makes sense to shut wet markets down, but what if the government starts making other decisions that will yield greater utility in general and are for the benefit of the public, but are against people's choices or freedom, such as forcing people to wear masks in public during regular flu seasons?*

**A:** Because health is an issue that poses risks to others, especially when we talk about contagious diseases, I think it is reasonable for governments to make those restrictions on people's health choices. Going back to your earlier question of whether there will be other flow-through effects from the Covid-19 crisis—maybe one of them will be an end to this idea that individual freedom includes my freedom to pose a risk to you. Governments are shutting down social gatherings of various kinds and that's affecting people's health choices. People say well, why shouldn't I go and party? We're now saying, no, you should not because you will spread the virus and harm others.

Even in the U.S., I think most states now actually prohibit churches, synagogues, mosques, and other religious gatherings of all kinds. I think some states have not, but some states are. Maybe that could be challenged in terms of the First Amendment, but I would hope the challenge would be rejected because I do think that in emergency situations like this, governments are right to stop people [from] spreading viruses that are posing a serious risk to others.



In terms of your question about forcing people to wear masks during regular flu seasons—I think the crisis shows that there is not an absolute right to do whatever you want. That right is relative to the risk you're posing. You would need to discuss how great the risk is in a normal flu season. Is it justified to impose this restriction of getting people to wear masks? That's a judgment call that could go either way, but the rejection of it can no longer be based on the idea that I have an absolute right to do what I want, even if I'm posing a risk of infection to others.

*Q: It does seem that if everybody went vegetarian, there would be much less of a risk of pandemics. You are a vegan yourself and you wrote a very influential book called "Animal Liberation," which became, in many ways, the heart of a modern vegetarian and vegan movement. Is this another point in favor of vegetarianism?*

**A:** I think it definitely is and it goes beyond the wet markets. It points particularly to factory farming as well. Other pandemics and epidemics have often come out of factory farms, such as the swine flu pandemic in 2009. We didn't take that much notice of it in the U.S. or other affluent countries, because most of the people that died from it died in low-income countries in Asia. But in fact, it killed far more people than have so far been killed by Covid-19. The CDC estimates it killed between 150,000 and 575,000 people. So, we still have a long way to go.

Factory farms are ideal breeding circumstances for new viruses or for viruses to mutate and spread rapidly. This is because you have tens of thousands of animals in a confined space, often with immune systems weakened by crowding. For the ban on factory farming, we already had a concern for animals, concern for climate change, [and] concern for many people's own individual health. Now, we have a fourth reason—to try to prevent future pandemics.

*Q: Do you anticipate this crisis changing the philosophical and moral consciousness of the world in the long term? Do you think that it could cause us to realize our interconnectedness, become more empathetic, and care more about other people? In many ways, social distancing itself is kind of a utilitarian act in order to benefit people.*

**A:** You know, we are always tempted to look for silver linings behind the black clouds. That is one that I've heard people suggest. I honestly do not know. I can't predict the future. I am somewhat skeptical. I think that the forces that produce the kind of less community-oriented attitudes that we have had prior to this crisis are going to reassert themselves. It won't be easy to maintain the broader sense of concern for everybody that has come out of this.

# 9

## Rationing Resources and Making Ethical Decisions at the Frontline of Covid-19 Care

Arthur Caplan  
June 1, 2020

“

*Science is what we have to rely on. If we use what we know from science, we will come out okay.*

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— **policy punchline** by Arthur Caplan

Arthur Caplan is founding head of the Division of Medical Ethics at the NYU Grossman School of Medicine. He is a pioneer in designing public health policies, from helping to found the National Marrow Donor Program to creating the U.S. system of organ donation and distribution. Dr. Caplan has been busy advising public health officials on the Covid-19 crisis, publishing in peer-reviewed journals, and educating the public through media outlets like CNN, WGBH, Time Magazine, NYTimes, the Atlantic, etc.

*Q: There is such a wide range of philosophical and ethical challenges coming out of this crisis that I would love to discuss with you. What strikes you as the most urgent?*

**A:** Well, I think there are probably three that are the most urgent. There is certainly no shortage of ethical crises. But the first one is when are we getting out of this? People want to know when they can go back to work, when they can go back to school, when schools will reopen, not just in the U.S. but worldwide. That involves a very delicate tradeoff between going back to normal and risking bringing the pandemic back, seeing the virus rebound, and having to go through this all over again. Or, you concede that you are going to take losses and people will die, but you recognize that it is important to have the economy running and are willing to accept the tradeoff. That is a tough one.

The second challenge is trying to figure out how to use your resources in the hospital. Many, many issues come up about rationing and distributing scarce resources and personnel. And I might add, first responders can also get overwhelmed with phone calls and requests to come and help. So, what is fair? What is just? That has been a big issue for me; I have been involved in that a lot.

And then the third is probably trying experimental drugs or novel uses for approved drugs to try and help those who are already sick. I think those are the big issues at hand.

*Q: The second one you mentioned, which is the rationing of resources in medical facilities—does triage play a part in that in terms of how you decide which patients receive care before other patients? How urgent is the situation today? And how frequently do doctors actually have to make those decisions in which they are forced to treat one patient instead of another?*

**A:** Well, as we speak today, interestingly enough, we have done the ethical thing, which is to avoid rationing by stretching resources. For example, fourth-year medical students from NYU, Harvard, and other schools are now out on the hospital floors. They graduated early and, in return, we got more doctors that way. But they are a little less experienced and less well-trained. We have to make a tradeoff, but it is better than saying we do not have enough people to run the ICUs. We also are hiring people back from retirement. So, again, they are vulnerable because they are older, or maybe their skills are a little rustier, but we are avoiding having to ration by doing that.

We did manage to get our ventilators distributed to where the need is. I have yet to see anyone who is said to have been declined a ventilator. Close, but not quite. So, we have not yet had rationing or triage, as it is sometimes described, but the policies are in place. Some people argue that we should not talk about this, [out of] fear of bringing panic to people, but I completely disagree. If we are going to get people to accept the reality of rationing, then they have to know how you are going to do it, when you are going to do it, and why you are going to do it.

*Q: It seems that rationing needs to happen in two aspects. The first is for the medical staff. The second is for the patients in terms of using ventilators and medical resources. Would you mind explaining your standard for benchmarks that you use to think through some of those decisions?*

**A:** Well, most people in bioethics and, in fact, most people in healthcare have not had to deal with rationing. I have done so starting many years ago when I was involved in setting up the system we use to distribute organs from deceased people who die—from cadaveric donors—to people who need transplants like kidneys, livers, and hearts. These transplants have always been in short supply and people die from a lack of donor organs every day. So being around that system, I have known rationing firsthand. I have also been on committees that have had to make decisions about who ought to live and that shapes my thinking about what we are going to do today.

Basically, with the scarce supply of organs, we do not take first come, first served. There is no lottery. We try to get the most lives saved out of the supply of organs we have. So, you make judgments based on biology, blood type match, tissue type match, and size of the organ. That gives you a first cut on who is likely to get a scarce organ because they have the best biological match.

Then, you start looking at underlying diseases. Do you have diabetes? Are you obese? Do you have other problems we know complicate the success of the transplant? We also look at advanced age independently of anything else. That is because you start to lose lung and kidney functions over the age of 80. You probably never heard of anybody getting a transplant over 80 years old. It is not that they could not—we might be able to rescue some older people—but they are disadvantaged to the point where they do not make the informal cut-off.

Those criteria are exactly what I refer to in trying to decide how to allocate personnel or machines. People with coronavirus might need ventilators to breathe, but they also just might need ECMO, which is a different kind of oxygen machine, or kidney dialysis because sometimes kidney failure happens with Covid-19 too. So, who is most likely to live?

You put everybody in the lifeboat, including disability, race, gender. Whatever factors there are, they should not matter initially. So, to be fair, we must consider everyone. But then you start to sort, if you will, the resources among the people on the lifeboat. For me, it is who is most likely to have their life saved. Sometimes, you have other people making arguments about how we want to save the longer life for people who are younger and would live longer. To tell you the truth, it never gets to that. It is all biology initially and that usually sorts it out.

If we had to, would I favor younger people getting treated over 70-year-olds, other things being equal? Yes, partly because of the “fair innings” or “equality of life” arguments. I get all that. We also have some bias to help healthcare workers and first-line responders in order to get them back to work. But I do not think we will ever get to those criteria. It comes down to essentially: Is this going to work? And what factors predict success?

*Q: That is really interesting to hear because you are saying we won't get to the part when we have to use life expectancy, or those very crude standards, to judge things. We can approach it by using some of the standards we have already been using for organ transplants, such as biology, looking at chronic underlying diseases, etc. Usually by those stages, we can already get a good sense of who we can be hopeful about and who we should worry about.*

**A:** I'm not saying it's impossible to have an explosion of patients showing up all at once in a Detroit or Houston ICU, such that we would have to start fishing around for the tiebreakers. It is very unlikely, though. We have tamped down the demand. It is still large, but not overwhelming in any particular place. So, it is more likely you would only get a few people in that situation.

One other point that I missed, and that I'm afraid not many bioethicists realize, is that another way you get resources is to take people off the machines. So, if a 75-year-old is not doing well, you go and say: "Look, because you have three underlying diseases, the best odds of you living after continuing being on this ventilator are 10 percent, since we understand the failure rate on a ventilator quite well. We've already had you in here for six or seven days and you do not look like you are flourishing, so we are going to make an early decision to give up." As this case shows, it's more likely that we'd be generous at the front end and then we sort out who did not respond at the back end to generate resources.

*Q: So, would you say that the sorting out process that takes place later is indeed happening in today's Covid context? Do we have to unplug certain people off ventilators?*

**A:** I would say we are definitely giving up when an experienced ICU person says the measurements we get about this patient are bad. If they have a bad profile, we are likely to stop and move on. By the way, that is not just for the machine, but also to relieve the person there that is working 12-hour shifts. They're burning out and you're trying not to exhaust them.

Meanwhile, we're not doing the resuscitations anymore. If somebody on one of those units has a heart attack and the heart stops, we're not going to send in people to try and do all the things you see on TV with the pads and heart massages. In general, I think there is more likely to be resource limitation on the back end than I've seen on the front end.

*Q: You mentioned an important key phrase, which is everybody should be considered equally. So that means what exactly? Certainly, no matter whatever race, gender, or socioeconomic class you are in, you should be equally considered. What about issues like disability, chronic conditions, or very unfortunate pre-existing conditions?*

**A:** There have been lawsuits against a couple of states that said we're not going to take care of people with cognitive impairment. Many people think that is discriminatory and I agree that is wrong. If someone is in what we call a "permanent coma," cannot sense the world, and has no sentience, then okay. It might not make much sense to use resources in that case.

But, if it is a child with Down's Syndrome, I would have them "on the lifeboat" [be part of the overall pool for treatment consideration]. Their parents say they are enjoying life. It's not like they can't enjoy themselves, even though they may have a shorter life because of that condition. I would put in everyone in the lifeboat—prisoners, people with mental illness, cognitively impaired, etc.

However, we still have to acknowledge that if you take a standard of who is likely to do the best in those situations, the poor are inherently disadvantaged. In the U.S., just because we have bad health insurance coverage and a lot of people do not have their chronic conditions managed, when they show up in the lifeboat, they are at a disadvantage because they have these chronic conditions.

People have offered the criticism that we're just kind of penalizing the poor with the principles I mentioned and we should not do that. If you go with the idea that you have to try and save the most lives, it is not racist because the wealthy minority person might not be much healthier than a poor minority person. But in reality, if the principle is to simply maximize the utility of the resources you've got—whether transplants, ICU beds, ventilators, or kidney dialyses—those with such chronic conditions are simply not going to do well with a ventilator and the poor are at a significant disadvantage. I feel horrible about it, but I think the overall principle of maximizing the utility of given resources is still sound.

***Q:** You brought up the criticisms against this current system of prioritizing patients who are inherently healthier than the others, so does it mean that we should try out other systems like "first come, first serve" in crisis moments like today? Do you think it is ever possible to have a truly fair standard? How do you see those utilitarian debates come into the picture?*

**A:** Well, what is the point of having healthcare? It isn't to give everybody a chance at healthcare. It is to try and use your resources to save the most lives. That is what hospitals and doctors exist for. It is not a lottery. It is not based on [the principle of] first come, first serve. I do not see that as the goal of healthcare.

The goal of healthcare is to save people. Good healthcare is to use your resources to minimize death and disability. So, if those are the goals and you use your resources consistently, does that disadvantage certain groups of people? It absolutely does. But I do not see any way around it. And I cannot say it's not just because I still think it is consistent with the overall goal.

If we had a situation on the lifeboat, where we were giving out food for ten people and two of them had terminal cancer, should we give the food to everybody equally? Probably not. That is the issue you're looking at. Is it their fault that they had terminal

cancer? Could we have prevented the cancer if we detected it earlier in a system that gave everybody better access to early detection? Sure, that would be great. I'm for it and I hope we can fix it once this pandemic is over. But here we are and that's the reality.

Again, I do not mean to sound hard-hearted about it, but I have been advising about transplant allocation over the years and I see the same things happen [with] people [who] are alcoholics or suicidal and they did not get good mental health treatment. The reality is, if you're a chronic alcoholic who has not been sober for two years, you're not likely going to do well with a liver transplant and there is no point in pretending otherwise.

Let me add one other thing. People have also said, let's refer these decisions to a committee, an ethicist, an algorithm, or some God squad—some group of individuals that think through these issues. But the issue is that we do not have time to refer to a committee. It's one thing to say let's make a decision about who is going to get a transplant, since the person waiting is not going to die in the next 24 hours, so you have some time to think it through. During a crunch at the E.R. or a crunch at the ICU, you've got minutes. There is not going to be a referral to a committee. You try to train people to know what they ought to think about and get them prepared. The last thing they can do in a crunch is call up an ethics committee.

*Q: But I assume it should be reasonable to have the hospital educate their staff on which criteria to look for when making these decisions?*

**A:** Yes. That is what I have primarily been doing during this pandemic: formulating the policies, then making sure we train people. You want to avoid saying, "Oh! Today is the first day we have to ration and here's the policy." Then workers are forced to have the discussion that we're having now. I have been involved with rationing transplants, watching people die, and watching people being told "No" for many years. Most of the people doing the rationing today, however, have not really experienced that at all, which is an emotionally awful process—as it should be. Because it is so terrible, you have to train people and prepare workers for these tough moments in addition to just having the policy. Otherwise, some might walk away and say they don't feel prepared to make those decisions.

I will say this too: there is indeed going to be some personal judgment at the end of the day. You can tell the E.R. or ICU doctors what factors they ought to think are relevant. But, if they eyeball their patient and say, "I don't see any underlying diseases, but the person's oxygen levels are terrible and he or she is clearly in poor health," that doctor should have the ability to make the call of not putting the person into the ICU. There will be some decisions made based on judgment.

*Q: How do you see this crisis causing more permanent changes in the medical community and medical practice at large?*

**A:** We are going to see many things come out of this mess that we're in. One obvious thing is to stockpile equipment, be better prepared with protective gear, and have a national depot of ventilators and other equipment including swabs for testing. We would be fools if we did not start to build up a supply. There is nothing to stop other viruses from assaulting us, whether it be swine flu or Ebola or whatever. We have to prepare differently than we have up to this point. Most hospitals operate with what is called "just in time" supply meaning they do not have extra supplies of anything. It is cheaper to run that way. We cannot do that anymore. You have got to keep some extra space and extra supplies locally. I know that is not maximizing business efficiency, but I think it maximizes healthcare reactivity.

I can make this prediction with certainty: there will be much more telemedicine in the future. We will not even remember that we used to go to the doctor's office because we had the flu or a cold. It was ridiculous because you were infecting other people traveling with viruses. Many things can be diagnosed and treated without telling the person, "Yeah, you look sick. Why don't you take your flu-like symptoms, ride the subway, infect everybody there, come in my office, infect everybody there and then walk in here and infect me."

***Q:** I guess the one interesting question that could be asked in that situation is: should the government intervene more in our personal decisions in order to achieve better public health outcomes? For example, during future flu seasons, if the government comes out with a law that says everybody is now compelled to wear masks in public, it will certainly decrease the number of deaths, but people won't feel comfortable with doing that.*

**A:** Remember, you're talking to a guy who, some years ago, pushed through the policy of mandatory flu vaccines for all healthcare workers, or else one would get fired. So, I'm a big believer in the government taking away some liberties to protect community health. There were nurses, doctors, and healthcare workers who did not like that idea. But we have a 99.6% flu vaccination rate at NYU. Pretty soon, I'm sure we'll get the numbers that show not only do we benefit from preventing people who were sick from infecting other doctors, but we also had fewer sick people in general because they got the flu shot.

So, I do favor tougher public health measures in the face of infectious disease. I think masking makes sense, but even more so, telemedicine makes more sense. Stop putting people who are sick out in public. Let them do their thing remotely. The management of the flu is just drinking more fluids, getting some rest, watching your fever, and if you really spike, going to the E.R. However, it's not like you have to come into doctors' offices. You can manage this [the flu] without people schlepping around. So, I think it is not so much that the government will do it, but rather that most hospitals and healthcare systems, and even your primary care providers, are going to start to say, let's do a lot of this online.



*Q: As you mentioned, there are three urgent debates and we spent the majority of this interview talking about the second one, which is resource rationing. But you also brought up experimental drug experiments, as well as the tradeoff in terms of reopening the economy or not. So, I would love to hear your quick thoughts on those issues.*

**A:** Let's first talk about going back to work, only because it's on so many people's minds as they have been staring at the same walls or the same people for months on end. I think what we're going to do is this: as soon as we get cheap and easy-to-administer tests, we can open up cautiously. These tests are much easier to conduct because you can spit and get an answer within a few hours. That is the road to getting back to normal life. There is also blood testing to see if you have antibodies to the virus, meaning you're immune. Are we 100 percent sure that you're immune? No, but it's likely enough that if you've survived Covid-19, or been infected, and do not shed the virus and do not have any symptoms, then you should probably be allowed back to normalcy too.

What I'm going to predict is this: we're going to come out by the millions, but not all at once. It is not going to be a magic day. Maybe we will do 10 million, then 10 million more and the people who are at the highest risk of death—the elderly or immune depleted people—will probably come out last. But I think that's the way it will play out. Testing along with vaccination are the keys.

Maybe we'll get a vaccine, but I do not think we are going to see anything like that before at least a year, or maybe longer. I can tell you why: it is not just about discovering the vaccine. You have to realize that you need to make 330 million doses just for the U.S. So, there is a 'little' manufacturing problem. You have also got to make sure that you make them all safely, so that is why it will take a while.

On the experimental drugs, so far, there is no drug out there that works. President Trump got wound up about antimalarial drugs. There was a report out of France that seemed to indicate 26 people had benefited, but it turns out that the paper was bogus and the author retracted. I guess the President, however, is still operating with that initial optimism, so he keeps promoting this drug.

Here's an old rule from human experimentation that scientists are not proud of: "If the person gets better, it must be the experimental drug. If they [the person] died, it's the underlying disease." Joking aside, but you see it all the time. People do not want you to think they gave you something that killed you, so they say, "Oh, it must be the underlying disease."

Anyways, I'm not against trying new things. I understand these are desperate times for many people who are not doing well on the ventilators and so on, but you have to do it in an organized way. Otherwise, you don't know. Should we give someone two doses a day at twenty milligrams? Or, three times a day at ten milligrams? Does it matter if I give it in their bloodstream or should they inhale it? These are very nuanced and complex questions. So, yes. Try new things, but realize they are all long shots.

If it were easy to cure Covid-19, we probably would have had a cure years ago for the common cold, of which Covid-19 is in the same family. We have to do things in a systematic, organized way. Clinical trials are key. Compare doses. Record the health status

of the person you're giving the drug to, how often and so on. Right now, there are 200 drugs that people are starting to trial. The President is in love with one of those. If you do not set this up properly and just keep throwing new drugs at patients, you're never going to know whether any of them worked. So, I think we've got to be hopeful, but we do not need to be stupid.

***Q:** The name of our show is *Policy Punchline*, so I have to ask you at the end—what is the punchline here?*

**A:** Science is what we have to rely on. If we use what we know from science, we will come out okay.

# 10

## Economic Lockdowns Are Causing 70x More Life Years Lost Than Covid-19 Otherwise Would

Paul Frijters

“ Covid-19 is the first real crowd moment in the Western world since the 1930s. We haven't had this kind of crowd movement since fascism. It has the same kind of unthinking and following what everybody else is saying. Also, the fact that intellectuals use their smarts in order to rationalize what the group wants, rather than argue whether or not it makes sense, is reminiscent of fascism. There is also this kind of sacrificial element of the crowd, and this blanket-like obsessiveness, this not wanting to think of the wider things. Finally, there is a hunting down of dissidents, of people who disagree.

”

— **policy punchline** by Paul Frijters

Professor Paul Frijters is currently a Professor in Wellbeing Economics at the London School of Economics. He specializes in applied micro-econometrics, including labor, happiness, and health economics, including policy and how we all can help the wellbeing of others. He is particularly active with models of cost-effectiveness and how wellbeing can become the driving focus of the nation-state bureaucracy.

***Q:** You have done some interesting calculations concerning the statistical lives lost as a result of our response to the Covid-19 crisis. Would you mind telling us a little bit more about your train of thought and your calculation?*

**A:** There are various aspects here to unpack. The first question is about statistical lives lost. That is a very old concept, and I certainly didn't come up with that. It's this notion that if we are going to look at the effects of our policies, we mustn't just look at what is immediately visible in [terms of] the lives we may save or not save that is in front of us, but also the longer-run consequences of our actions. For instance, if we don't set up new roads, there might be road accidents in the future. If we don't renew our energy sources, we might end up with very dirty energy sources inside houses, and that may mean that young children develop asthma. You can reasonably say that in the next 10 years, a million people will be saved if we, for instance, secure our food supply better than we did before.

That's a type of thinking which is very normal for economists around the world. We don't just look at what's immediately in front of us, but rather we also make a reasonable deduction about the long-run effects of our policies. This is what we routinely do if we set up a dike to keep out the sea. It's not that we immediately know who will be safe, because this thing will be around for two centuries, but have some sort of notion of the statistical number of lives that we're going to save.

If we talk about this Covid-19 epidemic, then we are talking about how many lives are we going to lose through our reactions to Covid-19, versus how many lives might we have saved by our reaction. This breaks down to various different scenarios. Suppose, for example, the world as a whole shrugged its shoulders and treated the coronavirus like another flu or another disease of no greater consequence than the swine flu we had a couple of years ago. I've also looked at scenarios where, for instance, I look at a particular country and ask: what if we go for another year of lockdown? What do you save in terms of life in that country alone? Compared to opening up or various other scenarios?

***Q:** Two months ago, in March, and you wrote that the [number of] statistical lives lost as a result of the world's response to the epidemic is at least 10 million. How do you come up with that number?*

**A:** It was already clear in mid-March that there was going to be an economic and social collapse as a result of our reaction to the virus—mandatory closing of businesses, cessation of trade, and so on. We could see the stock market already anticipating the cost to the economy. My calculation aimed to quantify the cost of that reaction versus if we would have done basically nothing. There are two or three key numbers that I can mention.

The number of lives that you lose can be calculated from, essentially, the total reduction in economic activity. A reduction in economic activity also has an effect on government expenses, and government expenses are linked to life expectancy. And then

there's a very rough rule of thumb you can use. In mid-March, the stock markets had gone down about 20 percent. If you apply the 20 percent number to all forms of capital—property, capital, human capital, and so on—then the world economy will probably lose about \$50 trillion in the next 10 years. A month or so later, the IMF said 8 trillion for the next one and a half years, but that doesn't mean you catch up after one and a half years. That is where you start going down. It takes a decade to get back up. Discount that over the next 10 years, you get pretty close to 50 trillion. So, that initial guess still seems to have stood the test of time. If it goes down 50 trillion, then all we really need to do to get a ballpark number is to translate that to the number of lives that you're going to lose throughout the world via reduced government expenses on all kinds of activity.

As a rough rule of thumb, one of the broad statistics around the world is the statistical value of life. For a whole 80 years of life, it would be around \$5 million. That also goes the other way around. If you lose that amount of money, then effectively, that is how much life you lose because governments can no longer afford hospitals, they can no longer afford schools, they can no longer afford to have clean water. Essentially, the quality of government and of individual consumption goes down. And of course, 50 trillion divided by 5 million is 10 million, so that is 10 million whole lives. that is about 800 million life years lost. If you take the world average, more like 700 million life years are lost.

And then you think the average person who dies of the coronavirus maybe has another three to five years to go. I know it differs a little bit by country, but in the Western countries where the overwhelming number of deaths have been, these people are fairly old. You would need to have about 200 million Covid-19 deaths to match up to 800 million years of life lost. If you don't plug in a reasonable guess as to how many people are going to die of Covid-19, you are very quickly going to get a huge ratio of costs versus benefits. Indeed, it would have to be fantastically deadly, this virus, for what we did to ever make sense. The loss of life down the line is going to swamp any benefit from our reaction.

*Q: There are some possible objections that I could propose. First, I am not sure whether a rise in the value of the stock market would directly lead to more wellbeing. Second, although we can roughly estimate that most deaths attributed to the virus are people that probably have three to five years left, one could also say that we do not know the actual impact of Covid-19 on the human body. One could potentially get Covid-19 and recover, but the disease may have other health effects or complications that we don't know about. Furthermore, we do not know the actual costs that will be incurred by the health system should many people fall ill.*

**A:** You pose a lot of questions, Tiger. If you compare us to the Middle Ages, when there was a life expectancy of 30 or 40 years, we see that much better lives are brought with higher levels of productivity. Economic development has allowed us to put in structures to improve water, to improve the food supply, to spend a lot of money on our personal and communal health care, to set up immunization programs, and to set up better roads.

These are all things that make life a lot healthier. In the long run, there is no doubt that there is a strong relationship between the level of economic activity and the innovation that accompanies it and our ability to live longer lives and survive early childhood.

So, in mid-March, I was looking for a measure of how much our economy is going to tank. In that sense, I treated the stock market more as a source of information. Yes, stock markets are subject to all kinds of speculation and bubbles, but in these kinds of situations, they're also the place where the people who are most interested in future flows of money and activity in our economy—financial traders—are trying to read the tea leaves and predict the decrease in corporate profits. What is going to go bankrupt? What is not? How much do I think this is going to happen? The 20 percent drop in the stock market should basically be seen as the best estimate around mid-March of how much we think economic activity is going to tank.

Interestingly enough, they've been proven right. If you look at clearer data, and if you look at the number of people who have become unemployed and the underemployment of people who are not yet officially unemployed, then it's about a 20 percent reduction in activity. If you look at the improving estimates of how much GDP has tanked in the second quarter of this year, it is up to 20 percent again. It will take many, many years before the economy is back, and 15 to 20 percent of reduced total GDP for the next five, ten years doesn't look so strange anymore.

In that sense, in mid-March, I was basically going for the best forward-looking estimate of the amount of damage we have done to ourselves. One shouldn't see the stock market just as this voodoo place where people gamble. It is also a place that collects a lot of information about what is going to happen. That is where our expectations of the future economic health of different countries are most clearly visible. In mid-March, that was the best information as to the future. A couple of weeks later, the IMF began to get with the program, and all the unemployment data started coming in.

***Q:** One objection I would make is that the stock market seems to be disconnected from the Main Street economy today. The Dow might rise 500 points just because Jerome Powell, the Fed chair, announced a new monetary policy measure. How would you respond to the argument that the stock market's rise and fall have nothing to do with "the real economy" per se?*

**A:** There are many arguments to be made there. I fear that we're sort of veering into a lecture in macroeconomics. But, of course, the stock markets look forward and ask, how much do we think that the stock should be worth based on profit streams and dividends? In that sense, the collapse in March represented the expectations of the market.

Now, there are other things that move the stock market, and one of them is how much money is floating in the economy. So, the massive amount of money printing, in principle, means that in the longer run, you expect the money to be worth a lot less. The fact that the interest rates have gone close to zero also means that effectively the value of money has gone down. That just means anticipated inflation, so, nominally speaking,

the stock markets are back. But, it's tricky to see that that is not connected to a recovery in productivity; it's more connected to the fact that, in nominal terms, there is a lot more money circulating.

So, yes, there are other things that affect the stock market, but that is why I keep coming back to the point that the collapse in mid-February was due to investors predicting a decrease in the profit stream of companies. That was the signal, and it has been proven by later data. If you like, it has been a good day for the efficient market hypothesis.

***Q:** What about the idea of value? Let's say that there is a correlation between wealth and life expectancy and therefore a correlation between the stock market and life expectancy. Shouldn't we keep in mind that this concept of value is, after all, a subjective concept that we've really created under a set of economic theories and assumptions? And if those assumptions do not hold true in reality, which they often do not, then the way we value things might not be accurate at all. For example, one could say that essential workers are actually keeping the economy going right now rather than stock market traders, but they're not being valued in the right way given the low wages we continue to pay them.*

**A:** I agree with this notion of value. I have spent my academic life arguing that we should put the wellbeing of a population first, and the wellbeing of the population is nothing more than the discounted happiness of the whole population from now until they die. If they live longer, then this discounted stream goes up. I am definitely the guy who argues that it should be about happy lives lived. But this does not mean that there is no information in the stock market or that the stock market is just totally random noise.

***Q:** You said that the concept of statistical lives lost is not about pinpointing who has died, but rather it's a rough statistical estimate. What if, for example, we end up passing health care reforms because of coronavirus that ended up saving more lives in the long run? Couldn't one argue that we don't really know the impact of an event?*

**A:** I am a consequentialist. Down the line, how much are we saving? How much are we losing? It should be the business of the government to acknowledge that we never know anything for certain, but to ask, what is the more likely outcome? Where does the balance of probability lie? Of course, if there is reduced economic activity, there is also reduced government health service down the line, and there is a reduced number of innovations because people are now being idle.

Potentially, our response is stifling new inventions that would change the world. The productive and creative part of our economy is being reduced, which also goes toward what we have lost, what we have not done in this period. There is also the huge severing of economic ties not only between countries but also between companies within countries, which means that there's a lot to rebuild before we get back to where we were before,

even on the technological scale. The car industry has tanked, the aviation industry has tanked. There have not been many industries that have continued moving forward. Some supermarkets have done well, and Zoom has done well. But you're going to be hard-pressed looking for technological breakthroughs being made during this period of time.

Now, to address one of your second points: how do you know what would have happened with this new disease? I think we should put this in the context of humanity, which has hundreds of diseases running around in our population. If we're going to be serious about the notion that every new disease has uncertainties, and that the safe thing to do is to halt all life as we know it until we know for certain what happens with the new disease, then we would stop every week! There's a new disease every week because, of course, nature doesn't stop viruses. They keep mutating. The same is true for bacteria and all kinds of other pathogens.

The argument that Covid-19 is something we do not yet understand 100 percent, and so we've got to stop life as we know it, would mean that we'd never do anything again. There is no way that that could be the basis for any type of policy. Rather, it must be the opposite way around. It must be the case that if we have any new virus, which will happen again in the future, we should roughly keep going as we are. We should make sensible precautions, yes, but we should not have this massive stopping of life, which will result in millions of deaths in the coming years and probably in the coming months.

There are virtual certainties of millions of lives lost versus very few lives lost from the virus. There is no way that we can have a system in which it's sensible to do this with every little threat that comes along. The proof of the pudding has got to be the other way. Prove that it's reasonable to hold life to the degree that we have. We cannot stop life as we know it for every little thing. Sure, there are uncertainties. There is uncertainty every time you go outside. It doesn't stop you from living your life.

***Q:** When you were answering the question, you said that you are a consequentialist. You wrote an article called "The Corona Dilemma," in which you likened the coronavirus crisis to the trolley problem, a classic case taught in every introductory philosophy class. In the problem setup, you're on a trolley and if you don't switch the trolley to a different track, you will kill ten people. But if you switch it, you will only kill one. You argue that the reason why decision makers are not pulling the lever to steer us to the more utilitarian, optimal way is that they're under social and political pressure. Can you elaborate on this argument?*

**A:** When I was trying to explain the strange choice that humanity has made, I put up a hypothetical in which an individual decision maker has the train that the decision maker can divert or not. That is the choice. If the train is not diverted, it kills someone they know: an elderly, frail person with a family and friends looking at them and shouting, "Divert the



train! Divert the train!” If you divert the train, you kill 50 other people. You do not know who they are, and their friends and family are not watching so closely. But you still kill 50 other people, including other old and frail people in your own country and other places. You lose in any demographic, but it’s less visible.

We’ve chosen the second option. We’ve actively killed 50 people by our actions. In the classic trolley problem, the train goes toward five people and would only kill one person if diverted. I deliberately twisted that around to say that we’ve actually chosen to kill more people—we’ve deliberately killed the other hundreds because this one person, or at least in a media sense, was highly visible.

And I do think that is roughly what has happened, that the media and social media has put this under the limelight and made us so fixated on that threat that we haven’t seen the huge damage we’ve done to ourselves. In that sense, we’ve been like rabbits caught in a headlight. It is mass hysteria. It is an obsessive focus day after day [on] a few people who are infected and dying of this disease. But what about the huge damage we’re doing to ourselves, which is many times more important?

***Q:** You brought up this idea that we are actively making a choice. That is something that philosopher Judith Thomson brought up when she was writing about the trolley problem. She argued that numbers don’t matter, and what really matters is your mindset. What are you actually doing in the moment? Are you actively switching to kill one person to save five? If so, then that action is probably not as justified. I could make the argument that even if they might kill fewer people by doing nothing and letting the economy stay open, the mindset of the politicians is that they need to do something to help save people. In politicians’ minds, they are making an active decision to not sit out during this crisis. One could say that by not doing anything, and by actually making a choice to stay out of any possible lockdown or quarantine, that mindset would actually be more reproachable because it is inactive and defeatist.*

**A:** I do see that. But, of course, it is a kind of Neolithic farmer idea to think that we must do something. Neolithic farmers sacrificed their own children because they were afraid of the harvest. No, that’s not a consequentialist way of thinking at all!

The “doing something” has got to make sense in itself. This notion that we must do something is a negation of the Enlightenment. It’s totally anti-scientific. It’s back to medieval sacrificial logic. Science is examining out options, determining the likely consequences, and taking the best one. In this case, we have basically chosen to take actions, which have gotten many, many more of us killed down the line than if we had not taken those actions. That’s now pretty clear. It doesn’t yet mean that every choice has been bad, and it does not tell us what we should do as an individual country or state next week. That’s another question for humanity as a whole.

*Q: You don't think that we should come together as a society to protect our elderly?*

**A:** I used to think that when the initial data came out, this virus might be aggressive enough to make the argument that there is at least a distributional loss among the old and the frail. Now, it seems more and more that even that is not true. Who loses out most from the economic shutdown? The old people.

Their pensions have gone down, they are amongst the most dependent on property prices, stock markets, and state pensions. They cannot make other life choices anymore. When it comes to earning their wages, the young can adjust, the old cannot. Who is most at loss in terms of the health services that have got to go down because governments simply can't keep up with expenditures? The social services which they depend on more will also go down. They have also been made lonelier since they can now no longer see younger members of their family. Who dies alone because the medical profession now doesn't want them to be in contact with others? Again, they are the old and the frail. So, to a certain extent, they've been the biggest losers of all of our reactions.

We've instigated a kind of apartheid system against the old and the frail. They are now kept in the background, and we say it's for their safety, but they're still going to die of something else. Now, they die alone away from friends and with no real way of engaging with others anymore. It has been absolutely horrible what we've done to the old and frail. So, I think this notion that we care about them is totally false. We just do not want them to die of this scary virus. But other than that, we don't care about them at all.

*Q: I suppose that a lot of people might argue that they would rather have the virus than continue to live like this, not being able to go outside and interact with anybody.*

**A:** Absolutely. I've made that argument because that is exactly the sort of thing you do as a wellbeing economist. How much does the quality of life go down as a result of this loneliness? We now have pretty good estimates that in terms of wellbeing, maybe five to ten percent of the quality of life has been reduced, which is similar to saying that every 10 days, one or a one-half has been taken away from you. How many days in a week or in a month would you be willing to give up in order to have your regular life back again? You do not have to give me an answer now, but it wouldn't be zero.

There has been a real reduction in quality of life. If you buy into a kind of a wellbeing metric, which I do, then you get actual numbers for that reduction. We've looked at the U.K. and other countries over time to see how much anxiety has increased and how much happiness levels have decreased. It's a high number. People have been very anxious. They value their life a lot less now than they did before in terms of its quality. That, too, can be translated into life years lost. If this is sustained for years, then we are talking about hundreds of millions of life years lost—even hundreds of millions. This virus had to be an order of magnitude more aggressive, not just for humanity to even make this choice of lockdown, but also to continue it.

That also applies to the question: does it make sense to do this for another month? The loss per month is absolutely enormous. If you lock down the whole population, it's as if you take five to ten percent of the quality of life of the whole population. In the case of America, that's 330 million individuals. Their quality of life goes down five percent, and one-twentieth of their year is then lost. 130 million divided by 20 years is 16.5 million life years lost per year of the lockdown. That is a big number. How many people have just died from the coronavirus in the United States? It's a bit over 100,000. These people have another four, five years to live. Maybe 500 thousand life years lost versus the 16 million per year if you'd lock everybody down. Even per month, it's over a million. And that's just the loneliness, not even counting the GDP. That is not even counting the unemployment or the social services or the health service. And so, very quickly, the calculus becomes overwhelming that what we've done makes no sense. It makes no sense on a grand scale and it makes no sense on a microscale.

***Q:** There is another interesting case in the Trolley Problem debate. Suppose that someone is chained to an electric grid, and the whole world is about to watch the World Cup final. If they decide to watch the final, it will activate the grid and kill the person. In order to save that person, the whole world needs to come together and decide not to watch the World Cup final. Is it justified to turn off all of the TVs in order to save one person? Philosopher T. M. Scanlon would probably say no, following his idea of contractualism, a formula stating that an act is right if and only if it is justified to other people on terms that they cannot reasonably reject. In other words, if something applies on a one-to-one basis, it should also apply on a grand scale. A single individual would not choose to sacrifice another human in order to watch the World Cup, so the entire world shouldn't either. To apply that idea to Covid-19, we could argue that society should come together and make individual sacrifices in order to prevent someone from dying.*

**A:** Yes, but that is when we return again to the first point. Many more people are going to die in the U.S. and in every other country due to our reactions than were ever going to die as a result of the virus. That is now clear, and that is now the tradeoff that one is facing.

In the U.S. you've just given a Nobel Prize to somebody who has a book about "Deaths of Despair," which was all about the reduction that people have of their pride in having a job and their thinking that they have a future, and as a result, there has been an increase in substance abuse and suicides. The U.S. health system, as you know, is a lot worse than European ones in keeping people alive. It can only be expected to worsen even further with the reduced public services that are probably going to come in the U.S. as a result of this. That, too, costs lives. That, too, is a decision.

And then if we think about the knock-on consequences for the rest of the world, the huge impoverishment that has taken place in nearly the whole of the developing world, it is even worse. In Africa, there are whole cities that are thought to be in danger of tremendous famines costing millions of people. It is the same in India and in parts

of Southeast Asia. There is a disaster happening around us in the world of an order of magnitude higher than these tiny numbers of deaths that we've seen in Western countries.

To address the argument that this is going to make us a more cohesive society, do you really believe that we're going to be a more cohesive society if we're 20 percent poorer than we were before [and] if we've instigated an apartheid type system to stay away from everybody else? Don't be warm. Don't hug each other. Don't be a normal human being. See every other human being as a threat—somebody who could give you a virus. This is not pro-cohesion, but against cohesion.

And I think that a lot of the riots that we are seeing right now in Minneapolis and other places, although there are a lot of historical reasons for those things, one of the other reasons will be this alienation that has been massively propagated. We should hope that that kind of attitude does not actually win out. We don't want everybody to see everybody else as a threat, but that is the logic of this virus, which, after all, is not all that deadly.

***Q:** Do you think there is any merit to the idea that, right now, we should build a more robust welfare state and enact those policies to shield people from negative effects and carry them through this difficult stage? Maybe doing something like that could help us come up with better solutions during these two to three months of lockdown. Would this make the strategy sustainable?*

**A:** I am a warm proponent of a reasonable welfare state on the empirical basis that it makes people happier and it makes them live longer. A reasonable welfare state has proven itself around the world. New countries that are getting richer, like China, are setting up welfare state structures for the same reason, because it's in the interest of their populations to do so.

I've advocated for a long time that, yes, the U.S. should also have more of a welfare state set up. It gradually reduces crime and the amount of tension in a country. But at the end of the day, this is up to Americans to argue. I'm a European and I can only say that this seems to be working out everywhere else. Why don't you try it yourself? But that is an internal matter for the U.S. I don't quite see the U.S. debate going that way, do you?

***Q:** The U.S. is having debates about progressive taxation and universal health care. It's been a part of the academic discourse for a while and people recognize urgent issues like inequality. I think that a lot of people are hoping that this crisis could be the trigger for a rethinking of the current system.*

**A:** Yes, but I see a lot of wishful thinking in that. You see a lot of things on the Internet and in newspapers, whereby everybody who has a particular problem in mind says that this is the opportunity to solve that problem. Whether it is global warming or extinction

of species or international cooperation or human rights or whatever else that they care about. It's no different from before the virus, and it does not mean that the virus has made it more likely that this will be the next problem that we'll be worried about.

I would say that it is more the opposite. We've created a huge new problem and that will start to push out a lot of other priorities that were previously on the table. We probably will start to care less about many other things because we now have problems like huge unemployment to overcome. A lot of people won't be able to afford their mortgages. Lots of shops have gone bankrupt. There are tremendous loneliness and fear in our society. There are a lot of new problems to address. I think that other problems are going to be pushed to the background.

***Q:** Are you more of a pessimist in that sense?*

**A:** In the long run, I am tremendously an optimist. February 2020 was the high point of humanity in the sense that we will have more people in the world than ever. We were doing reasonably well. I have been absolutely amazed and also very saddened. We, as human beings, have just thrown ourselves into an abyss as if it made any sense without really thinking beforehand as to where the onus of proof should be or what the balance of probability was. But we will recover. Humanity as a whole still has got a lot going for it, and I'd still prefer to live in 2021 than I would have liked to live in, let's say, 1930. I am still an optimist.

***Q:** In a recent article you wrote that the smartest option for combatting the virus in Australia would be to create herd immunity by actively giving everyone Covid-19 in a short period of time. Can you elaborate on your argument?*

**A:** Yes, I think herd immunity is the smartest option. For the U.S., it's no longer all that relevant because strangely enough, largely via incompetence, you seem to have done most of that anyway. But I think that it is the best option for places like Australia and New Zealand, where almost no one has been infected and thus there is no immunity.

Those countries could possibly hide behind quarantine walls to keep the virus out until this magical vaccine comes. We'll hope for it to come soon, but, of course, the history of vaccines is that it takes a couple of years before they come out. Even if we take shortcuts, it's not likely that this thing is going to be online for the next 12 months, at least, unless there is some kind of miracle. Are these countries really going to destroy large sectors of their economy to wait for the vaccine, taking the chance that this vaccine won't come in the next 10 years? If so, they're going to kill off a lot of their economy, which is going to create a lot of hardship.

Or, they're going to accept that they have got to open up. We've got to somehow accept that we're going to be part of the rest of the world. In my proposal, we want to protect the old by creating some notion of immunity in the people who are around them. That is the engineering problem. How do you most quickly create immunity in a population? You get those people for whom this virus is not a large health danger to have a mild infection of it. They get antibodies, but they're not seriously sick. You can do that as a state program, or, being American, you can pay people to do this, right? Why not make it a market?

***Q:** Do you think people would be willing to get a shot of Covid-19 in their nose? Some people do not even want to get vaccinated. That seems to be a hard sell.*

**A:** People get flu shots every year, and flu shots are basically weakened forms of viruses. This notion of giving people an active pathogen, which in principle is not healthy for them, but it saves them from something worse, is very normal. That's your yearly flu shot. Those are also the vaccinations that people get for measles, mumps, and other viruses. Ninety percent of the population gets these vaccines, and they too come with risk. This is not a strange thing to do. I didn't say that this is politically likely, but I did say it is probably the smartest thing to do.

***Q:** Won't many people die?*

**A:** I wouldn't argue that everybody should be infected, just the people for whom there is very little health risk. I encourage you to look at what actually happens with vaccines. There is no such thing as a vaccine with no dangers. They're just more likely to protect you because contracting the disease would be a bigger threat to your health. The same goes for individuals themselves because they may be young and strong, and so they basically shrug this virus off with no problems and develop immunity. One also has to see how long that immunity lasts. Once they become old, they would probably prefer to have developed immunity earlier in life. Even from an individual point of view, it is not a strange idea to do this until the vaccine arrives.

***Q:** What about the alternative, which is to do massive testing, contact tracing, and then reopen with social distancing? Hong Kong, Singapore, and South Korea are all doing this quite successfully.*

**A:** But look at the cost of doing that. Social distancing comes at a tremendous cost to the economy. It's very hard to imagine a public transport commuting system functioning clearly with that kind of social distancing. It's very hard to see any notion of a mass event anymore. How are you going to have football games? How are you going to have theatre plays? You are killing off a lot of joy in life by this social distancing, and you're killing off a lot of office spaces. Once again, you're giving up a large part of life for what is only a tiny risk of death.

If you do the numbers properly, which I've done several times now, it's a no brainer. You are going to kill way more people through social distancing and these other rules, even if it is in terms of old people dying, young people dying. It is overwhelming. No, these policies are going to cost way more than you can potentially save by doing this. It just makes no sense. Part of the problem in this debate is that people are not talking about this. Why do they churn out the maps? What do you think is going to happen with social distancing? How large is the damage associated with doing that?

And this idea of contact tracing, they are going to have to implement this on people who are traveling, causing a delay. Are you really going to have a kind of Covid-19 police running around forcing you to take these tests all the time? Is that really how you want to run your society? There is also a civil liberty issue. People are giving up their health and liberty for what is a tiny, tiny risk.

***Q:** Do you foresee your plan possibly going very wrong? In your blog post, you wrote that at least 60 percent of the population needs to be exposed to the virus in order to be considered immune. Even the hardest -it cities right now haven't reached that level, which means that we would have to institute those programs. There would certainly be very strong political opposition, and even if it's politically feasible, don't you think we still do not know enough about the virus and so many things could go wrong scientifically?*

**A:** You referenced an article of mine in which I said that at this moment, the smartest thing to do is to just actively catch up with Sweden and then catch up with New York as well. I know that this is not the way that the Americans look at it. However, I think that down the line they will start to see that New York has suffered more deaths, but also has much larger levels of immunity so it can reopen its economy and restart social life much quicker.

There are now neighborhoods in New York that have around 50 percent immunity levels based on these antibody studies. that is huge. Those people, I hope, will find themselves in high demand in the labor market now because they can be trusted. They are already immune. They can be around the old and frail.

However, as I've already said in that article, I see almost no political feasibility of that. A more normal way of doing it is to just open up the economy and take your chance. We should institute some special arrangements for the people in retirement homes and nursing homes, but apart from that, we encourage people to get on with life and treat this as just another one of several hundreds of diseases, not something worth stopping your life over.

***Q:** Didn't the U.K. initially try a strategy of herd immunity but quickly turn away from it because they realized it wouldn't work?*

**A:** The U.K. saw fear coming and said that something must be done. Initially, the virologists held on to the logic of their models, which is that herd immunity is the only way to go when vaccines are not going to arrive for a long time. Then, they panicked. There was so much pressure on them from all these supposed scientists to close down the economy without any notion of the huge social and economic disruption that it would cost.

It has been so anti-scientific what these scientists have been bleating. The virologists who were holding out for a while, they just lost their cool, went back to their models, and plugged in some different data. Then, they began to say that it was too dangerous and that we should close everything, and the government listened. My reading of them is that they've sort of regretted it ever since. A couple of weeks later, their new model projections showed that this virus wasn't in fact so deadly.

***Q:** Journalists, academics, and scientists all seem to have developed this understanding of Covid-19 as well as an agreement on a certain set of policies. In order for us to implement a policy like yours, we would have to withstand tremendous social and political pressure. Wouldn't this be incredibly difficult?*

**A:** I totally agree. It's incredibly hard to go against the grain, but that is partly what our societies learn over time. Many things considered totally normal today would have been seen as heretical in 14th-century Europe. The notion that you can believe whatever you want was seen as a very, very dangerous thing. You were burned at the stake for even thinking about it. And yet that is now totally normal.

The idea of separation of powers is another example. Our societies do learn from the mistakes of the past. The question becomes, what systems do we need in place so that we do not make this mistake in the future? We've just made a horrendous mistake, probably similar in depth to the First World War, maybe worse. What do we do to prevent this kind of hysteria from taking us over again? What can we do in moments like these to have a more informed debate in the corridors of power as well as having an awareness of historical circumstances?

***Q:** What do you think? Will we learn from our mistakes?*

**A:** I think that we won't make this mistake again in the next 10 to 20 years because despite what the mainstream is shouting now, there is a gradual realization that we have really messed up. I think my views are no longer contrarian and I think you hear this in central banks, you hear this in the treasuries of all the major nation-states, and [from] the policy elite. You might not hear it from the academic economists, but definitely from the ones who are working close to the government because they are the custodians of the economy. They are used to thinking in terms of the future. What does it mean to have debt? What does it



mean now that we have so much unemployment? They're seeing this, and you do hear a lot of voices along that line.

Then, there are two questions. First, is there a political system that has been a shining example of what to do? The answer is no. All over the world, humanity has failed. The Chinese, who have this highly authoritarian system, were the first to have this type of tremendous lockdown and it cost them an awful lot. And then nearly all of Europe went for the lockdowns as well, despite all kinds of differences between, for example, the more egalitarian Netherlands or the more top-down U.K. They all made roughly the same choices. Sweden held out for a little bit, but even their population went along with this.

The United States is an interesting place because to a certain extent, they've been lucky in that this is one of those rare problems where it helps to be disorganized and it helps to have an incompetent federal government. I really think that they have been lucky.

*Q: I've been following the crisis for a couple of months now, and one of the issues I've been really struggling with is getting accurate or objective data because it seems that one can always find supporting evidence for whatever one believes. Some people say that only old people are affected, while others say that young people and children also have side effects. There are also competing numbers for the fatality rate, the economic cost of the shutdown, and other important metrics. At this point, do you still think it's possible to come up with objective projections and judgments on the issue? Where do you pick your facts when you justify your stances?*

**A:** There are two things to mention. One is the virology of the crisis. There are, of course, differences of opinions within the virologist, epidemiologist, and medical sciences. But I do think that these opinions will coalesce around a view as to what is most likely going on. It takes a while, but eventually, we will arrive at a consensus as to how dangerous this thing is, how it's transmitted, and what to do about it. You see that consensus breaking through America, such as the new consensus that the aerosols are a large problem and that face masks help in enclosed spaces. We didn't think that two months ago, and it's now becoming accepted wisdom.

What do you want? That is another thing. On the economics of this, I doubt we are going to see consensus in the academic literature anytime soon. I do think that there will be a consensus behind closed doors in the central banks that this was really a huge mistake. We cannot do this again. But there is so much academic ego now riding on not admitting to this mistake, particularly in the U.S., where basically all of the top economists who spoke out on this were nearly unanimously in favor of the lockdown. Of course, I think that they're probably wrong and it would be very hard to backtrack.

I think that economics has a deep problem now, which is that the usual way that economists have thought about cost-benefit analysis has been discarded. Historically, you first have to find proof before you take this kind of drastic action. Now, economists have

flipped, calling for drastic action without clear evidence, because that is what the virologists say we should do. That's such a strange mindset that they bought into. I think it's going to be a problem for American economics for a long time.

*Q: So economists should not make their policy recommendations purely based on scientific facts per se?*

**A:** I'm saying that they definitely should use scientific facts, but they shouldn't, as it were, outsource their own opinions. They should analyze the costs and benefits of various reactions and do a critical read of the medical literature. But the medical literature, even in this case, is only a small part of the whole issue because a large and a much bigger part of the issue is the social and economic cost of our reactions. Medics are amateurs in that. It's economists who are and should be the experts in that. What happens to whole economies if you lock them down and reduce trade? If you sever all of these supply chains? That's a question for the economists.

We've seen this several times in history. How much loneliness are you creating? How many suicides are you creating? What kind of effect does this have on the health system with lots of people not showing up for hospitals because they're too afraid? All of these questions do not belong with medics, they belong with us, and we have been totally missing in action. I despair at my brothers and sisters and others in our discipline who should have been at the forefront. We should have been saying that the loneliness we are creating is horrendous. This is going to have these consequences and costs, and this looks much bigger than the benefits on the Covid-19 side.

We've been totally like sheep in that sense. There has been an awful lot of academic writing, but it has not entered the public debate. What does it matter if, in two years from now, they're right or wrong? It's too late by then. They have to be engaged now and have to have a clear recommendation.

*Q: Social media is a powerful avenue for socialization. How do you feel about how Twitter and Facebook have handled this crisis?*

**A:** I'll point out something that other social scientists have pointed out—Facebook, Twitter, Instagram, and all these other social media platforms are a great device for conformism. They have made us more into a crowd, into a group thinking place. If this hysteria was anything, it was a huge crowd moment in history. This really is reminiscent of 1930s Europe. There are other examples of, of course, other crowd moments in other countries for different reasons, like the Cultural Revolution in China. It is that kind of feeling.

You can't escape the opinions of everybody else. You quickly all gel into a single point of view, and if you deviate ever so slightly, everybody falls over you. No real diversity of thought is possible anymore because you would just be lynched on this social media

platform. It's very, very clear that that is the role that these platforms play. They basically play the role of enforcing and making a group. That is a real lesson. It's very difficult to avoid in the future because it's the nature of that medium. But that is what it does. It creates great conformity and makes us into a crowd. And crowds, historically speaking, have done awful things.

One of the real lessons of the Second World War was that we should avoid crowd thinking. We should keep more diversity in our debates, in our societies, and we should have media of different points of view and all have them state-subsidized. That was part of the thinking in some places in Europe. We do not want everybody to agree with each other. That is not a good thing, because it just means we, again, become a singular group, which has very, very dangerous connotations if we all think in the wrong direction. It is very difficult to maintain any diversity of thought in an age of social media.

***Q:** Since the name of our show is *Policy Punchline*, I must ask, what is your punchline here?*

**A:** My punchline is that this is the first real crowd moment in the Western world since the 1930s. We haven't had this kind of crowd movement since fascism. It has the same kind of unthinking and following what everybody else is saying. Also, the fact that intellectuals use their smarts in order to rationalize what the group wants, rather than argue whether or not it makes sense, is reminiscent of fascism. There is also this kind of sacrificial element of the crowd, and this blanket-like obsessiveness, this not wanting to think of the wider things. Finally, there is a hunting down of dissidents, of people who disagree.

It has been fascinating. For instance, if I talk with many of my fellow academics who, normally speaking, are left-wing, and if I say to them that this crisis is killing millions of people in the poor world, their first reaction is to be dazed, and they can't believe it. They go through the usual stages of being anti-intellectual in which they don't want to know about the problem and [want to] enjoy the crowd moment. I have been baffled about the betrayal on the Left. It's really not good.

# Politics & History

Keith Whittington

Jacob Shapiro

Frances Lee

Melissa Reynolds

Merle Eisenberg

# 11

## A Libertarian Caught in a Pandemic

Keith Whittington  
April 20, 2020

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*The state has a role in the context of a public health crisis, and you should expect the state to intervene in society and restrict liberties in various ways. At the same time, you should always ask very tough questions of the state to make sure that the kinds of interventions they're adopting are actually justifiable and necessary under the circumstances.*

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— **policy punchline** by Keith Whittington

Keith Whittington is the William Nelson Cromwell Professor of Politics at Princeton University. He is the author of several books on constitutional theory, including “Political Foundations of Judicial Supremacy: The Presidency, the Supreme Court, and Constitutional Leadership in U.S. History.” He has published widely on American constitutional theory and development, federalism, judicial politics, and the presidency.

***Q:** You recently argued in an op-ed titled “Can You Be a Libertarian in a Pandemic?” that there are aspects of libertarianism that are still quite valid even during a pandemic. Could you discuss this idea, how you define libertarianism, and why you think it’s so important to talk about libertarianism during the Covid-19 pandemic?*

**A:** I was a little struck by how much public discourse there seemed to be coming from the political right with regards to the idea that libertarian principles might not apply in the context of a pandemic, or alternatively that those principles required absolute resistance to anything the government might do.

Likewise, from the political left, there seemed to be a set of arguments saying that no one can reasonably be libertarian in the context of a pandemic, and libertarianism as a political philosophy was therefore inherently flawed. Seemingly, both sides of that complaint were somewhat misguided and had misconceived foundations of libertarianism as well as how it might apply and occur in the current context.

The piece I wrote was concerned with sketching out the general underlying principles of a libertarian political philosophy. Such a philosophy emphasizes the limited role of the government in general, but also includes an emphasis on the idea that there are some things that a government was properly set up to do and certain kinds of tasks and occasions when you would expect to see the government take action.

I think public health crises are among those core situations, where even a libertarian would expect the government to take action. Moreover, it’s the kind of situation in which a more aggressive set of government actions are in fact called for, and, as a consequence, a set of restrictions on individual liberties might be called for. That idea was always implicit in a libertarian philosophy, except libertarians would emphasize that under normal circumstances, we shouldn’t see that kind of activist government and those kinds of restrictions on liberty.

We should also bear in mind that the coronavirus global pandemic is not normal circumstances. This is an extraordinary circumstance. It is exactly the kind of circumstance where we should expect to see a more active government, and libertarians should welcome and accept this.

***Q:** Outside of a pandemic, what would you expect a libertarian government to act like and, given that we are in a pandemic right now, what would the ideal version of a libertarian government look like to you?*

**A:** Libertarians, as is true with lots of political philosophies, represent a range of different views. Some are much more anarchic in their fundamental commitments and would really prefer to have no government at all. Others instead think that the scope of the state ought to be quite limited and should only be concerned with performing a set of minimal functions necessary in order to keep society up and running and to protect the rights and liberties of the individuals within that state.

At its core, that vision means enforcing criminal law and preserving minimal kinds of functions to act on what economists might call externalities, but the role of government in itself is relatively minimal. Libertarians then are antagonistic to an expansive state that, for example, redistributes resources to various members of society.

In general, libertarians are also quite skeptical about anything the government might do, including a lot of regulatory activity the government engages in, as libertarians tend to think that much of it is not, strictly speaking, very justifiable. As a consequence, they are naturally quite skeptical of occasions like this where the government becomes much more active and aggressive in what it's doing.

***Q:** It seems that government action in the context of the pandemic is quite different from other forms of government intervention that one might usually criticize, such as Alan Greenspan's attempt to control market fluctuations or America's ultra-interventionist policies in the Middle East. Would you say that the kind of government intervention we see today is justified during a crisis of this magnitude?*

**A:** Yes, I think so. Libertarians would say that even as a general matter, in crisis situations where new challenges arise, it should normally be the case that the government plays a role, even if it may be a relatively modest role. We might also expect civil society to be doing a lot of the work to respond to specific kinds of challenges.

I think the specific context of a public health crisis is exactly the kind of situation where libertarians ought to recognize that government has a role precisely because a threat of individuals who might spread infectious disease to others is an externality that would require collective action—such as a governmental response—to deal with.

A lot of what libertarians have been focused on throughout the 20th century has tended to take place in a context in which public health crises have been relatively minor. We are not very used to dealing with epidemics or public health emergencies, and as a consequence, these are unfamiliar situations and unfamiliar uses of government power.

At other points in American history, it would've been much more common to have seen quarantines and other similar kinds of actions. Fortunately, we have not had to deal with that very much over the last several decades, but as a consequence, it has put some pressure on the logic of our political philosophies and on our expectations about government behavior and how that applies in this relatively unusual situation.

***Q:** Even if you acknowledge that the government has a large role to play in a public health crisis like this, there might still be room for libertarian ideas to be productive. Can you elaborate on what kind of ideas we can borrow from libertarianism to benefit us in combating this public health crisis?*

**A:** Certainly, part of the libertarian orientation is to think that there are lots of things the government shouldn't be doing at all. The one question is: is this the kind of thing in which the government ought to be involved and active? Responding to epidemics is precisely the kind of context where, in fact, the government does have a role to play.

Additionally, libertarians are very skeptical about how the government develops its policies, what kinds of actions they engage in, and how those actions wind up getting implemented. In that context, I think a libertarian would argue that not only does their philosophy have potential utility in telling us whether or not government ought to do anything at all, but it also has utility in thinking about whether the particular steps the government is taking and the particular policies it's adopting are well-designed to address the particular situation at hand.

Libertarians worry that governments tend to be captured by special interests and, as a consequence, turn lots of policies toward benefiting well-situated interests rather than necessarily benefiting the public good. Libertarians want to make sure policies are actually in the genuine public interest and are actually helping to contribute to fighting an epidemic, rather than just fattening some people's wallets.

Likewise, they'd be very skeptical of restrictions on liberty and would want to ask hard questions: is this restriction really necessary for the goals that you're trying to serve? We ought to recognize that some kinds of restrictions on liberties are going to be necessary in these kinds of situations, but we also ought to be skeptical about what kinds of restrictions we're inviting and really push the government to defend why particular restrictions are necessary and how they contribute to dealing with the public health crises at hand.

***Q:** Do you think that there is a role for the private sector as well? Are there inefficiencies that have been created by the government in this crisis that the private sector could somehow improve on?*

**A:** There's a clear role for the private sector in this context. Lots of universities made the decision to shut down in the face of the epidemic for public health reasons long before any state government official stepped in and mandated it. Universities themselves were trying to make the calculation about what was going to be in the best interests of the students and took appropriate steps.

In addition, there's the uncoordinated response of private individuals, who responded to the rise of the epidemic by not going to restaurants and by implementing social distancing norms on their own. One thing we worry about is whether we've reached the optimal level of that kind of thing. As a result, on top of that, governments try to deal with the fact there may be some individuals who are not responding adequately.

In addition, we want to think about how the private sector has responded to the needs at the moment. President Trump has come under a lot of criticism for not using what were designed as wartime statutes to encourage and manage the production of goods that might be necessary for a war effort. There have been arguments that he ought



to deploy those kinds of legislative authorities in the current context in order to require manufacturers to produce goods that might be useful for medical personnel. The Trump administration has been somewhat reluctant to actually use these legal authorities.

A libertarian would ask whether it would be useful for the President to use those legislative authorities, or whether we would instead expect private industry to respond to the existing economic incentives. Lots of relatively idle manufacturing plants in the present moment could potentially see it in their own economic interest to produce medical equipment that might actually have an immediate market. In that scenario, you would want the government to get out of the way. Early on during this crisis, the CDC (Centers for Disease Control and Prevention) and the FDA (Food and Drug Administration) often put restrictions on how people could generate medical supplies, medical tests, and other things to respond to the epidemic, which might have slowed down the private sector response.

Libertarians would suggest that you have to reduce a lot of regulations. You have to get the government out the way so that the private sector can respond adequately to the present demands. Sometimes that may require coordination from the government in order to make that happen, but other times it requires the government to get out of the way. I think libertarians tend to lean on the get-out-of-the-way side, but they should also recognize there are occasions when it would actually be useful for the government to be involved as well.

***Q:** You've said that it's reasonable in this kind of crisis to put restrictions on individual liberty. At the same time, there are countries like Sweden who have kept things open and encouraged the public to stay home and practice social distancing. Some libertarians argue that rather than taking action, governments should try to persuade people to socially distance. Where do you stand on this matter?*

**A:** I think there are difficult policy questions as to the right measures to adopt in these circumstances and how to think about the costs and benefits of adopting the particular measures. One thing that's striking about the current pandemic is that it creates some unprecedented challenges for society and governments as to how to address it.

Unlike a lot of traditional public health crises that governments face, it's not so easy to identify infected individuals, for example, and to isolate them specifically in order to prevent them from infecting others. Instead, our testing isn't adequate enough to identify who's actually infected, and we have these long asymptomatic periods in which people are infectious without knowing it. That has spurred an unusual reaction by the government to then shut down the entire economy, as opposed to the more traditional approach of identifying the sick people and isolating them so they can't infect everybody else.

There are hard questions involved in trying to think about the costs and benefits of those kinds of things. Shutdowns are obviously a very big cost, but the hope is that there are real benefits as well, in addition to a lot of voluntary compliance. I think that some of what we've seen from governors requiring shutdowns is partially to encourage

public compliance. Part of what government does by issuing these orders is help persuade people to take this seriously and try to act on it. One of the reasonable critiques against the Trump administration, for example, is that they've been downplaying the threat for so long and discouraging people from taking voluntary actions.

That's the nature of our current situation, and especially this sweeping response that we have now. There is in fact no way for the government, whether it's federal, state, or local, to actually enforce the scope of these orders. There are not enough cops to actually force everybody to shelter in their houses and not go outside.

A crucial component of making this work is voluntary compliance. The government really needs people to take this seriously and, as a consequence, voluntarily comply with these orders. If the people stop complying en masse, it would be very difficult for the government to actually do very much about it. They can engage in some activity on the margins, like attacking businesses that try to reopen, but it's much harder to target individual people. Government must try to encourage people to take this very seriously, try to identify what the right steps are, and then try to incentivize people on the margins about how to behave.

You want government to be setting the right standards as to what makes sense. If governments are issuing orders that don't seem very reasonable and can't adequately explain why they're doing it, it may lead people to downplay the risk and discourage them from taking voluntary action. I think one concern is that the government overreacts, and people overreact in response to that overreaction by claiming the crisis has been overblown and doesn't need to be taken seriously.

Government has to think carefully about what the right balance is between trying to encourage people to take the crisis seriously and to be cautious without overplaying their hand, which can in turn lead to people ignoring what the government is trying to recommend.

*Q: If we look back on the history of how the federal government has reacted to the crisis, it seems that initially, the government struggled to come up with coherent communication strategies and even struggled to come up with accurate information for people. When it comes to individuals voluntarily complying, people might be consuming inaccurate information on social media and might really believe that they shouldn't wear masks. As a result, do you think that the libertarian reasoning to allow everybody to have this decentralized reaction mechanism to the crisis is somewhat utopian or unrealistic?*

**A:** I think that in the context of a public health crisis in particular, you don't want to rely strictly on voluntary compliance. People might generally underestimate the risk and, as a consequence, engage in more risky behavior than they really should. A libertarian might say that you ought to be reasonably tolerant of that assuming the only consequence is that they're going to make themselves sick and will only inconvenience themselves as a result of such a decision.

The more challenging aspect from a libertarian perspective is that they're not just going to make themselves sick but may infect others. If you have people who underestimate the risk, engage in risky behavior, become infected, and then go out and infect others, then other people are going to suffer the consequences of that behavior.

From a libertarian perspective, there's no reason to accept the idea that individuals can cause harm to others just because they're willing to accept risk in their own particular life. A lot of challenges for libertarians lie precisely in the context in which we imagine that individuals are going to be imposing harms on others through a consequence of their own particular activities. This pandemic is exactly one of those instances where we might imagine that individuals are going to be imposing harms.

Part of the challenge in this context is that it would be an easier call to make if we were confronting a set of known, infected individuals. Then, the concern is whether you should quarantine those individuals or allow them to go out and infect other people. I suspect there would be some who would be hostile even to quarantining obviously infected individuals, but that's a much easier call.

It's a trickier thing to say, "because we don't know who the infected individuals are, we're going to effectively quarantine everybody by having self-isolation that forces people to stay in their homes," because in that case you're encroaching on the liberty of an awful lot of people and you're encroaching on the liberty of a lot of people who are, in fact, themselves not yet dangerous to others. You're simply trying to anticipate the possibility that they're dangerous in order to minimize the risk down the road.

That's hard for people to get their heads around. I think it's philosophically justifiable, but it runs up against people's own instincts about how they ought to behave. As a consequence, it's hard to persuade people that those kinds of things are acceptable in general.

***Q:** In the United States, the response has been mostly state-driven as opposed to other countries where the response is almost unilaterally coming from the federal government, with some nuances, of course. Do you think that there is a precedent for more state-driven action and less federal government-driven action in the United States? Also, do you think that the state-driven model is more helpful in a very populous country like the United States rather than a federal model?*

**A:** I think some of that is contingent on our particular situation. The Trump administration has been somewhat surprising in some ways by not being willing to assume as much control as some other administrations might have. They've also been a little slow to respond to the situation in ways that some other administrations might not have been. Some of what we're seeing now is just a particular feature of the Trump administration and how they have chosen to react, and that has left more space for the states.

But I think it's intrinsic to our constitutional structure that states are going to take the leading role in this kind of context in general. Historically, constitutionally speaking, it was the states who generally had primary authority over public health. They were the ones

provided with the tools to address public health, which was not seen to be within the federal government's core set of responsibilities. Traditionally, it has been the case that most public health crises are localized, and responses to local public health crises are mostly state and local ones.

Part of what's unusual about our current situation is that it's a pandemic; it's a nationwide situation, at least to some degree. As a consequence, there's more natural room for the federal government to be involved. There are some very appropriate things for the federal government to be doing in the current context. Any kind of public health crisis concerning infectious diseases is necessarily, given our constitutional structure, going to leave lots of space for the states, and states are going to be very important in how you deal with it.

That being said, it's the nature of the decentralized, state-driven system that states will also come to different conclusions about how to deal with the crisis. Kansas may differ from New York in the level of severity of the threat it's confronting, and as a consequence, ought to respond somewhat differently. To some degree, we might think that some of that is misguided. Some states are going to be slow to respond, some are going to be faster to respond, some are going to have better solutions, and some are going to have worse solutions. There are upsides and downsides to that in any context, and part of the downside of it in the present context is that states that are slow or unprepared create risks for everyone else. They may make the virus harder to contain in various ways.

On the other hand, the upside to that decentralized system is if the Trump administration is acting too slow or not being adequate in its own response, then states can adopt better responses than the federal government. The downside of nationalization and centralization on that front is a one-size-fits-all solution.

There are costs and benefits to federalism. In most public health contexts, it's mostly beneficial. But in the context of a nationwide pandemic and a global pandemic, it does put particular pressure on the way the American constitutional system is structured and where most of authority lies for dealing with a public health crisis in the United States.

***Q:** Some would argue that the coronavirus crisis is actually exposing underlying weaknesses that only nationwide, socialist policies could address, such as universal healthcare. What are your thoughts on those issues?*

**A:** I think there are a couple of different issues to think about in that specific context. With regard to relief packages, we might think that only the federal government has the resources to dedicate to such a large-scale relief effort that people need in order to make a stay-at-home order sustainable. Individual states could not themselves provide the kind of financial resources that would be necessary in order to persuade people that they ought to stay at home rather than try to work.

We've encountered that all throughout American history. Some kinds of particularly large financial hits really need a federal response in order to address them. You

cannot rely upon states and localities to come up with the right response for this. From very early in American history we figured that out. Events such as natural disasters that occurred in states and localities simply overwhelmed these small governments and prompted the need for federal help. We very quickly decided that it is an appropriate thing for the federal government to do.

Another aspect is more specifically related to public health. Certainly, the pandemic emphasizes some features of government supported healthcare that would be to our collective best interest. There are sometimes externalities from individuals getting sick, and libertarians ought to worry about those externalities, which opens the door to some very specific interventions.

The classic argument is thinking about vaccination: do you mandate vaccination? Do you subsidize vaccination? Or, is it up to individuals to make their own decisions without any government influence? As soon as people figured out vaccination, government started to believe it was something worth mandating in order to prevent people who are sick from infecting other people.

It's a version of the quarantine problem. Such a circumstance raises the hackles of lots of libertarians because it's also an infringement on liberty to force people to be vaccinated. Some people don't want to be vaccinated for all kinds of reasons—whether it be for religious objections or health concerns.

A lot of those health concerns for vaccines in the present context are radically overstated, but early in American history when vaccinations were first coming online, those health concerns were very real. People got sick and died from vaccines on a regular basis. There was a question for the society as a whole: are we okay with some people dying as a consequence of getting vaccines in order to save a larger set of people from dying and to prevent the spread of disease? That's a tough libertarian question and a tough political question in general. Eventually, we decided that it would be appropriate to require vaccination for people.

In the current context, we should imagine that we'd certainly want social support—that is to say governmental subsidies for testing for the current disease. We don't want individuals making the calculation as to whether or not they will get tested because they might not be able to afford it or because they don't want to spend the money. Collectively, we have an interest in quarantining and isolating people who are sick. We also have an interest in figuring out whether or not they're sick, and that may require government support for providing that particular testing regime.

Moreover, it may support the idea that we ought to have government support for certain kinds of treatment as well because we might also see people unwilling to be hospitalized due to healthcare costs. Those decisions might actually contribute then to the spread of disease, and we want to prevent that by trying to have a more collective intervention that does not incentivize individuals to run around sick. We want to incentivize them to go to the doctor, so they don't spread disease.

In the context of infectious disease, in particular, it does suggest that there is more of a collective role to be played and more of a government-mandated role as well

as a supporting role to be played in trying to address some of these particular issues. The question then becomes: how big is that scope going to be? It may not lead to universal health care per se, but it may get you some very specific interventions that you might think are particularly necessary in this kind of context.

***Q:** There are those on the left who are using this pandemic as a cautionary example in favor of universal healthcare. Many argue that the public health system in America was not well-equipped to deal with this kind of crisis, and that's why we are seeing a delayed response. Furthermore, a general mistrust of the state and of the government in dealing with health and in dealing with general matters of public welfare might have contributed to a poor response to the virus in the U.S. What do you make of these ideas? Do you think that the comparatively more libertarian ethos of America, especially compared to European and Asian countries, hurt America's ability to respond in such nation-wide crises?*

**A:** I'm a little skeptical in thinking that the unique features of the American political culture made much difference in this context. An awful lot of countries seem to have done poorly on this front. The U.S. is not unique in this suffering. You can look across a range of countries, examining very different cultures and very different political setups, and they're all in the same mess.

I'm skeptical of the idea that these particular decisions are unique to, say, the Trump administration, and I am also a little skeptical in thinking there's something particular about American culture or American political institutions that made us particularly vulnerable in this context. Certainly, I think we could have done a better job than we did, though.

The question is, what will the consequences be down the road, what lessons will we learn from this, what kinds of policies will we adopt moving forward, and what kinds of institutions will we adopt? The countries that have responded very well in this context—countries like South Korea, Taiwan, and Singapore, for example—had very serious public health crises during the SARS epidemic several years ago and learned lessons from it. As a consequence, they adopted a whole public health regime that was designed to deal with epidemics, that then came online very quickly in the current context and was able to successfully deal with it.

The U.S. used to have that, too, in order to deal with particular kinds of epidemics. When the U.S. was routinely dealing with smallpox epidemics, cholera epidemics, and other kinds of viral outbreaks including various livestock epidemics, we created a set of institutions and policies and laws surrounding our ability to respond precisely to those kinds of public health crises. We gradually dismantled them as those kind of public health crises went away, and we solved them in various different ways.

What's different about our current situation is the U.S. was not prepared for this kind of epidemic. We probably should have been, and we should have drawn better lessons

from the past, but we didn't. One question going forward is: to what degree do we actually learn lessons from this experience and then set up the kinds of institutions and policies that are going to be necessary? I think then the particular future of the American political culture and political system are going to come into play in thinking about how well we do that.

It would not surprise me if there is a lot of resistance to the kind of policies that would actually be necessary to respond effectively. For example, South Korea, Taiwan, and Singapore have achieved very aggressive testing and tracing in order to then identify and quarantine infected individuals. It's the classic thing to do with public health crises, but it does require a kind of intervention that does constrain individual liberty in a way that Americans are not used to. Americans were more used to it at earlier points in our history when we had epidemics all the time, but we're just not used to it now. It will take a big political challenge, actually, to persuade people that these are acceptable moves.

From a libertarian perspective, the challenge is thinking about how you empower the state to do the kind of things that it needs to do in this context without empowering it to do too much. It's the same kind of calculations and the same kind of concerns that surrounded the War on Terror, for example. There are genuine concerns that some kind of response is necessary, but that such a response is going to include, for example, lots of surveillance of individuals in order to try to protect them from terrorist threats.

The questions are: When do you go too far? What's actually necessary? Which restrictions are more restrictive rather than justifiable given the nature of the threat? We're going to go through a lot of the same debates that we did after 9/11, where we debate how to balance out a collective security need with the interventions on individual liberty that are part of that. I don't know how we're going to come out on that front. I suspect there will be resistance to doing everything that might be reasonable from a public health perspective. And some of that's going to be a function of our particular political culture, but some other things as well.

***Q:** Historically, wars and war-like events have led to expansion of government. 9/11, for example, led to the expansion of surveillance mechanisms and national security measures. One could make the argument that, whereas the expansion of government surveillance after 9/11 was a violation of civil liberties, the current crisis could lead to positive developments like broader health insurance coverage. Doesn't that seem like a healthier, better version of interventionism?*

**A:** There are good versions and bad versions from that perspective. From a libertarian perspective, the bad versions would actually be if this led to a call for universal healthcare. From their perspective, they would say, the more limited, the more targeted the intervention is, the better it is and the more easily justifiable it is.

Libertarians might accept the idea that there is a collective interest in preventing the spread of infectious diseases, but there is not a collective interest in, for example, preventing

you from smoking and dealing with the health consequences associated with smoking. From that perspective, libertarians would argue that the further a response is from protecting us from this particular threat, the less justifiable it is.

As a pure political matter for libertarians, I think that the more they hear the suggestion of instituting a panoply of policies that need to be put in place as a consequence of this, the more they're going to be resistant to any of them. The challenge is to try to persuade them that there's a set of policies that are in fact justifiable here, and you ought to support those policies, even if you're going to resist other kinds of policies. If we get those and resist the tendency to expand others, we should all take that as a win. I think there's going to be some who are going to certainly respond by saying that any kind of policy that gets adopted is going to be a loss, and I think that would ultimately be a serious mistake.

***Q:** What are some “interventionist” policies that you would be happy to see and others that you would feel are more dangerous, assuming that this pandemic is leading to an inevitable expansion of the state?*

**A:** I think mandatory vaccines are going to certainly come out of this once we have a vaccine that can address this particular issue. There will undoubtedly be a debate about whether or not the vaccine ought to be mandatory. I think it clearly should. We mandate lots of other vaccines and for the same kinds of reasons.

Ultimately, once we have reliable testing to be done, there are going to be questions about how widespread that testing ought to be, and under what circumstances should that testing be mandatory. I think the answer is going to be that it be relatively mandatory across a relatively wide range of contexts. Certainly, I think people are going to resist that.

I actually do think that there's a rationale as well for thinking about social provision of treatment for some of these contexts. For example, part of the expectation of state-mandated quarantine was that the state would then provide healthcare to those people in order to treat them, in order to allow them to then return to society. The government did provide healthcare in this specific context precisely because the state had a responsibility at the scene to provide healthcare, both to prevent the infection and to deal with the fact that you are confining somebody. The state had an obligation to do what it could in order to allow somebody to come out of the confinement, and that meant treating them. However, not even in that context is the government expected to provide healthcare broadly.

We haven't quarantined people very much for quite a long time, but it is a narrow exception to this broader understanding about how much healthcare should the government provide. This is a context in which government traditionally did provide healthcare to people. Of course, then, it was healthcare in a very limited, specific, targeted way. I think there's justification for thinking similarly in this kind of context as well. Part of how you contain infectious diseases is by treating those who are sick, so they don't continue to spread the disease. Even those who are very skeptical about government and social interventions ought to be supportive of that kind of very narrow intervention.



The question is: what more comes of it? Masking is an interesting question. I do think it will be one of the issues that will be on the table. I'd be surprised if there's a lot of pressure for a government mandate on masking, for example, but I do think our social norms might shift a little bit on this front.

One of the questions from a government regulation perspective, which is true about thinking about infectious diseases more generally and what kinds of measures you take in response to them, is: what counts as a dangerous disease? Lots of public health statutes that are on the books at the state and federal level both specify and empower government officials or public health officers to make reasonable regulations to address dangerous infectious diseases, but they don't specify what counts as a dangerous infectious disease. Then, when a particular epidemic breaks out, and public health officials respond to it, they simply declare that a disease counts as a dangerous disease without a legislature signing off on that.

There are difficult decisions to be made in any particular context about whether a virus is a disease dangerous enough to justify this kind of intervention. As a point aside, as we compare the coronavirus to the flu, we've accepted the notion that the flu is not a dangerous disease. Lots of people do die from it, but it's not dangerous in the sense that we don't quarantine people when they have the flu. We don't invoke all the normal things that go along with a public health crisis in the context of flu. If you categorize the coronavirus like the flu, then you shouldn't respond to it in the same way that you respond to something that you would categorize like smallpox or cholera, which we do treat differently.

So, is Covid-19 more like smallpox or more like flu? Then, the challenge becomes: how far do the goalposts move on this kind of stuff? Do we require masking during flu season? Lots of other people will react negatively to the idea that there's going to be mandatory masking—and it would be interesting whether or not we actually get to a point where we make that shift in culture.

Let's remember, for example, when mandatory seatbelt laws came in to place. Mandatory seatbelt laws are very interesting in the American context because the requirement that you wear seat belts in a car previously didn't exist. The argument is a weird one from the libertarian perspective because not wearing a seat belt is only damaging to yourself. If you go through the windshield of your car in a car accident, you're the one that gets hurt.

The argument then became, "well, then your kids will be without a father if you go through the windshield of your car." It's not a traditional public health kind of argument. Nonetheless, the argument succeeded. We wound up adopting mandatory seat belt laws, and it was extraordinarily controversial. At the time I was a teenager, so I resisted wearing seat belts for as long as possible, despite the government mandate. But eventually, that became the norm. People got used to the idea of wearing seat belts, and seat belts got built in automatically to how cars are manufactured, so you couldn't escape the fact that seat belts would deploy when you got into a car.

One question is whether we come out on the other side of this pandemic in the way that we've done with mandatory seatbelts. Do we shift cultural norms where people just accept the idea that masking is a pretty normal thing to do, much like wearing

a seatbelt? To an older generation, that will seem crazy, but to a younger generation who's used to it, it will seem much more natural. I don't know yet whether 10 years from now we will think of masking the way we now tend to think of mandatory seatbelts.

*Q: [Jokingly] So we just have to keep restricting people's freedom until their kids get used to it?*

A: Well, that is the way it works. There is a social adjustment that gets made to restrictions on liberty. From a libertarian perspective, that's exactly what you worry about: that people will accept things that you think are radically coercive, arbitrary, and tyrannous. Yet your kids will accept them completely—at least at some point, maybe not when they're teenagers.

Those who are more sympathetic to those kinds of restrictions would say, “well, in the long run people get used to it, and if you get used to it, then what's the big deal? We ought to accept it.” We see that sometimes these debates don't really go away. Given the seatbelt example, it persisted because, one, it's not very intrusive, and two, it is automated by the fact that it's built into cars such that you are passively restrained. Furthermore, it doesn't require active measures on your part necessarily, which makes it much easier.

Vaccinations, though, are a constant source of friction precisely because it's not ever going to be passive in that way. People have to voluntarily get themselves vaccinated. As a consequence, there will be some people who always resist vaccines and complain about it. Masking is going to look more like that in that sense.

*Q: There have been a lot of protests calling for an end to stay-at-home orders. You've made the argument many times now that the government has the ability in these kinds of crises—and we should accept that they have the ability—to infringe on people's personal liberty. That being said, do you think that the arguments made by the protesters have merit, and how would you respond to them?*

A: I think the protests themselves seem a little crazy. I'm not sure the particulars of the protesters' arguments make sense. If you look at the signs being waved there, there's a lot of wackiness going on with the protests. We should recognize that the protest is a very small set of people, which is the nature of protests in general.

The challenge is to figure out how representative a protest is of any kind of larger constituency. All the survey research suggests that, in fact, the vast majority of Americans are totally supportive of the kinds of restrictions that are currently in place, and so the number of people currently antagonistic to these policies is actually quite small. Now, that may change because the facts on the ground may change, in part because these protests are getting more attention to the resistance, but right now, I think the protesters are an outlier in this regard.

I think that the questions are what are they protesting about exactly, and what is the nature of the claim? There are extreme versions of this. Unfortunately, I think these protesters are reflecting the extreme version of saying the whole thing's a hoax and we shouldn't restrict people at all based on the kinds of challenges being posed by this virus. I think that's an extreme view and a wrong view.

The narrower view and more targeted view that's also reflected in some of these protests is thinking about how much the government should restrict people's ability to, for example, go to church services. Some churches have resorted to conducting services while maintaining social distances the best they can, such as having services at drive-in movie theaters outdoors, but then the government gives everybody tickets for breaking orders on this front.

People quite reasonably look at these kinds of circumstances and argue that there's no actual reasonable risk of infection in this context. People are doing this very safely, but the government is telling them that they can't continue. It's an overreach on the government's part. It's trying to impose arbitrary and unreasonable restrictions rather than restrictions that are actually justifiable.

I think some of the debate now about whether to open closed public beaches and public parks is part of that issue as well. You can imagine some of the contexts in which public parks are in fact much too crowded, but there are also lots of contexts in which people in fact are pretty spread out in outdoor places. There's not a lot of evidence that people are actually not at much risk of infecting anybody in that context, in which you might think the government is actually overreaching, and they ought to draw back.

There are lots of debates along the margins of government policies that are provoking some of these protests and some of those are actually reasonable arguments to be had. They're justifiable arguments, and government ought to be capable of explaining why they're adopting particular kinds of policies.

The extreme versions of the protests that completely discredit the virus are just wrong, both as a matter of substance about the threat facing us, but also wrong as a matter of principle. I'm trying to think about what the underlying philosophy ought to be about what kinds of freedoms we ought to have and how we should think about them. That's why I wrote that op-ed piece in the first place. From the perspective of those who are very worried about having maximum freedom in this society and most limited government possible, what are the right principles that ought to guide us in this situation?

I don't think the right principles that ought to guide us in this situation, from that perspective, lead us to call for no restrictions and for everybody to go about their business just like normal. Even from that very small government or maximum freedom perspective, the right principle is to argue that this is a time when government ought to be restricting your freedom in various ways, and we ought to accept that. That piece is partially designed to try to appeal precisely to the kind of people who are instigating the protests and showing up in the state capitols.

***Q:** Your commentary appeared in *The Guardian*, in an article titled “Trump v. the State: How the President is Remaking the Government in His Image,” in which you address Jared Kushner’s statements that masks are owned by the government rather than the states. Could you elaborate more on your ideas with regard to this statement?*

**A:** The Trump administration is very confused about the scope of his own legal authority in these contexts. It is not totally unusual for the Trump administration, unfortunately, and it is also not uncommon for President Trump in particular, to say things that then might have just been ignored by the administration, and not actually followed through on. On occasion, though, he’ll say things for which the administration then attempts to generate a legal explanation as to the basis of what he’s claiming.

On this front, the president is on very thin constitutional ice. Certainly, the particular claim that Jared Kushner made about the nature of the national stockpile and whether or not it should be released to the governors doesn’t make any sense at all with regard to the nature of the federal law and why this stockpile of equipment exists. It exists precisely in order to distribute it to states in need.

The more recent claim of President Trump’s—that he has total authority to tell the governors when they should lift their lockdown orders—is just completely wrong. These are independent decisions made by governors on the basis of their own state’s constitutional and legislative authority. They do not rely upon the federal government’s authority in order to make those claims in the program, and the federal government has no authority to override them on those claims.

There is some space, potentially, for the federal government to make some regulatory policy that would be inconsistent with some of the state policies on this front. I think it requires new congressional statutes in order to actually get there, although there are some statutes on the book that might empower the executive branch to make some rulings on its own.

Fundamentally, this is, from a constitutional perspective, primarily a state and local issue. State and local bodies have independent authority to make these determinations. The President has very little say. President Trump in particular likes to position himself as having vast legal authority and being able to do whatever he wants, but this is just one of those areas where he doesn’t.

***Q:** There has been some talk of relating coronavirus to climate change. The analog there is that climate change, like the coronavirus, is a worldwide global crisis, and it’s time-sensitive. A lot of people argue that governments must combat climate change in the same manner they have combated the coronavirus: by acting quickly and decisively in what we would consider the common interest. Do you think we need to become more comfortable with government power and government action in order to combat climate change? Do you think that the coronavirus is in some ways a preview of the imminent government responses to the climate crises?*

**A:** I think there's clearly a governmental role in the context of climate change in particular. The details of what that role looks like are complicated and probably not working at the moment. I certainly have no real expertise in thinking about the details of what response is going to be necessary in that context.

I'm a little skeptical thinking that this crisis sets the stage for thinking about that crisis. It may well be the entry point for more government activity and more interventionist government in various ways, including ways that are particularly relevant for climate change.

In the case of climate change, I think you need an international response in particular. It puts particular pressure on our ability to cooperate internationally to generate responses. In the case of the coronavirus, some more international activity and inter-governmental cooperation would be helpful in thinking about future pandemics and preventing them just like it would be helpful in the context of climate change. We're seeing some of the problems of doing that in this context.

In some ways, I think this crisis will also highlight the same things that will make it difficult to respond to climate change. For example, we have already seen the World Health Organization (WHO) had a hard time dealing with China in the context of the origins of this pandemic. As a consequence, lots of people were distrustful of that particular international organization. The WHO has a hard time because they're partially dependent on individual nation-states. It's hard for the WHO to do their job without the cooperation of China, so they have to win the cooperation of China.

However, this in turn limits and undermines the ability of the WHO to do the kind of job they're supposed to be doing. As a consequence, people are now very skeptical about the WHO and its role within this current context. That's going to be the story in any kind of effort at international cooperation or with international governmental bodies: there is a risk of being captured by nation states who have their own particular self-interests. The issue here is that these interests are sometimes inconsistent with global collective interests. That will be a problem in this context, just like it's a problem in the context of climate change.

There are also similarities in that people disagree on the best policy response. One kind of response people are now having to this pandemic threat is whether we should invest more in thinking about tracking and tracing. Also, should we think about global supply chains and whether or not we should be so reliant on China? Should we impose more protections such as trade barriers in order to cut off China? Should we be hostile and try to blame them specifically for these epidemics?

There's going to be a lot of political pressure to try to isolate China in general and really blame them. That's one kind of policy response to our present situation. It requires a lot of government intervention in order to get that policy response. I think it's not a good policy response, but it's a nationalistic one, rather than an international one. It's a withdrawal from the international community rather than engagement with the international community.

In thinking about the lessons of that for the climate crisis, it's a reminder of the fact that even if people observe the same kinds of threats and agree that there's a problem, they can come to very different conclusions about the best way of addressing those problems.

***Q:** It seems that in the contexts of both climate change and this pandemic, global coordination is necessary. In that sense, it sounds like you are more pessimistic than optimistic?*

**A:** I've been in a very pessimistic mood lately, and for the past several years. I don't feel good about our politics in this regard, both domestically and globally. You need a lot of international cooperation in order to contain the spread of this disease and minimize the nature of its future return.

And I think there will be flare ups that occur even after we get through this immediate moment. The question is: how do you manage those flare ups down the road? That will require a lot of international cooperation. International cooperation is always difficult.

There are a lot of difficulties associated with what the right policies are going to be here. There's going to be international cooperation necessary in order to think about testing and travel issues, and the much harder aspect is to think about international cooperation in terms of what the right kind of regulatory regime is for dealing with the local environment.

We see a version of that in the context of the United States. Everybody is freaking out about opening up the Florida beaches, because there is the fear that they will spread it to the rest of country again. The exact same dynamic can occur on the international stage as well, where some country decides to open back up and be very loose, which then prompts the worry that it's going to re-infect the world. I think it will be intrinsically extraordinarily difficult to get countries on the same page about how to have those kinds of very difficult and comprehensive domestic responses to this pandemic.

***Q:** I guess that's why in The Guardian article, there's a section called "lip service to federalism," in which you were quoted "I'd be surprised if what we're seeing now results in a substantial permanent change in the relationship between the states and the federal government." Do you doubt that any meaningful change could really come out of this this crisis on a political level?*

**A:** I am more optimistic that there will be some changes. I am pessimistic about the scope of those changes. I'd be surprised that we don't do anything, but I also wouldn't be surprised if we get a lot of things that are not very useful.

I'm hopeful we'll get something in place in terms of vaccination and testing regimes, but I'm a little more skeptical whether we can set up the scope of testing and tracking that actually would be to fully necessary to fully contain this virus.

*Q: You don't think there's going to be like a long-term change in the political consciousness or something like that?*

**A:** Let's hope not. I'm worried that if we get to change something in the long-term consciousness, it will likely be something very bad. From my perspective, both on the political left and right, we're seeing the kinds of responses and calls for dramatic changes in policy that I find very unattractive and not well justified by the current situation. So, I think it's at least as likely that we get a set of bad policies coming out of this pandemic as a set of good policies. My hope is just we get some good policy to balance all the bad ones and maybe minimize how many bad ones we get.

*Q: Before we end the interview, I would love to just to hear a little bit more of your thoughts on why you've recently become a pessimist. Very rarely do we have a guest on our show publicly admitting that he or she is a pessimist. Everyone says, "I'm an inherently optimistic person." Oxford philosophy professor Toby Ord, who is central to the effective altruism movement, said there is a one in six chance that humanity would go into extinction in the next 100 years based on a series of probability calculations he did, so he's certainly not very optimistic in that sense.*

**A:** I'm not that pessimist, thinking that we're likely to go into extinction. On the other hand, I'm not necessarily very optimistic that we can actually get our political act together and start making good collective decisions as a consequence of this pandemic.

There is an intrinsically optimistic quality to some aspects of being an academic, I think. That was certainly reflected in how I thought about campus free speech issues, which I wrote about a few years ago. I went into that process being quite a pessimist about where I thought we were given lots of threats to free speech and critical inquiry on college campuses. But I came out being somewhat optimistic. Through education and talking it through, we can actually come to a better set of agreements on the principles, policies, and practices to improve campus free speech.

It's the nature of an educator that you hope that you can persuade people and people will learn and come to better solutions from your perspective. This pandemic is not one of those cases, though. It is not going to be a function of persuading people on university campuses to a better set of principles and practices. This is a question of coming up with a set of policies that will intrude on people's deep interests and will overlap with a set of existing political interests and structures that incentivize people not to come to those conclusions.

These are intrinsically difficult public policy problems, so it will already be hard to come up with the right answers. In addition, it would also require the kind of political acts that will be very tough to do. One reason why I've been relatively pessimistic about politics in recent years is just the kind of political forces that seem dominant right now. From my perspective, they are not very attractive or efficacious political forces. So, in lots of ways,

politics seems to be going on the wrong track, and our response to this pandemic is just one further example of it.

***Q:** The name of our show is *Policy Punchline*, so I have to ask you at the end—what is the punchline here?*

**A:** The state has a role in the context of a public health crisis, and you should expect the state to intervene in society and restrict liberties in various ways. At the same time, you should always ask very tough questions of the state to make sure that the kinds of interventions they're adopting are actually justifiable and necessary under the circumstances.



# 12

## Misinformation Narratives about Covid-19 and the Real Problems We Have to Worry About

Jacob Shapiro  
April 23, 2020

“ *The really interesting questions for policy are not around the Covid-19 response, since the path we’ve chosen is not going to change significantly. Instead, we need to think hard about what we are going to do coming out of the pandemic in order to recover and help those who are most harmed. That’s where hard thinking can make a difference.*

”

— **policy punchline** by Jacob Shapiro

Jacob Shapiro is a Professor of Politics and International Affairs at Princeton University and directs the Empirical Studies of Conflict Project, a multi-university consortium that compiles and analyzes micro-level data on politically motivated violence in countries around the world. His research covers conflict, economic development, and security policy.

**Q:** *In your recent op-ed, “Coronavirus: Don’t Forget About the Poor Kids,” you wrote how coronavirus is accelerating educational inequality, which is just one set of societal imbalances that the virus has revealed. Why don’t we start by asking you to explain some of the central ideas you hope to convey?*

**A:** The op-ed stemmed from my frustration in the early days of the pandemic when it was very clear that social distancing policies and school closures were going to have wildly disparate impacts. The kids who have comfortable places in the house to study, parents who are attentive to their education, and awesome broadband Internet will not have their education set back.

However, kids who do not have these privileges will face massive educational setbacks. Worse, if someone in the family is abusive or if there are other unstable elements in the homes, the kids would essentially be losing their safe spaces in school that gave them an opportunity to thrive. They are going to be set on a path from which they will never recover.

In the early days of the pandemic, nobody was talking about this. The op-ed tried to bring more attention to this issue that was not discussed early in the crisis or featured front and center in the relief efforts. My co-author Austin Wright and I felt quite strongly about this issue. For Austin, it’s personal because he came from one of those homes and could directly relate what would’ve meant to him had he been taken out of his middle school for months.

**Q:** *You propose widely distributing electronic tablets so that children use the technology required for them to continue their education remotely. Do distribution issues or poor internet access concern you?*

**A:** These issues are entirely solvable. For almost everyone who’s on national school lunch programs, the local school districts have their home addresses and contact information. Internet service providers could be subsidized to go to all of those homes and to deploy broadband internet. Pollsters and survey companies provide people with internet access all the time when they want to get representative samples of the U.S. Why aren’t we doing that now?

With regards to devices, there are surely some supply chain issues involved, but for schools that already have devices in the school, the issue is insurance. If schools send a device home and something happens to it, how do they make up their losses? This is something that could be changed with policy, but we’re not seeing bills that include subsidies for insurance to school districts so that they can send the devices home, for example.

*Q: Some argue that schools should not pursue online education unless all students have access to it, since it would disadvantage poorer students without access to the technologies needed for online education. Do you think we should suspend education unless everyone has equal access?*

**A:** I think that's total nonsense. It's a strawman problem in two senses. First, it's not going to happen. Second, the answer should not "let's stop educating everyone," but should be "let's figure out how to help the people who are relatively disadvantaged." We don't say that we shouldn't give anyone medical services if not everyone has access to high-end medical services. Instead, we expand health insurance access, train better doctors, and so on—so that more people can access high-quality primary care. So, I don't see why we should say this for education.

The more important questions are: How do we make it easy for localities to get creative in order to make sure children being left behind are minimally harmed? More importantly, how do we direct resources to those who are relatively disadvantaged when school comes back in session? We need to think about subsidizing summer programs and special after-school programs, as well as deploying mental health resources already in place. While some school districts are working on this, many are failing. We are not hearing anything from the Department of Education and that is a tragedy.

*Q: What kinds of policies would ensure that homes are safe spaces for children, given that we are reporting higher rates of domestic violence, even only one month into stay-at-home orders?*

**A:** I am not an education specialist, so I don't know what the right answer is. I suspect we have already missed the boat on the imposition of a lot of that harm. A lot of the effort is going to have to focus resources on those who are most harmed, which is something we should be planning for now. We need to think about what turbulent home environments mean for school staffing, mental health requirements, and criteria that determine access to different services. There are many programs that are not currently means-tested that should maybe be means-tested going forward, at least for a period of time after the pandemic passes.

*Q: Do you think that the pandemic era has the potential to generate realistic policy solutions that will be able to close the education gap that existed before the pandemic?*

**A:** My hope is that this period can create a greater sense of solidarity, shared responsibility, and community. The response will likely depend a lot on how seriously certain places have

been impacted by the coronavirus. For example, I would expect that in New York state, where many communities have been hit really hard and realize the importance of community response as a result, we will see more moves relative to states that have not been hit as hard.

Hopefully, this crisis will also reinforce the importance of competence in government. There has been a long-running trend towards the devaluation of expertise and experience. We have been moving away from thinking about the nuts and bolts that make institutions work in favor of superficial political issues. The pandemic might move people back in the other direction. We're now seeing the consequences of not staffing federal government organizations.

The main challenge for many universities is that the flow of foreign students is a key funding source. Many colleges are going to have less revenue for a number of years going forward until the flow of foreign students rises again. The relative attractiveness of the U.S. as a destination for foreign students will have been harmed by the poor quality of our response to Covid-19. Many universities will have fewer high-profitability students and less revenue with which to subsidize the other students. Services to people from underprivileged backgrounds and difficult homes are going to be scarcer coming out of the pandemic than they were going in.

**Q:** *What are your thoughts on the \$9 million of federal funding that Harvard University received, which has stirred a lot of controversies?*

**A:** I think worrying about the \$9 million that might go to Harvard is a really silly thing for people to be spending time on. Right now, almost 15 percent of the Americans who were working at the start of March filed for unemployment. I want to know what we are going to do to make it easy for those people to get back into their jobs when the economy opens up. What are we doing to use DPA (Defense Production Administration) and other federal government authorities? What are we doing to increase the manpower at SBA (Small Business Administration) so that they can get the money out the door fast and minimize fraud? Those are the things I'm worried about, not whether some rich institutions like Harvard get things they're not entitled to.

Hopefully, this crisis will also reinforce the importance of competence in government. There has been a long-run trend towards denigrating the value of expertise and experience. We're moving away from thinking about the nuts and bolts that make institutions work in favor of superficial political issues.

We're now seeing the consequences of not staffing federal government organizations and years of failure to plan and maintain systems and stockpile resources. The failures of the current administration are legion, but the prior administration also failed in important respects, neglecting to replenish some of the stockpiles that were drawn down with the avian flu epidemic and failing to update, maintain, and adequately fund basic

research needs, for example. While we can lay the blame on Washington, the important thing to think about going forward is what should be done differently in the future.

People who are currently out of work are now shaping how we are going to help the people who have been differentially harmed. For example, put furloughed teachers to work developing multi-track lesson plans that will help students who fall half a grade-level behind get back on pace. Think about how Germany in the 1960s put parts of the country in a completely different school calendar for years to get them caught up. There are all kinds of innovations like that that we could be thinking about the development of which would ensure that the education sector stays vibrant and active while students are stuck at home.

***Q:** Since most of your research focuses on international relations, what do you believe to be the global consequences of the American national response so far?*

**A:** With regards to international relations, let's not lose sight of the 10-15 year tragedy that our response to the pandemic has created for American influence in the world. Step back to March 1st and imagine a world in which the President had invoked DPA to use the U.S., the world's largest economy, to produce PPE (personal protective equipment) for the world; lead in the production of drugs; identify potential supply chain shortfalls as different countries fell off the production process due to Covid-related movement restrictions; and, target our industry to address those issues.

That's a completely different world in five years than the one we're moving to after we dropped funding for WHO and ostentatiously shut borders. There's a real big-picture, geopolitical tragedy in terms of the influence of democracies on the world that my children will grow up in, though much of my thinking now is speculative.

***Q:** I know that you have been researching the spread of misinformation. Would you mind just telling us about the range of misinformation that you have uncovered?*

**A:** On the Covid-19 misinformation, by mid-March, we had been doing work on disinformation campaigns around political influence for about 18 months. We try to catalog the campaigns going on all around the world and build some technologies that would help track and understand them, in order to give people a sense of the volume and effort behind different campaigns. In the course of doing that, we engaged a whole group of undergraduates at Princeton and other universities around coding information on those misinformation campaigns.

In mid-March, our colleagues from Microsoft Research reached out to us and asked if there are things they should be thinking about as they started to work on Covid-related disinformation research. We decided very quickly to start trying to track the narratives

that were out there. When we started, we did not really have a really clear use for it. We just thought it would be useful and we did not see anyone else doing it. We also wanted to start pulling together a list of resources that people could use if they wanted to do research on the process. It was partly a way to just like do something useful as the pandemic was unfolding and partly a way to think about how to give students an opportunity to contribute to the response.

It became clear very quickly that there was a wide variety of misinformation out there around the pandemic. There were good reasons to be concerned that this misinformation could harm the public health response. The first step was giving people some understanding of the range of narratives, which is what we set out to create. It is not an account of volume. You cannot say there is more of this kind of misinformation than that, but you can say there are more stories of this type circulating than stories of that type. We're counting the "species" of narratives as opposed to the population count of those different species.

We've tried to classify the type of narrative (i.e. on virus origins or possible treatments), its source (i.e. by state actors or companies), and its motive (i.e. to earn profits, stoke fear, or lay the groundwork for later political claims). A notable pattern is that there are few stories that are clearly coming from state actors that attempt to mess with the public health response, which has been done by other countries during prior pandemics. Instead, what state actors are doing is mainly sending messages that help lay the groundwork for the future and who is going to take the blame.

During the AIDS epidemic, Russia had a project called Operation INFEKTION, which placed fake scientific papers that had information attributing HIV-AIDS to a CIA bioweapons program. The rumors that those papers created are still circulating in parts of the world and are used to justify, for example, not using condoms to protect against HIV-AIDS.

The predominant narrative now is the attribution of the coronavirus pandemic to particular nation-states. This is evident in early efforts by people in the U.S. to pin the pandemic on labs in China, as well as Chinese, Russian, and Iranian efforts to pin it on the U.S. or NATO. When we look at these reports, we try to make a distinction between the carefully reported pieces versus those that present little to no evidence from the scientific literature.

The two biggest categories of narratives so far are stories about false cures or preventive measures and fake stories about the emergency response. Interestingly, the number of narratives we're seeing around false cures and preventive measures has dropped compared to that of the nature of the emergency response. The false emergency response content is primarily people taking information from the WHO or CDC and tweaking it.

We are unsure what the motivation for these narratives is so far. It could be trolling for entertainment purposes, or people trying to help out because they have an honest belief or something else entirely. We're exploring ways that we can understand the motivation behind these narratives by collaborating with some other institutions, but that takes time because it's a complicated social science problem.

***Q:** Do you have an understanding of why people are sharing fake news? How do you distinguish intentionally false information from those who are genuinely trying to help the problem but simply disagree with the authority?*

**A:** We try to use context as much as we can. I don't view this as something where anyone is going to be right on every piece of information. If you think about averaging over a number of stories, are you generally getting it right? And, does everyone generally agree? That's the target we're going for.

I think the deeper question is: why are people sharing and passing fake news? For example, for the news media, they're sharing it because they think it's newsworthy. They believe consumers will read that information as debunking and not as them promoting fake facts as true.

A lot of individuals, on the other hand, are trying to be helpful. For example, early in the pandemic, text messages circulated widely spreading rumors of a nationwide quarantine and encouraging people to stock up. While those text messages circulated fake news, there wasn't malicious intent behind those messages; they were trying to be helpful. We don't yet understand how many of them share stories because they want to be helpful and how many want to mislead people for entertainment.

We also do not know how those behaviors change as the severity of the situation becomes more obvious. My suspicion is that people in New York City right now are very careful about what they share and are trying to be as fact-based as they can. In contrast, people in parts of the world where the virus hasn't hit yet probably feel freer to just pass information on.

***Q:** Do you speculate that most complex sets of misinformation being disseminated are related to or started by a state actor or an organization instead of individuals?*

**A:** We don't really know yet. There are some technological innovations being developed that might give us the ability to trace some of these narratives back to the source in a systematic way. Of the set of stories that seem fake, we do not know yet how many of those are the continuation of reporting that was unintentionally incorrect (i.e. due to errors made by sources), but later corrected itself, versus someone intentionally constructing a false narrative.

***Q:** How can platforms like Twitter and Facebook work to take down fake news? Do you think the government should craft a policy response requiring Twitter and Facebook to remove fake news from their platforms?*

**A:** There are a lot of things platforms can do. Once a story is known, you can use a combination of machine and human intelligence to find other examples of it. The platforms are certainly working hard at this.

About three weeks ago, we received one good piece of evidence from the Oxford Internet Institute suggesting that these companies were catching a fair amount of fake news, but the amount varied across platforms. I can't recall the exact numbers, but for Twitter or Facebook, the ratio for fake news was around 50 percent. It's clear that they're removing a fair amount, but certainly not everything.

***Q:** Since you also research on conflicts and terrorism, I want to ask you whether you think that terrorist attacks will take other shapes or forms, or get delayed as a result of the pandemic?*

**A:** First, the organizations that defend the physical integrity of society are designed to take much higher levels of loss than coronavirus could possibly impose on them, especially given the demographics of the disease. Covid-19 is not going to significantly disrupt the ability of the intelligence community and the defense establishment to manage the terrorism problem or respond to violence or efforts by state actors overseas. These are institutions that have a lot of slack built into them so that they can handle crises. We shouldn't be too worried on that front.

We should worry more about the massive economic displacement in some parts of the world—exactly how much remains to be seen. Many countries are saying they could not possibly do the social lockdowns that the U.S. and Western Europe are following, or people will starve. As much as lockdowns might be optimal for public health right now, lockdowns could be a disaster for their public health in the future.

I do a lot of work in Pakistan and they're in the middle of a wheat harvesting right now; the planting of cotton and rice will need to happen soon. If these activities don't happen because of social distancing, people will starve and the potential number of loss of lives could actually be massively greater than those you would save from Covid-19. With respect to terrorism and political violence, the concern is that such massive economic shocks are going to create a lot of disruption and political foment.

***Q:** You have published several books on terrorism, and there are a lot of scholars worried that bioterrorism is an imminent threat to humanity, especially given what we've seen with Covid-19.*

**A:** I completely disagree. It is highly unlikely that a terrorist organization can maintain the infrastructure and research facilities required to engineer an organism that hits just the right balance of transmissibility and lethality without popping on the intelligence radar of every nation-state in the world.



Even during the Cold War, both the U.S. and USSR ran massive organizations attempting to devise good bioweapons, but neither really achieved their goal. You need to hit this absolute sweet spot in terms of the nature of the organism, how it's dispersed, and the response to it. I don't think anything about this pandemic changes the fact that like bioterrorism at a scale that would reorder society is a very distant threat.

***Q:** The name of our show is *Policy Punchline*, so I have to ask you at the end—what is the punchline here?*

**A:** The really interesting questions for policy are not around the Covid-19 response, since the path we've chosen is not going to change significantly. Instead, we need to think hard about what we are going to do coming out of the pandemic in order to recover and help those who are most harmed. That's where hard thinking can make a difference.

How do we get the kids back in school? How do we handle tracking? How do we handle college placement?... On an international level, how do we reconstitute supply chains and rebuild the interpersonal networks that underlie all economic activity? There's a huge host of "what next" questions that people could be spending time on.

# 13

## Partisanship in Congress and the Covid-19 Policy Response

Frances Lee  
November 25, 2019  
August 29, 2020

“ *Attitudes toward the threat posed by Covid-19 have much to do with whether or not voters trust the country’s leadership—or not. Republicans trust Trump and believe that things will eventually work out with the pandemic. Meanwhile, Democrats fear for the worst under leadership that they do not trust, at all.* ”

— **policy punchline** by Frances Lee

Frances Lee is a Professor of Politics and Public Affairs at Princeton University. She is one of the country’s foremost scholars on Congressional politics. She has written extensively on American politics, including the award-winning books, “Sizing up the Senate: The Unequal Consequences of Equal Representation” and “Beyond Ideology: Politics, Principles, and Partisanship.”

***Q:** We always begin with the relatively broader questions. Professor Lee, your work focuses on the issues of congressional politics and partisanship. Why did you choose to study partisanship? Is there a certain aspect that drew you in? And what are some of your most interesting findings that you would like to share with us?*

**A:** I'm a Congress scholar. I started out studying congressional politics and policymaking before I began to focus on partisanship. My early work was on distributive politics, or, in other words, how Congress decides who gets what across the nation. I began to become interested in party politics and partisanship during my time as a congressional fellow working on Capitol Hill, in 2002 and 2003. One of the first things that one notices in the Hill environment is that partisanship affects everything, from how the institution is organized to behavior on all kinds of issues—issues that really have no obvious connection to ideology—to what we think of as the principled differences between liberals and conservatives in American politics.

Everything is shaped by partisanship in some way, and I began to think about how partisanship has such broad ranging effects. This brought me to work on what became my 2009 book, "Beyond Ideology," which you mentioned. I continued to work on this theme with another book in 2016 called "Insecure Majorities: Congress and the Perpetual Campaign," which looks at the effect of closer competition for control of Congress, as in majority control of Congress, and how that has helped to drive the rise in partisan conflict that we've seen in recent years. Under conditions of close competition, the party not in power has more incentive to withhold support so as to more clearly define the differences between the parties and thereby make a case for a return to power. If the two parties are working together collaboratively, then that harms the ability of the party out of power to say that the party in power is doing a bad job. In this way, the close competition that we've seen in recent years is one factor that contributes to this intense and ferocious party conflict that has come to characterize legislative politics in Congress.

***Q:** The number of laws passed by Congress has been decreasing steadily for a number of years. You've spoken before about how the president may contribute to this gridlock by attaching himself to a policy goal and thereby increasing the opposition from the opposing party. Would you mind talking a little more about this? Is this something inherent to the American political system or is it a more recent phenomenon?*

**A:** With the rise of partisanship this kind of behavior has become more prevalent. The party not controlling the presidency wants to make a case against the president's continuation in power and/ or his party's continuation in power, and under conditions of closer competition, those incentives are stronger. When the president puts forward a policy initiative, it then becomes a benchmark for his performance in office. Is he doing a good job or a bad job? Is he competent? Is he successful? The party out of power wants the answer to those questions to be negative. This adds some political incentives to initiatives that the president champions

that are separate from the policy merits involved. In my 2009 book, I wrote about how when President Clinton proposed assisting local law enforcement in hiring more police officers, Republicans voted against that to a person. There was a strongly partisan reaction to what was basically a grants-in-aid program to assist local law enforcement. Hiring police officers is not something we'd previously thought Republicans would be against. We also saw this happen under President George W. Bush when he proposed a new entitlement benefit for seniors in Medicare, the Medicare Prescription Drug Modernization Act, which eventually passed. Even though you'd expect Democrats to be in favor of providing prescription drugs for seniors, most Democrats opposed the measure.

*Q: Can you envision any type of solution, be it procedural or political, that might be able to resolve this specific type of gridlock?*

**A:** I don't think there's any overarching solution to this problem. These incentives are sort of baked in. They are stronger when control of the presidency is tightly contested, when both parties see a path to power. There's less opportunity to do this when the president proposes something that's overwhelmingly popular, although politicians can often find a way; hiring police officers was quite popular, as was a prescription drug benefit for seniors, and yet we still saw partisan conflict over those initiatives. Does that mean this is just part of our logic of separation of powers and party politics? Possibly. It may just be something that we have to struggle with, where political incentives make it more difficult for presidents to lead.

*Q: Does this mean that a lot of issues are not simply ideological? That issues like Medicare and support for law enforcement are not inherently a Republican or Democratic ideal?*

**A:** That's where you can see the effect of presidential leadership. It's most evident on issues where the parties don't already have well-defined positions. When the president steps in, it shifts members' behavior. One example that I've pointed to in some of my earlier work is when President George W. Bush proposed that NASA should prioritize a mission to Mars. Suddenly, you began to see Democrats coming out against that, saying that it was a waste of money. Previously, Democrats didn't have a position on a mission to Mars.

However, I would say that Medicare is an example of a left versus right issue. But in this case, the Republican president was proposing an expansion of an entitlement benefit, in effect taking the more left-leaning position, and Democrats shifted against it, even though one would have expected them to otherwise be in favor of a program like that.

*Q: You have said that everything in Congress is shaped by partisanship in some way. Do you think that partisan politics have played a significant role in shaping the congressional response to the Covid-19 crisis?*

**A:** Congress achieved remarkable bipartisan unity in the immediate wake of the outbreak. The legislation passed in March 2020 was jaw-dropping in its scale and speed. Truly vast sums were marshaled to support businesses and workers displaced by the pandemic and the lockdowns.

This summer Congress has struggled to follow up to extend these benefits, and there has been considerable partisan disagreement over how much more aid is needed for workers, state governments, and businesses, with the two parties trillions of dollars apart in their negotiations. But my view of 2020 thus far is more of a story of how much the parties came together to take initial and highly consequential action, even amidst the toxic partisanship of the aftermath of President Trump's impeachment.

**Q:** *Public opinion polls have shown that partisanship is shaping the public's responses to coronavirus. Republican voters have taken the position of prioritizing the economy over the pandemic, while Democrats have taken the opposite position. Do you think this division is a result of long-standing ideological differences, like views on economic policy priorities, between the two parties?*

**A:** It's certainly true that Republican officeholders at all levels of government have been quicker to lift economic restrictions imposed in efforts to control the pandemic than Democratic officeholders have been. President Trump was calling for the country to be opened up by Easter.

But the economy-versus-health framing is rather superficial and doesn't get at the more profound psychological processes involved. Partisanship shapes voters' views on the threat posed by Covid-19. Throughout the Trump presidency, Republican voters have been inclined to believe that the country is on the right track and things are going well, while Democrats have been worried and fearful about the direction of the country. When the outbreak occurred, the pandemic fully validated and realized Democrats fears about the potential for disaster, and they consequently viewed the threat with tremendous alarm. Meanwhile, Republicans believe that the country is in good hands and are less fearful of disaster generally and this disease in particular.

One counterfactual: contrast Republican voters' response to Covid-19 to their views of Ebola under President Obama. Republicans were hugely alarmed about Ebola and wanted to prohibit doctors and nurses who had worked on fighting Ebola from coming back to the U.S. The disease received wall-to-wall coverage on the Fox News Channel. Ebola was much more terrifying to Republicans than Democrats, in great part because they did not believe that President Obama could or would protect them.

Attitudes toward the threat posed by Covid-19 have much to do with whether or not voters trust the country's leadership—or not. Republicans trust Trump and believe that things will eventually work out with the pandemic. Meanwhile, Democrats fear for the worst under leadership that they do not trust, at all.

***Q:** How do you think presidential leadership has impacted the congressional responses to Covid-19? Many criticize President Trump for being rather ineffective in organizing the American response to the crisis—has his lack of leadership significantly impacted the effectiveness of Congress?*

**A:** The president was not in the lead in negotiating the congressional response to the pandemic. The key players were Treasury Secretary Mnuchin, Senate Majority Leader Mitch McConnell, and House Speaker Nancy Pelosi. These leaders came together quickly and cohesively, a remarkable achievement considering the ferociously partisan context in the immediate wake of presidential impeachment and, just in 2019, the longest-ever government shutdown.

It's hard to know how much presidential leadership can achieve on its own. Playing out the counterfactual, I am not inclined to think that things would have gone substantially better with the pandemic response had Hillary Clinton been president rather than Donald Trump. Could she have induced compliance and support from Republican governors in control of a majority of states? She would almost certainly have been impeached, too, over the handling of classified information in her personal email. Without the midterm backlash working in Democrats' favor under President Trump, Pelosi would not be Speaker, and Republicans would almost certainly have retained control of the House, as well as the Senate in the 2018 elections, had Hillary Clinton won the presidency in 2016. A President HRC would have faced huge backlash from Republican states and leaders in her efforts to manage during the pandemic; polarization around disease mitigation efforts (like masking) would likely be even worse than it is.

Under a President Hillary Clinton, it is unlikely that congressional Republicans would have supported as much unemployment assistance and other economic stabilization as they have. With a president of their party in the White House, Republicans knew that they would bear more responsibility for economic conditions in the country, helping them overcome their ideological resistance to large-scale government spending to support the economy during the pandemic. Indeed, I expect Republican support for such measures will likely decline if Biden is elected. Not controlling the presidency, Republicans will feel less obligation to provide economic stabilization in a Biden administration. They will not likely feel as much pressure to compromise their ideological objections to large scale spending as they have under Trump.

The bottom line is that it is enormously challenging for any president to overcome the partisan divide in the country. Neither President Trump nor a hypothetical President Clinton have or would have had the capacity to inspire trust in the opposing party. This basic fact about our national politics right now means that even a steady leader with a clear sense of how to respond to this crisis would likely have struggled to command the necessary trust and respect across the aisle to be effective. Party polarization amidst a close division of party power in the country makes presidential leadership more challenging today than at many other points in U.S. history.

***Q:** The name of our show is *Policy Punchline*, so I have to ask you at the end—what is the punchline here?*

**A:** I suppose the simplest punchline is that partisan conflict makes things much harder. Political incentives are aligned in such a way that it's harder to achieve policy breakthroughs. Bipartisanship remains just as necessary for legislative success today as it did in past eras. Bipartisanship is hard, but it remains essential.

# 14

## Communications Failures From the 15th-Century Epidemic Are Still Happening Today

Melissa Reynolds  
April 15, 2020

“ *One truism about human nature and human experience is that we are going to seek out information wherever we can find it, especially in moments of crisis. Our desire to know can lead us to actions that are perhaps not good for society nor our health. We can recognize that and formulate a robust countermeasure to that. Leadership’s role in addressing that human desire is equally as important, in my opinion, as any of the medical or epidemiological interventions that we are pursuing.* ”

— **policy punchline** by Melissa Reynolds

Melissa Reynolds is the Perkins-Cotsen postdoctoral fellow in the Society of Fellows at Princeton University and a lecturer in the History Department and the Humanities Council. A historian and humanist, Dr. Reynolds recently published an op-ed in the Washington Post comparing the coronavirus epidemic to “the sweat” outbreaks in 15th-century Europe. She suggests that, despite the obvious advances in modern medicine since the 15th century, there are similarities between the two epidemics, most notably the failure of government to communicate adequately with the public.



*Q: Would you give us some background on your Washington Post op-ed, “Communication Failures in a Pandemic Can Be Catastrophic”?*

**A:** At the time when the coronavirus was just beginning to impact Americans in the early stages of the pandemic, I first conceived of the op-ed as a response to President Trump, his administration, and other advisers who were downplaying the effects of the virus and openly dismissing experts’ advice that this could be quite serious. Since I am a historian of Europe, I have quite a lot of friends in Italy and so I was getting a picture from my personal network about the seriousness of the virus. I felt like the U.S. government was not doing a good job of communicating this message to the public. I started thinking about parallels to the early modern world and I wrote about a disease not very well-known to most called, “the sweating sickness,” or, “the sweat.”

While the bubonic plague has gotten a lot of press in the last month because it is the most well-known early modern and medieval epidemic, the sweat parallels the novel coronavirus much more closely epidemiologically. We do not have detailed medical records from the 15th and 16th centuries, but we think that it was a novel virus that emerged from a rodent vector host, probably rats. In fact, we think that it was very similar to modern hantavirus pulmonary syndrome. The sweat struck England first in 1485 and then in consecutive waves throughout the first half of the 16th century.

England, unlike other European nations or other city-states in Italy, Germany, or France, had no real public health apparatus in place, even after the bubonic plague had already shown up in Europe in 1348. In a lot of other European cities, municipal governments had put public health measures in place to the best of their ability. Governments lacked our knowledge of viral vectors and transmissions and bacteria, but they knew to isolate sick people, publish orders of quarantine, and contain the spread of these contagions. But England did not do any of this. The sweat showed up in 1485 in a moment of really intense political turmoil, when the country was very divided, and it just wreaked havoc. There you can also see a parallel to our modern experience.

There was no effort on the part of the government to offer any sort of information about this disease and one of the really interesting comparisons with Covid-19 is that the sweat eventually moved into continental Europe in the mid-16th century. In Germany, they did exactly the opposite of what England did. German municipal doctors published information about the disease and offered advice. Of course, when you read the advice, it does not hold up to our modern medical standard, but it goes a long way in explaining what people do when faced with a complete lack of information and a dearth of leadership. That is the crux of the op-ed: What happened when people decided for themselves what the virus was going to do, what the illness was going to do, was they convinced themselves it was not going to affect them. There was no real leadership and, of course, people were affected. I argue that we need a concerted communications effort and public measures to ensure public health.

*Q: Would you tell us more about what you observe to be the major communications failures in the U.S. today versus 16th-century Europe?*

**A:** The primary communications failure is that governments have a vested interest in trying to ignore things until they reach a crisis point. I can understand peoples' desire to just try to pretend the crisis is not there because we also see the economic consequences of a pandemic. History and modern events have shown us that denial does not turn away a new virus. Delay tactics are cataclysmic because they do not protect people and have put us in a position where we have the highest number of cases in the world.

Much of tackling a virus today is the same as it was in the 16th century. It is a matter of political will, just as much as it is that of medical expertise. We have medical expertise that the government lacked in the 16th century. However, the political will to address the crisis and offer people a sense of control in the midst of so much uncertainty could have done a lot more. We still lack that kind of clear-eyed vision for our strategy, just as they did in 15th century England.

*Q: How can personal misinterpretation of the government's messages lead to communication failures?*

**A:** I first submitted this op-ed about a week before it was published. In the span of that week, we went from the administration denying the existence of a threat, saying, "There are no cases in America. We are going to be fine," to the government taking the pandemic more seriously all of a sudden. So, the crux of my thesis about disinformation or miscommunication shifted. I began to see educated and informed people starting to make guesses about what was really going to happen with the virus, which I think is human nature.

I have heard responsible, educated adults hypothesizing, for example, that it really was not going to be all that bad in cities where it is sunny or in rural places. I feel like people were trying to convince themselves that they had some sense of control and that it could not possibly be as bad for them as they were seeing in Europe at that point.

I was just struck by parallels to the sweat. From 1511, when the sweat hit England for the second time, Sir Thomas Moore, the author of "Utopia"—which you may remember from high school English class—wrote a letter to his friend Erasmus, another name you may remember from early modern history. Moore was martyred by Henry VIII for refusing to accept the king as head of the church. Erasmus was this great humanist figure, a tower of intellect in early modern England. Moore wrote a letter to Erasmus, telling him of the death of their good friend, Andrea Ammonio, who was the Latin secretary to Henry VIII. Latin secretaries took dictation in Latin to write important documents on behalf of the Crown. Andrea had convinced himself that he was not going to die and that his upright living and his wonderful moral life was going to protect him from the illness. Moore wrote that Ammonio boasted of his invincibility at a dinner party and, within three hours, he was

dead. In early modern England, Ammonio would have been one of the most educated on public health. He came from Italy. Even still, he suffered from this trick of human nature: We convince ourselves that it is not going to be us.

It does not help us to scoff at people trying to convince themselves that everything is normal or at people who do not understand the severity of the disease. It is really difficult to get people to grasp the kind of global impact we are facing when we do not have the kind of experience with epidemic diseases that they had in 15th century England. None of us have any experience with this type of situation, which is why public health communication is so critical. To offer trustworthy facts and a clear-voiced set of guidelines is unbelievably valuable, equally valuable as any of the modern medicine that can eventually defeat the virus.

***Q:** How did England model their response after other countries to eventually overcome the sweat?*

**A:** England was behind the times when the sweat showed up in 1485. They finally got with the program over the course of the 16th century, largely because the people in charge looked to Italian cities and French cities that were implementing public health policies and realized that they had to do more. They wanted to follow a model that seemed to protect people better. Today, we look to places like Germany where there is only a fraction of the mortality from coronavirus that we have. Of course, we could argue that they also have a more robust social welfare system, but the real question is one of policy and of political will. Policy has nothing to do with the virility of the virus because the virus is the same across all nations. It is the same virus in Germany as it is here. What we are seeing is a difference in political action.

In the 16th century, Europe never defeated the sweat in the sense that we might eventually defeat the coronavirus because, of course, they did lack modern medicine. The virus returned in waves. As I said, modern epidemiologists suspect that it was similar to hantavirus pulmonary syndrome. They think that there was an environmental factor that contributed to its return, so you might see some parallels to the novel coronavirus there. I know, for example, that epidemiologists today suggest that a warming climate, coupled with our very global economy, will lead to more of these global epidemiological events as viruses are coming out of other mammalian vectors and moving into human populations. Historians hypothesize that there were a series of warm, wet summers in the 15th century that led to the sweat. Every time there was a warm, wet summer, the rodent populations increased and the virus would return. The sweats came in 1485, 1511, 1518, 1528, and then finally in 1552. By 1552, the public health apparatus in England had shifted [and] that outbreak was the first time a practicing physician in England published about the virus.

John Caius, the author of this book about the sweat, was an important physician to Kings and Queens in England, who was elected president of the Royal College of

Physicians, the licensing bureau for medical practice in England. Though much of the rest of Europe had had these sorts of licensing bodies since the 14th century, the Royal College was not founded until 1518 in England. So we have this really important, powerful physician who would be president of the Royal College Physicians writing a book for the common people. He recognized that average people need information. In fact, he spent the first five or six pages of the book justifying writing in English, because, in the 16th century, most learned medical texts would have been written in Latin, but John Caius wrote in English.

Of course, his descriptions and his advice obviously bear no relevance to modern medicine. But, on the other hand, he still recognized that it was really important to get information out because people were scared and fear leads to disorder. With that fear and disorder, you have a public problem, a societal problem, a political problem, rather than just a medical problem. After 1552, for reasons we do not really know, the sweat did not show up in England again. Of course, there were other epidemic diseases like bubonic plague that recurred every few years in England and the government continued to have to think about public health measures.

***Q:** So, did England start to do better after 1552? Did they finally grasp the importance of public communication?*

**A:** Absolutely. While 1552 was the last recurrence of the sweating sickness, the bubonic plague was endemic in Europe at that time, and the following year, in 1553, the government published plague bills for the first time. In 1563, during a particularly bad outbreak of the plague, an Italian physician living in London wrote to Queen Elizabeth's chief adviser, Robert Cecil, suggesting that England implement public health measures similar to those adopted in Italy.

Within a year, Cecil started publishing quarantine orders mandating that people who live in houses with the plague must mark their door and stay inside. To leave an infected house, you had to carry a white stick that showed that your household was infected and Queen Elizabeth closed the gates to the city to prevent exports. By implementing these sorts of common-sense public health measures, England became on par with much of the rest of Europe. From the late-16th century and into the 17th century, you see incredible medical advancements in England, which just goes to show that a nation can catch up and then go on to have a robust medical economy. Improvement is always possible.

***Q:** What can we do today to avoid communication failures?*

**A:** One of the most frustrating things to me is the awareness that there are easy fixes that could have happened early on. The CDC is a federal organization designed to track and inform the public about outbreaks. One of the tragedies in the lead up to this outbreak is that the CDC was sidelined entirely. It is our public health organization. Just yesterday,

President Trump decided to defund the World Health Organization, in my opinion, out of a desire to scapegoat a different public health organization for the United States' failure to handle the pandemic.

Meanwhile, the CDC has been publishing verifiable information about the virus since it emerged in China in late December. However, the CDC has probably waffled more than it should have on some of the advice they are giving to the public. The mask situation comes to mind, but I think what we are seeing is the CDC being influenced by a culture of disinformation coming from the top. When you have the president openly countermanning scientific and medical experts, it creates an environment where it is very easy to disregard experts and it is very difficult then to provide the kind of unifying information that is absolutely necessary in these moments of public emergency. There needs to be a single voice—not a single voice among experts—a single voice among political authorities. We are seeing it among governors. So, it is not impossible.

***Q:** How should leadership balance the management of expectations with maintaining national spirit?*

**A:** Trying to keep the people optimistic is always at the heart of political responses to a pandemic, historically speaking and now. Italian city-states had public health measures far sooner than did England but even Italy's robust early modern public health measures were always subject to a compromise between quarantining everyone and potentially having your wealthiest citizens leave and your economy shut down. I understand that there are also economic consequences of taking a pandemic seriously. On the other hand, if President Trump knew about the severity of the virus in January, [as] he says he did, then we have been able to literally see in real-time that ignoring something does not make it go away. Ignoring Covid-19 may have exacerbated the economic crisis. We may have, as a result, a far longer epidemic than we would have had if he had taken decisive action early.

I read an op-ed in *The Guardian* by former UK Prime Minister Tony Blair's communications director about Jacinda Ardern, the Prime Minister of New Zealand, who was getting top marks for her handling of the crisis. She took decisive action really early on and the authors focused on her communication strategy. Some of her measures may be seen as controversial. People do not want to be shut up in their homes and it is really difficult to see businesses close. I get that, but you have to be able to communicate your message clearly and help people to understand why closures are necessary. The perspective in *The Guardian's* op-ed was that Prime Minister Ardern has done an excellent job. From an epidemiological standpoint, New Zealand has nothing like the rate of transmission that we have in the United States.

***Q:** Do you think President Trump's daily coronavirus briefings demonstrate effective leadership and communication?*

**A:** I will admit to being distressed when Trump first got a bump in his approval ratings during the Covid-19 crisis, in part, because I felt like people were becoming receptive to disinformation about the crisis. I felt like we were doomed to repeat these communications failures from the 15th century.

My fear has been abated by the fact that Trump's approval rating bump is low when compared to other presidents that have had to handle similarly terrible crises. After 9/11, George W. Bush's approval rating went from somewhere in the 60s prior to about 92 percent. With President Trump, we have seen a small bump which has since corrected from early April.

On the one hand, his public appearances ensure that people start to listen. If you are there every day saying something, people will listen. You are the president of the United States. On the other hand, the nature of these press conferences has been largely antagonistic toward experts and particularly towards the media because they have framed an adversarial relationship, often regionally adversarial, pitting Republican governors against Democratic governors. I do not think this adversarial take in the midst of a public health crisis supports the claim that any communication is good communication. I am skeptical.

***Q:** How should the government and media's roles differ in distributing information to the public?*

**A:** We are incredibly privileged in the United States. It is foundational to who we are to have a free and open press. We have access to expert advice and reporting. I imagine that if you are anything like me, you dove down a rabbit hole of Covid-19 research at some point over the course of this pandemic. That is important. In no way does access to that kind of information mitigate the need for leadership communication. Those are two different things.

Reporting on symptoms, the instances of mortality in specific hospitals, or failures to distribute ventilators is vital information. The public has access to this information and should avail themselves of it. I do not expect the government to give us all the information we need. Then, we would be looking at something far more authoritarian than what I have in mind. But outlining public health policy and communication and providing that is what I expect the government to do. In theory, the government should act as the voice of rational, evidence-based research delineated through experts working for the government that we can use to direct our actions in times of crisis. The kind of information that leads to action should be coming from the government. I do not think that that should be left up to individuals, because, in moments of public health crisis, we cannot have an individual response. If you are the only one wearing the mask, then it does not do much good.

***Q:** Social media has played a big role in today's pandemic. Are you concerned about the spread of rumors and conspiracy theories on social media?*

**A:** People in the 15th and 16th centuries were also very worried about disinformation. They did not have social media, of course, but they were still really worried about the spread of rumors and conspiracies, certainly after the emergence of the printing press. The printing press was the official communications organ for early modern states because it was very closely licensed and controlled throughout the 16th and 17th centuries. However, in England, out of this very public, orderly set of communication, you see this explosion in what is called "manuscript separates." People circulated hand-copied texts with inside political information, rumor, libel, or whatnot.

The manuscripts from the 15th and 16th centuries that I study were owned by a lot of ordinary, everyday people if you can call them that. They were not the wealthiest or the most elite. Most of the manuscripts contain medical recipes and that sort of thing. And one of the ways I can date these manuscripts is because I start to see recipes for cures for the sweating sickness show up. Even though there was nothing published in England until 1552 that addressed the sweating sickness, somehow folklore and opinion about how to treat the sweat spread throughout the English population. Nearly every recipe book that I have looked at that was still being used after 1485 has a recipe, or two, or three for how to deal with the sweating sickness. Even if official information is not forthcoming, people will seek out the knowledge they need from whatever source available. And that is how we see social media acting today.

Today, the scope of the impact of disinformation is so much bigger with social media. It is a pity that we have to use this analogy, but incorrect and even dangerous information can go viral and spread. No pun intended. Yet while the average consumer of information faces far more disinformation on the worldwide web than two generations ago, concerns about rumor are problems that human societies and civilizations have been thinking of and trying to mitigate for hundreds of years.

***Q:** When the government proposed a China travel ban, many media outlets communicated the same outrage that the xenophobic "Muslim travel ban" incited because that outrage was part of a "cultural script." How do cultural scripts impact the effectiveness of our communication?*

**A:** On the one hand, you could make the credible argument that the travel ban was a failure because it did not go far enough, because it did not actually limit a lot of travelers from China. Any resident returning to the U.S. from China came without much screening whatsoever. The policy assumed that the virus was only affecting people in China, but it ignored the epidemiological vector of the virus. The virus can affect anyone who is in contact with it.

On the other hand, a knee-jerk push against some of these policies is not helpful. President Trump seemed to be downplaying the severity of the virus, but his first public action against the virus was a travel ban. The media was conditioned to read it through exactly the cultural script of a xenophobic administration.

There have been a lot of really bad takes about this virus. Even the media had to reassess what is reasonable in the time of a public health emergency and what is not. The cultural script could have shifted and the government has a role in shifting that cultural script. Right now, with a complete lack of definitive communication strategy, the media is left to take an angle. I do not want to criticize the media too robustly in the sense that often they are doing the best they can to arrive at the story as it is developing. And in this case, the story was developing at lightning speed over the early weeks of this emerging pandemic.

I think back to driving in my car in late January and hearing about lockdown in Wuhan and thinking, “Wow, that is crazy. How are they living like that?” I just could not imagine that less than two months later I would be in such a similar position. The scale of the change that we have had to confront leads people to fall back on these cultural scripts, perhaps even more so than we do in a sort of normal “political moment.”

***Q:** What should the government’s role be in quelling misinformation?*

**A:** I am not advocating for censorship here, but it is amazing what a set of clear guidelines and a sort of serious-minded effort to acknowledge the public’s lack of information and fear might have done just to steer them towards more reputable sources. Look at the way the country has embraced Dr. Fauci. Everyone was just looking for a person who could give them some answers. They wanted information. That is a universal, unifying human trait in the face of unknown diseases. We are going to look for ways to mitigate them and we want someone to tell us what to do.

***Q:** Why shouldn’t we censor fake information, fake news, and disinformation on platforms like Twitter?*

**A:** I think the question is whether the government should censor information or whether Twitter has an obligation, as a private entity, to remove content that is undeniably going to harm its users. If Twitter or Facebook would like to screen their tweets and remove disinformation, that is on them. I do understand that social media companies also sometimes walk a fine line between censoring the disinformation and being perceived to shape the narrative too much since.

The government, however, should have no power to go on Twitter and censor that information. The detrimental effects of censoring the free exchange of information and knowledge would far outweigh the positive effects of removing a few bad actors.



***Q:** Are there any other takeaways from the responses to the viruses of the 15th and 16th centuries that can apply to the pandemic today?*

**A:** The viruses of the 16th century catalyzed the development of the English “Poor Laws.” These were laws that demonstrate a recognition of the fact that the government and people needed to do something to care for the poor, sick, and disabled. Yet in practice, this frequently meant putting the poor and the infirmed in poor houses or prisons. The sentiment looks ‘progressive’ while the actual practices are obviously terrible, so I do not mean to suggest that we should emulate the Poor Laws of 16th-century England.

However, if you want to restore your society to health after a pandemic, both economically and physically, the government has a responsibility to provide for all people. There is no way out of a pandemic if you are not taking public resources from the broader society, from healthy people, and redistributing them to provide food and healthcare and shelter for people that are sick. Even in the 16th century, a need for some redistribution was obvious. Those in quarantine were provided for by their local parish. A lot of us are of the mindset that once we get through this, then we are done. However, we are not going to be done with health crises or rising inequality. Previous issues were only exacerbated or heightened in a pandemic. We can take a page out of the 16th century to recognize that these moments require public solutions. There is no way around public solutions [and] public redistribution of resources to the sickest.

***Q:** If you were a policymaker focused on communication strategy, what would your next steps be?*

**A:** If we want to revive the economy, which is going to be the next step after we beat this virus, we have to convince people in the U.S. that they are safe and supported. A lot of us are going to emerge from this crisis quite shell-shocked and uncertain and hesitant to invest in much or do much of anything for fear that something like this could happen again. I would massively extend healthcare benefits beyond the current Biden plan. I hope that the crisis inspires a real conversation about the insanity of linking health care to employment.

I would also foster a robust conversation about unemployment benefits. The striking difference between the way the U.S. has responded to the pandemic versus Europe is that we still require people to apply for increased access to unemployment benefits. Europe has guaranteed wages for employers. Assuming that everyone should get paid, that is a very different way of framing public responses to public health and the public good.

***Q:*** *What conversations did you hope to incite with your most recent op-ed?*

**A:** My op-ed was intended to remind people that, as much as we have advanced medically, when we face a deficit of information and do not understand the threat we are facing, we tend to minimize, deny, and convince ourselves that there is not a real problem, as evidenced by people in the 16th century.

# 15

## Treating Covid-19 Like Past Pandemics is Dangerous: Cultural Scripts and Plague Narratives

Merle Eisenberg  
May 29, 2020

“ *I think all pandemics are different, so don't be fooled by assuming simple comparisons. Use this time as an opportunity to take action and to shape the world. We don't need to return to what it was before, and whether you're in politics, academia, or working at any other job, there are ways in which people can now address some of these broader issues.* ”

— **policy punchline** by Merle Eisenberg

Merle Eisenberg is a postdoctoral fellow at the National Socio-Environmental Synthesis Center (SESYNC). Currently, he is working on a project entitled, “The Making of a Pandemic: Plague, Environment, and the End of Antiquity.” It examines the outbreak of the first great socio-ecological disaster in recorded human history: the first bubonic plague pandemic, commonly known as the Justinianic Plague (c. 541-750 CE).

***Q:** You recently wrote an article in *The Washington Post* about the tendency for people to use "predetermined cultural scripts" based on past pandemics to talk about today's pandemic. Would you mind telling us a little bit more about that idea?*

**A:** When we think about pandemics, we have a couple of notable ones that stick out in our minds. The most famous one is the Black Death, which takes place during the middle of the 14th century. It began somewhere in Central Asia but quickly spread and decimated populations throughout Central Asia and Eurasia. New evidence suggests that it is also spread throughout the Middle East and Europe, killing at least 30 percent of the population, sometimes 70 percent, in various places. The Black Death, or as a recent webinar put it, the "Mother of All Pandemics," has fundamentally shaped how we think about other pandemics. The point we made in the op-ed was that we have to think about each pandemic in its particular context, with its idiosyncratic implications and effects.

***Q:** Let's zoom into this idea a bit further. Have you seen any prominent examples of policymakers, journalists, and the like falling victim to this fallacy as they address this current Covid-19 crisis, making false comparisons to previous pandemics?*

**A:** I wouldn't necessarily say that they were false, but they are people using lessons from history to create changes for what they want today. They're reaching for examples from the past, attempting to draw an equivalency to the present. Almost every day, someone publishes an article on "Medieval Twitter" that says either this pandemic is good because, just like the Black Death, it may end the modern version of feudalism.

The first round of hot takes suggested that feudalism ended in the 14th century when the Black Death was raging on. Therefore, the current pandemic will somehow end today's economic inequality. I think that set of hot takes has given rise to another set of hot takes, making the opposite claim: "Actually, these large corporations seem to be gathering more money and profiting off of Covid-19. Billionaires are now even richer." So now all the op-eds are suggesting that this is going to lead to a new feudal society. These are all examples of gross comparisons between past pandemics and Covid-19.

***Q:** What are some unique aspects of this coronavirus crisis that we should consider before making historical leaps and analogies to previous pandemics?*

**A:** I think that's what makes a lot of the historical analogies quite tricky. The number one thing that seems to be different about the current pandemic is the number of people dying compared to past pandemics. The fact that we've had 150,000 people in America die is awful and tragic. That being said, Covid-19's mortality rate is quite different from that of the Black Death, which had a 50 percent mortality rate. It's also quite low compared to the 1918 influenza pandemic, which caused tens of millions of deaths around the world,

including at least half a million people in the United States. So, you see a difference in orders of magnitude.

The world we're living in today is also quite different from the world in the 14th century, where upwards of 90 percent of the population were land-working peasants. That's a very different economic society from the 2020 global world where almost no one works the land anymore. In today's America, most of it is run by a service industry or white-collar professionals. It's very different from [the] 1918 America. How society is organized—economically, socially, and culturally—is extremely different a hundred years ago than it is now.

*Q: It becomes less accurate to draw the big historical leaps that the coronavirus is somehow going to eliminate today's inequality. But it seems that the cultural script could fit either way. Anyone could find some kind of narrative that fits into this. Does that hold in the sense that you can always find an angle to find some historical comparison to find your agenda? Couldn't you do that for all kinds of historical examples?*

**A:** If you want to go searching history to prove what you're trying to do in the present, I think you'll find it. It's not too difficult. There are thousands of years of recorded history and that can certainly be done. However, I think it flattens many of the things that did happen during those time periods. There were site-specific and locality-specific repercussions and examples with differences across time and space during every pandemic. When you just draw these simple feudalism comparisons, you're not doing justice to the differences between the feudalism found in England, France, Spain, and Italy.

In fact, you can even draw down the differences between individual cities and regions. But by doing that, you've erased the rich complexity that history offers you, which present different examples of how people react in a given situation.

*Q: So how helpful are those historical comparisons in general? There are so many economists presenting an endless stream of working papers that try to explain what happened in the 1918 influenza, the economic policy of the time, and the economic impacts of non-pharmaceutical interventions. We've interviewed economists on such matters and it seems to us that they could often shed light on some important issues today. But it sounds like sometimes those analyses might not be as accurate as we hoped it to be?*

**A:** There are a few reasons for that. One is a data question. The farther back you go in time, the worse your data is. Even today, there are problems with our Covid-19 reporting data. We're underreporting deaths today, so it's not as if data is ever neutral by any stretch of the imagination and you're going to get less data the farther back in time you go. So, how are you going to run all your regression analyses on bad data and expect reliable results?

You also have problems with what people in those time-periods were focused on. Were they focused on economics above all else? This crisis has shown us America's laser-like focus on economics above everything else. We're focused more on economics than we are about reducing deaths at this point, which is the wrong way to approach it. So, each time-period is shaped by what it cares about and what it thinks is important. Economics has been a central driving force in American life for a little over 50 years. The same cannot be said about 14th century Europe.

***Q:** When we talk about cultural scripts, do you think are they more inherently built into humans' way of thinking about those matters, such as our tendency to draw historical analogies, or is it more sort of influenced by a top-down approach by the media, where news outlets, journalists, and even scholars try to make those sweeping judgments that might not be accurate. What do you think is the cause of this?*

**A:** Causality is always going to be challenging to pin down. If a historian tells you they know the cause of something, they probably don't. The idea of a cultural script is quite interesting. It's getting back to the tendency of historians to talk about two things: structure and agency.

Structures are the things around us. We're born into a set of circumstances. You were born into one set of circumstances; I was born to another. Yet, we share some because we've both been at Princeton for the same amount of time, though at different ages, which is going to structure our lives and how we think about the world and limit what we even think is possible.

But within that, you do have the agency to make choices. There are contingent factors that will then shape how people live within their given structure. So, if you want to use an example, in the 1918 Spanish Flu, people knew that they shouldn't be holding victory parades because when you have a bunch of people massed together, influenza spreads like Covid-19. Philadelphia famously decided to have a bunch of war bond parades in support of WWI. Unsurprisingly, it spread influenza, leading to more people getting sick and a noticeable uptick in deaths relative to other cities.

So, what you see are people working within the same structure, but the contingent choices shape how they're doing it. And in that example, it also shows you how structures are different, in the sense that people placed so much emphasis on WWI that it overrode public health concerns.

***Q:** So, the lesson that we should take away here isn't that historical comparisons can't be useful. We can still learn much from history. But to apply the lessons of history effectively, you have to develop a more nuanced perspective in terms of the local situation, its structure, and the contemporaries' agency.*

**A:** Correct. However, when attempting to apply these lessons, you have to keep in mind whether people are even going to pay attention to what you have to say. That's the old question with history, right? We know from influenza and other flu outbreaks of the 20th century that spread is reduced when people are more isolated. But we've chosen a different path; many states have already decided to significantly open up their economies because they've determined that the economy is more important, even though data and history are against them. This should tell you something about how our society structures its own thought.

**Q:** *Do you think that the inherent ways of how humans organize societies contribute to failures to effectively respond to such crises, both on the part of the government and in terms of how the public influences itself through media and various other channels?*

**A:** This is the old question of whether biology drives human history and human actions. To some extent, some comparisons are quite good, but once you start adding in more factors, you realize it doesn't have to be that way. I don't think societal organization itself is necessarily to blame for our failures to respond to this pandemic.

South Korea famously locked down very quickly from the start of the pandemic months ago. Since then, they've employed excellent contact tracing, among other techniques. You see broad comparisons, say France versus the U.K., Italy versus Spain, or Italy versus Germany. There are multiple ways countries have reacted to this, so I don't think it's fair to treat societal organization as a monolith.

I believe there are different possibilities we can choose to pursue. At least in the United States, the issue is that the federal government has been so incompetent at communicating and shaping our response. And this failure cannot be pinned to the American system because post-WWII Germany has the same federalist system found in the United States. Yet, Germany reacted in a completely different way, which has resulted in more success in containing the virus. That does not necessarily make them perfect by any means, but it certainly makes them very different.

**Q:** *Since we're talking about the history of pandemics in this episode, why don't we go a little bit deeper into the history here? Maybe we can start with the Justinianic Plague. To provide context, I want to quote a part of your writing from your recent journal article, "Lessons from the past, policies for the future: resilience and sustainability in past crises":*

*"By the year 500, the Western Roman Empire had disappeared as a cohesive political state across Western Europe, but the Eastern Roman Empire simultaneously flourished. The Western half had divided into successor "barbarian" kingdoms, while the Eastern Roman Empire was centered around the Balkans, Anatolia (modern Turkey), and the*

*Middle East. One of its main initiatives, the re-conquest of formerly Roman regions in the west, such as North Africa and Italy, had begun well—with quick and cheap conquests. At the height of this re-conquest in the early 540s, the Justinianic Plague erupted across the Mediterranean world and Europe. The Justinianic Plague was a pandemic of the bacterium Yersinia pestis that remained active for over two centuries, c. 541–750 C.E. Its impact on the Eurasian population has been suggested as significant (i.e., causing the deaths of tens of millions), while its effects on human behavior from economics to culture and religion have also been described as pivotal (Meier 2016; Harper 2017; Sarris 2006). Some have described it as the watershed moment separating a flourishing Ancient World from the darker Medieval World.”*

*Why has the Justinianic Plague received so little attention? Would you mind telling us a bit about this plague and why it attracts your attention?*

**A:** I’m a historian of Late Antiquity and the early Middle Ages, and the Justinianic Plague happens to fall under those time periods, so that’s why I got into that plague outbreak in particular.

The Justinianic Plague is well known within my narrow field but not in the broader context of history. It’s certainly not as well-known as the Black Death. The usual story you get of the Justinianic Plague is that it breaks out in 541 in Egypt, spreading quickly to Constantinople (now Istanbul), then capital of the Roman Empire. From there, the plague spread across the rest of the Mediterranean world. If you read textbooks on this, you’ll see that the death rate was very similar to the Black Death, [a] 50 percent mortality rate. Similar to the Black Death, it caused economic, social, and cultural crises. It essentially ended the ancient world and began the Middle Ages. That’s how the story is usually told.

Lee Mordechai and I wrote several articles about the topic. One was primarily a qualitative piece for historians in a historical publication called *Past and Present*. The other was a quantitative piece, tailored for scientists, in what’s called the *Proceedings of the National Academy of Sciences (PNAS)*, a fairly well-known science journal. With each one, we use the different techniques used by historians and quantitative evidence to make the case that the Justinianic Plague didn’t actually cause all of the economic, social, and political changes it’s purported to have produced. We also challenged the Justinianic Plague’s staggeringly high death rate. While you may have some significant loss of life, claiming a 50 percent mortality rate is just untenable due to a lack of data to back it up.

**Q:** *Would you mind just telling us a little bit more about your research there? You emphasized in your reexamination of the Justinianic Plague the importance of a historical analysis that considers the local changes in the economy, religion, and agriculture. We’ve already touched on how local contexts shape pandemics, but could you speak more to it?*



**A:** There's a famous historical source that discusses the outbreak in Constantinople in that first couple of years by someone named Procopius of Caesarea. He's probably the most famous 6th-century historical writer for a series of books he wrote called, "The Wars of Justinian," [about] the emperor at the time of the plague. If you read his account, you'll get a description of the plague outbreak in Constantinople.

It's undoubtedly significant in understanding what was going on. The city has problems burying bodies, for example. People are hiding in their houses. The plague lasts for several months. Now, the mortality numbers [that] Procopius presents are problematic. He said 5,000 people died per day for the first 1.5 months, and then 10,000 people died per day for the next 1.5 months. If you do some back of the envelope math on his numbers, he claims that 675,000 people died in the last three months. However, the city itself was probably only 500,000 people. So, you can't rely on his numbers for accuracy. The issue is that people take Procopius's vivid account of the Justinianic Plague and feel comfortable applying it to any context that looks like the plague.

Lee Mordechai and another colleague wrote an excellent paper using disease modeling to model all the different potential ways in which this virus might have spread in Justinianic times. They show that not only do the numbers not work, but the plague lasting for three months couldn't possibly work. From what we know about bubonic plague and pneumonic plague, every piece of Procopius' descriptions just doesn't work scientifically.

In the article, we showed that these numbers don't hold up demographically. My colleagues and I go back to the source and find ample opportunities to poke holes at the supposed evidence. The source might merely say that "a great pestilence broke out in Italy, Spain, and North Africa." And for some, it's sufficient evidence for the existence of massive amounts of plague deaths across all those countries, which is not a logical conclusion from the evidence.

**Q:** *What could the Justinianic Plague inform us about today's coronavirus crisis, whether it's their response, the state's capacity, or the government's resilience?*

**A:** One pretty clear thing is that their government was quite adaptable in the short term. Like in all urban locations throughout history, people in the city of Constantinople were packed together, creating a death rate that was probably much higher than a typical small village. But we can see from the evidence that the Roman empire was able to adjust itself pretty quickly. Famously, the government couldn't bury bodies very easily. Therefore, Justinian appointed an administrative official to take charge of burying the bodies with the appropriate funding attached. As a result, they took care of the most pressing urban public health crisis at the time at a relatively rapid pace.

Additionally, the city of Constantinople's supply lines, which were required to feed its massive population, seemed to be restored to their fully-work capacity within 5 to 6

years of the outbreak. Though our data can be very spotty at times, it seems that there were places that adapted reasonably well, performing better than what we might expect from a modern state.

***Q:** Would you mind just telling us more about the concept of the resilience of the state and how the top-level and the bottom-level interact with each other in times of crisis, particularly during pandemics?*

**A:** One thing to keep in mind when analyzing any state reaction is that our conception of public health is fundamentally different today than it was centuries ago. It wasn't until the turn of the 20th century that we see the emergence of bacteriology and laboratory science—all the modern knowledge we now take for granted. To put it bluntly, they didn't know what was killing them. To their knowledge, they had no way of fighting it.

There were two things that people seemed to do. First, we have examples of people who locked themselves in their homes to isolate themselves, thereby stopping the spread. But it should be noted that the plague is quite different from what we're going through today with Covid-19. The plague spread in various ways. The most common form of plague, the bubonic plague, spread as a result of flea bites. It can also spread from other ectoparasites, but flea bites are generally the culprit. So, locking yourself in your home wouldn't have prevented you from getting bubonic plague if fleas were in your bed.

Second, if people had the means, they left. We have whole cases in which elites would leave. In one famous case in a later outbreak in the 8th century, the emperor famously fled Constantinople. There's another example where whole towns in Italy just got up and left, running up into the hills. Again, we don't know if that necessarily worked. That's in some ways no different than what we've seen in New York City, or in France with people fleeing to chateaus in southern France. At least from the bottom-up perspective, that's how people were reacting.

***Q:** How do we measure a state's general ability to respond to a pandemic? What is state capacity in that context? In other words, do we see a correlation in history between a state's ability to organize its citizens in a top-down fashion and its effectiveness in responding to a pandemic?*

**A:** This goes back to some of the points we talked about earlier. In the same way, we all live in our own structure with our own agency and each state does as well. So Western countries, namely Western Europe and the United States, have particular ways to approach public health that are broadly similar. But everyone's going to react differently per the country's complexity, ideology, and system redundancy. These are big things that are going to change how we think about things.

For instance, the United States has much more of a free-market ideology than France or Germany. This is where you see significant differences between countries despite sharing broad institutional structures. This same principle applies when analyzing authoritarian and democratic governments alike. Regardless of what category a country falls into, countries can react in fundamentally different ways, both from a bottom-up and a top-down perspective.

***Q:** I would love to hear more of your thoughts on other historical takeaways from crises in general.*

**A:** States in the premodern world, if they are resilient and put in enough systematic capacity, they're able to adapt to short term changes, even significant ones that happen over several decades. You shift resources and move things around.

John Haldon, an emeritus professor at Princeton, has a great case of 7th century Byzantium where they lose two-thirds to three-fourths of their territory. But they managed to reorganize their society politically, ideologically, and economically from the bottom up to revamp the entire state. This is what the Ottoman example is pointing out as well. When severe crises hit you, you can figure out ways to shift resources around to maintain itself.

Now, the downside is that elites tend to win out in these changes. Ignoring the notable exceptions of the Russian Revolution and the French Revolution, elites tend to be the ones who win out in these processes rather than the average person, often because they're the ones who can buy into the various changes and shifts.

***Q:** Maybe we can talk a little more about other historical comparisons between the Covid-19 crisis and past pandemics. What other similarities do you see in our contemporary pandemic response with the past, whether it's quarantining or social distancing? Are there patterns that have maintained themselves throughout different centuries?*

**A:** We touched upon some of these constant themes already. First, the elite people running away is a common occurrence. I haven't found a pandemic where that hasn't happened. Second, poor people tend to suffer, especially the longer a pandemic goes on. That's the significant change for the Black Death, which continued to hit Europe for centuries. Over time, what you see is that the poor lose out more and more to some extent.

One thing we could talk about is the idea that a pandemic should change history. That they have a big impact is actually a pretty recent idea, which really has a history in and of itself. Part of the story of the 1918 pandemic is that it's been forgotten. Well, it wasn't really that it was forgotten, but you do have a history of how you study pandemics; that in and of itself has a story that shapes many of these things.

***Q:** You've mentioned the recent development of the idea that pandemics have a drastic impact on the way history is written. Could you tell us more about this point?*

**A:** Not just the way it's written, but how historians think it affected people's lives. The idea that pandemics have a significant impact on history and are worthy of study is a very new thing. There are three broad areas of development over the 20th century we can discuss. The first is around 1900, where you have the development of bacteriology, modern medicine, antibiotics, etc.

This phase then eventually transitions into a phase that we might call "the conquest phase." Thomas Zimmer was talking on our podcast about public health over the middle of the 20th century. He studies the WHO and malaria campaigns in particular. During the post-WWII period to about 1970-1980, you had an idea that people working together could stop a disease. There's a famous book by Fabian Hirst called "The Conquest of Plague," which argued that humans can and have stopped plagues. And it's not untrue, for we did come up with antibiotics, but no one really knows why the plague has gone away.

The third phase is the post-1980 phase, which is linked with the AIDS pandemic, quickly followed by emerging infectious diseases in the late-80s and explodes on the scene in the early nineties. This is when you see the first emergence of Ebola in the public consciousness. You get books like, "The Coming Plague" by Laurie Garrett, for example. We see the emergence of the idea that not only is some disease going to come, but it's also inevitably going to kill us all—an idea that continues to be present.

***Q:** Would you mind just telling more about what you think led to those changes in our understanding? Was it more driven by scholarly research by academics that aided this growing interest in pandemics? Or was it more of a mass movement of people suddenly caring more about hygiene, social-distancing rules, and the like? I suppose that goes back to the long-time philosophical and historical debate of whether it's individuals or the general public that actually shape history.*

**A:** My friend Lee would say that it's all a feedback loop, and I think that's very much true for the post-1990s phase. You can see a feedback loop between the military, the cultural ideas of pandemics, whether through film, other forms of media, or scholars. People are also writing about this because there's more money involved. For example, there's been a lot of ancient DNA work on the Justinianic Plague, which costs a significant amount of money. The ancient DNA work has Defense Department funding because they think we could potentially stop our current pandemic if we learn and understand more about plagues in the past.

To trace out the three phases in greater detail: people started thinking about the Justinianic Plague for the first time as a pandemic in the first 10-15 years of the 20th century. It's because they were focused on stopping the plague in their own present. So, when you're focused on stopping the plague in the present, you want to know about it in the past.

Gradually, once the scientists stop the plague, they point out that they've conquered the plague. "Look how much better we are than these ancient people. In the ancient past, plague destroyed society. It destroyed the ancient world. It brought down the great Greeks and Romans."

Then, you get a new phase of research on disease, which starts in the late 70s, where people make the point that disease has caused many problems in history. Whether or not it causes massive political, economic, social, and cultural change, as people suggest the Justinianic Plague did, we can debate. I would say no, but that's where that tendency to affirm comes from, and there are good examples. You could look at the research done on the 1918 flu pandemic. It's quite neatly lined up with those phases as well.

***Q:** Let's talk a bit about quarantine. You wrote this very lighthearted post on your blog about people's newfound passion for baking and gardening in self-isolation. I wonder if there's any historical pattern for people becoming more interested in self-sufficiency during pandemics, especially due to fears of shortages. And do you think this says anything more profound regarding our society today compared to historical ones in terms of our ability to react to upheaval?*

**A:** The expert on quarantine is my friend and colleague Alex Chase-Levenson, another Princeton Ph.D. This phenomenon of past people becoming more obsessed with these newfound passions particularly. The famous comparisons people are drawing these days are WWII victory gardens where people grew food at home to save food for the war effort.

I think what we're seeing is quite different. In the Late Antique world, very few people were writing about what you would consider "mundane things." You don't sit there and write in a diary or a blog post about how you got your food every day. It's just part of your lived experience. So, you're going to get fewer of those examples, which is not to say it's not there, but it's harder to access.

Two things are different now. One is the global supply chains we all depend upon. That's radically different from even 20 to 30 years ago, let alone 100 years ago. We're all still buying tomatoes in the store. Well, those tomatoes are not grown in the Washington D.C. area. It's just not warm enough right now. My two tomato plants just went in three weeks ago and you simply can't grow tomatoes right now. So, what you have are global supply chains. People are trying to adapt to that because they think that there's going to be problems with the global supply chain. I think most of those concerns have been mitigated after the first six or eight weeks of initial insanity. For example, I couldn't find wipes for my kids' diapers, but that seems to no longer be the case. The supply chains have adjusted and there's no longer a shortage of toilet paper. I don't see any fights over toilet paper these days.

The other is that most of the people engaging in these activities are university-educated, white-collar professionals who do not have kids and are working from home. There is a limit to how much work you're actually doing. If you're working hard at your job

and doing your daily activities, that's maybe eight hours a day? This very interview is now taking place during my kids' nap.

So, I think the baking and planting come from people who have never done these things before and they're trying to fill up their newfound time. And if they're not playing video games, they want to bake bread because they want to be healthy about it. This is all from my pure anecdotal observations from my friends, most of whom don't have kids. Every day, I'm looking at sourdough loaves from about four different people on my Instagram account. The idea that I would have time to bake a loaf of bread is pure insanity on my end.

***Q:** Would you mind just telling us a little bit more about your thoughts on inequality and how it relates to the pandemic?*

**A:** I think that's another thing that makes this pandemic unique. It's always existed to some extent, but society is more fractured than in the past. You have a whole group of white-collar professionals, myself included, who can sit on their microphone and talk on a Friday afternoon. We call it "work." I'm a postdoc and one of my things to do is get publicity for the place I work and my own work, and that's what I'm doing right now with this interview.

So, what you really see here is a combination of structural racism in a fractured society. We might say we're all in this together, but we're all doing our own thing. Dan Rodgers wrote a great book called, "Age of Fracture," where he talks about this and how it developed over the last 40 to 50 years. It's an inability to recognize the solutions to these problems. What are the solutions people put out?

"You should wash your hands more. Avoid public transit. Stay away from large groups of people. Stay at home if you can." The key here is that there are individuals, African Americans, Latinos, etc., who cannot socially distance. How can you social distance if you have multiple people in a small apartment? How can you go to work if the system you live in is not designed for you to own a car and you don't have the means to own a car? If it's designed [so that] the only way you can get to work is by public transit and that's just getting to the job. Is your employer providing you with masks? In most cases, the answer is no.

Why are meatpacking plants Covid-19 hotspots? Well, you can't social distance people on a meat line because you're trying to make money. You're not allowing for inefficiencies in the system. And then you don't provide protective gear to any of your workers. So obviously, they all got sick. So, how can you tell those people to separate and isolate? And then you don't give them masks. Do you have places for people to wash their hands when they get to work? Do you have the ability to wash your hands when you get off a bus? I think the answer is "No," again. That's why you get these massive inequalities.

It's an inability to recognize the problems and a lack of interest in finding a solution. If you say wash your hands, that's you saying I don't care about the actual problems. I just want to push the burden onto you without getting anything done.

*Q: What do you think a solution to this would be?*

**A:** The solution, in many ways, is ostensibly simple. Get those communities to shape the responses and tell the government what they need, and the government responds in turn. It's not simple in practice, but that's the broad framework.

It would be great if people who have less can shape the reactions and shape what they need more than anyone else. Provide them with more mass transit if you're not going to pay them more to pay for their own transportation. And when you give them mass transit, put in place the infrastructure to make it so that it's safe. But we have no interest in building up mass transit infrastructure, let alone making it safer. That's the problem at the end of the day.

*Q: What do you think has really contributed to this kind of pervasiveness of pandemic related inequalities, especially in the context of the U.S.? What contributes to many politicians' unwillingness to find interesting solutions from a historical perspective? Is there anything unique about the U.S. in how it has historically dealt with diseases that could shine a light on this issue?*

**A:** Historically, it has to do with how American society is structured. It's always had a very structurally racist existence in many ways. We haven't addressed those and we've just papered them over. In fact, we've made them worse in many cases. You could look at what has been happening in the last few days in Minneapolis. As far as I can tell, anyone who's seen the [George Floyd arrest video] says the officers should be arrested. But the fact that they haven't has led to protests and further violent protests.

You're also living in the midst of a pandemic where there's at least 20-25 percent unemployment. I would assume it's probably higher in those communities because of the inequality baked into them. So, you're going to have a situation in which things are going just to get worse.

*Q: It seems that current debates over public health measures will not be settled until a cough in the grocery store no longer elicits fear or when coronavirus cases drop significantly. I would love to get your take on how you see public perceptions shaping up in the coming weeks or months. Do you think we will really not go back to normal unless everybody truly feels safe?*

**A:** There are a few things to unpack there. The short answer is yes; until people feel safe enough that they want to go to the grocery store again, things will not be normal. Opening up is becoming a ridiculous phrase to me. As I've mentioned, I have children and I know a lot of other people who have children as well. What does it change for you as a parent if stores open up in the economy and I have nowhere for my children to go? If there are

no schools or camps open, it doesn't matter if you open up. And that's only exacerbated in communities that have less money.

What was the point of shutting down the economy and halting our lives if we haven't gotten to testing on-demand yet? If we don't pour money into universities and schools, they don't have a better chance of safe teaching. This is the conundrum that Princeton and every other university are going through. They're all hemming and hawing at the moment, putting off the decision of whether or not people will go back to campus for as long as possible. It's taking these institutions a long time to decide because nothing has really been done to produce positive change.

How can we actually ever go back to school without significant policy changes? That's why the opening up conversation has just been a ridiculous conversation to me. How is my life any different if my kids are still home with me until September? That's not going to change my daily life. Nothing's going to change now.

A return to normalcy is possible only through the use of massive financial resources dedicated to reopening. Schools like Princeton sit on billions of dollars of endowment, allowing them to approach their conundrum better than less wealthy institutions. But what can the local school do? They barely have a functioning class capacity as it exists. How will Mercer County Community College, which is only 15 minutes down the road from Princeton, return to normalcy when their budgets are being cut from the state? If you're not pouring money into community colleges, how do you expect them to reopen? How is the local elementary school going to open? You need to be able to take care of everyone together, and that's the problem.

The other thing to think about is this utopian idea of normal. There is no normal. The normal is what you make of it. And clearly, as we've seen from this pandemic, pandemics expose faults in one's society. They reveal that there are massive inequalities in this society, a topic people have written about ad nauseum since 2008. Do we want to return to 2011 when there were massive inequalities in society? I would argue no. We can use this as a moment to take action, to shape a just and equitable outcome that we actually want for the future. There are ways in which we could shape how we address society's issues. The example I gave about public infrastructure in terms of mass transit would be a way to do it if we decide building mass public transportation in places where it's desperately needed is one way to stimulate the economy.

***Q:** Do you think this is where historical comparisons could possibly contribute to the development of a post-pandemic recovery plan and lead to broader societal improvement? And going back to the very beginning of our conversation, that's something we should be doing, having nuanced conversations rather than just making broad comparisons to achieve some agenda, like saying the coronavirus is going to end inequality.*

**A:** Exactly. What happened after the 1918 influenza pandemic? It didn't lead to any of those macro changes by any stretch of the imagination. Instead, you have the 1920s, which



hosted massive inequality. So, there are different ways in which you can attempt to address these issues. In that sense, history can give you ways to approach it. In some senses, we're not making up things each time, which is probably good. We'd all be exhausted if we were constantly making up new stuff. But it can give you ideas that you can then try to implement.

***Q:** You mentioned that you are on Twitter and Instagram these days. What do you think of the cultural scripts there? I sent you this article covering an interview with Dr. Zeynep Tufekci, a professor of information science at the University of North Carolina, Chapel Hill. She mentioned how the media today follows those unique cultural scripts and how it's caused many problems. She goes on to say that social media is also a form of socialization, acting as one of the most potent ways of shaping human perceptions of different ideas. I would love to hear your thoughts on what you see today in traditional and social media.*

**A:** The broader question that you put up about socialization is essentially a reframing of my analysis of the structure and agency debate. How we socialize, whether on Twitter or other platforms, is determined by how we live our lives. I think that's fairly accurate, but I believe it misses some of the nuances. I think she explained these changes in terms of people thinking about it in terms of the Muslim ban, if I remembered correctly?

***Q:** Tufekci argued that when the Trump Administration announced the travel ban from China in response to Covid-19, the media immediately jumped in and called the move racist, using the same cultural script they used for the Muslim travel ban, even though the travel ban in the Covid-19 context was quite effective. In that sense, using repeated cultural scripts would cause significant harm.*

**A:** There are two points to that. For one, I think that the ban didn't do anything for two main reasons. First, it was too late. And second, if you look at the phylogenetic trees and the evolution of Covid-19, most cases from New York City are seeded from Europe. Considering the national spread starting from the East Coast, most cases in America actually came from Europe, not China and we didn't do a European travel ban until very late in the process. Even that was done poorly. So, it doesn't matter if you do a ban if you're letting people who already have it into the country. That's the factual problem with the ban—it didn't actually work and it was done too late.

The second point is that I don't think this is a reaction to the Muslim ban. I think it comes from a broader idea I've traced out about emerging infectious diseases. People were saying that H1N1 was going to be the disease that kills us all. SARS was supposed to do the same. This idea has gone back for 25 or 30 years. So, it's actually not a Muslim-ban script. It's called "the outbreak narrative," a term created by Priscilla Wald in her excellent

book, “Contagious: Cultures, Carriers, and the Outbreak Narrative”. In the book, she points out that we’ve enacted the same stages over the last 25 to 30 years about how the outbreak narrative plays out.

A part of the outbreak narrative is the stigmatization of foreigners. Now, in this case, for the last 20 years or so, Asians have felt the brunt of this force. It typically plays out in the following way: Great scientists heroically stop the pandemic from wherever it’s spreading; then people go out in the streets and applaud first responders. But God forbid we pay them well, give them hazard pay, give them bonuses, give them more vacation time, or do anything for them that actually makes a difference. It’s no different from standing at a ballgame to applaud military people while simultaneously choosing not to provide them with good benefits.

The Muslim ban narrative misses the point. I believe that the larger outbreak narrative is in the driver’s seat. It’s a more in-depth history than just the last four years; it’s a history of the last 30 years.

***Q:** The outbreak narrative is such an interesting concept. I suppose our interview has come back to a loop to the initial discussion about cultural scripts. What would be your solution to these narratives, the grand remedy for our naiveness when it comes to juxtaposing those analogies that aren’t accurate in terms of history?*

**A:** This touches on what we discussed in the beginning. The first thing we have to do is look at these local effects. Famously, there was a plague outbreak in San Francisco in the year 1900 and the local effects there are eerily reminiscent. They had a governor who didn’t want trade goods not to be shipped out of California, so he refused to admit that there was an actual plague outbreak. He fired the scientists to prevent science from trifling policy. Local effects matter. Other places across the world reacted differently at the local level when faced with smaller plague outbreaks.

The other thing is to think about is the outcomes you want for your society. If problems you want to solve are being exacerbated, pointed out, and made worse as a result of this pandemic, then figure out a way of addressing them. That’s a political question and that means going to the polls in November.

That’s what you need to do to change these things. But it can’t just be a top-down change. Even if you flip the presidency, that doesn’t change the system that allocated these funds and determined how things are done. Things do not change fundamentally in the system with such a [top-down] change. That’s something that needs to be obviously reworked in the country.

***Q:** Don’t you think this matter just gets more complicated in the presence of social media? As a public forum, doesn’t Twitter make all the chaos exponentially more irrational compared to traditional media platforms?*

**A:** Yes and no. As a country, the U.S. has moved away from trusting experts for the last 50 years. I'm not an American historian, but I can point to the Vietnam War as a famous example. JFK and LBJ had, famously, the smartest men in the room. They put the world's experts in charge. Yet, that didn't solve the problems that they faced and it only made the Vietnam War worse.

In the American context, putting smart people in charge has been gone for decades. How many Ph.D.'s do we have in Congress? How many compared to lawyers? How many engineers do you have? How many mathematicians? How many disease modelers? How many doctors? There just aren't that many. There isn't a diversity of thought in Congress at the base level.

I'm not saying it has to be diverse, but it's a reflection of the larger society. American society has decided it doesn't want experts in charge. This has been exacerbated after the 1960s; again going back to Dan Rodgers's "The Age of Fracture." There is no meaningful authority left. As a result, laypeople are just arguing about these things through the available mediums and social media is, in many ways, just an outcome of this process. Now it drives the process and makes it worse, but it's really just an outcome of longer historical trends.

You could make an argument in favor of social media—that you can get information faster and it is accessible to more people than ever before. Social media also creates accountability. The George Floyd video from Minneapolis wouldn't have been spread as much if it weren't for social media; people probably wouldn't even know about it.

**Q:** *You recently started your own podcast "Infectious Historians" with Lee Mordechai. What impact do you ultimately hope to have on policy or the general public's view on the pandemic?*

**A:** Lee and I started writing about pandemics in the last two years. It started just because we read something we disagreed with, so we wrote an article that articulated our thoughts on the topic. Frankly, that's where it all started. We didn't expect, nor do we want, the podcast to become popular. But that's what's happened. Honestly, we didn't have a plan. We just wanted to write something.

**Q:** *[Jokingly] You weren't predicting that there would be a global pandemic in another year or two that would align perfectly with your work, right?*

**A:** No, of course not. In a sense, that's what this emerging infectious disease narrative has said. There are always claims going around for the last 30 years that something's going to happen, but there is no reason to believe that this is the case.

As the pandemic started to put the world in a chokehold, we realized that we had the knowledge to discuss the topic in a more public way, leading us to write a series of op-eds. Historians working in the deep past cover more ground than most modern historians. Modern historians often end up monitoring in five- or ten-year increments as opposed to the decades and centuries that deep historians contend with. Therefore, we end up reading longer historical processes in some cases.

We've done a lot on the Justinianic Plague. We've had to do a bunch on the Black Death. We've also been reading about 19th and 20th-century narratives. That was where those three phases I laid out for you came from. We realized that we knew stories that touched on all of modern society's questions in response to Covid-19. People looked at the 1918 flu pandemic and asked, "Why do we forget this?" And in many ways, that's not the question to ask. The real question is, "How did the way we think about diseases make it possible for us to forget them?"

We had some of these answers to these thought processes, so we decided to put it on a podcast. We have good networks with other people who work on diseases and pandemics, so we reached out to them as our first guests. We also realized that there's going to be a growing interest in pandemics, both from a university-level to a K-12 level. You can't assign the articles I sent you to read, Tiger, to an undergraduate seminar, let alone an 11th grade class in high school. This is where podcasts come in. If you have a podcast, you can succinctly lay out the three historical plague pandemics. [It's] becoming a good way to process information and learn stuff.

*Q: There's an Oxford philosopher called Toby Ord, who is associated with Professor Peter Singer on the Effective Altruism movement. He projects that there is a 1/6 chance that humanity isn't going to make it in the next hundred years. Specifically, he projects that there's a 1/30 chance that humanity could end because of bioterror or diseases concocted by some well-intentioned scientists that accidentally leaks to the public. I would love to hear your take on it.*

**A:** Bioterrorism is a subfield of the emerging infectious disease narrative. It would be interesting to know when he started saying that. Lee and I have given some talks and presentations on the subject. One of his favorite slides tracks the Web of Science, an aggregator of science journal articles. He tracks emerging infectious diseases and you can literally see an uptick in diseases.

It's relatively gradual at the start, growing exponentially in the mid-90s. If you track bioterrorism, you will see the exact same pattern but slower. After 9/11, bioterrorism shoots through the roof, accelerated by the Iraq War. By the mid and late 2000s, it dropped down again. So, I'd be curious to see when he started making that bioterrorism prediction. I wouldn't be shocked to see it line up somewhere within that train of post-2001 thought.

There was a good example this morning where there was a lab where they're doing coronavirus testing on monkeys. The monkeys broke out, which is like the scene from the 2002 movie, "28 Days Later," where the monkeys with the disease break out.

Ultimately, I think the answer is "no" on the question of whether this virus broke out from a Wuhan lab. And ultimately, it doesn't matter. If getting you back to the source allows you to cure disease, then that's one thing, but that doesn't seem to be what's at the heart of the origins question. No one thinks you're going to find a pure sample that will be able immediately to resolve this problem. Maybe some people do, but the origins question—of the origins of diseases—is this age-old question. Where does the Black Death come from? Where does the plague come from? This is a question people in my field ask all the time. Frankly, to me, it's not an interesting question because I'm interested in human beings, so how does it affect people and what can we do to fix it?

*Q: You said that as a historian, you try to theorize the happenings throughout human history, so you don't make predictions, but do you think we're overreacting or underreacting to this crisis in the greater historical context?*

**A:** It's not about overreacting or underreacting. Now, I would say we certainly underreacted at the start, and I think we still haven't done enough. So, in that sense, to answer your question, we're underreacting.

But the broader question now is where we have gotten to. The answer that seems to be clear, which is disgusting and disappointing, that we seem to be fine with a thousand people dying a day. It's probably more than that because we're not logging all these cases. That seems to be the case. We've essentially gone down from a high of two to three thousand people to now to a thousand people dying a day, and suddenly we're going to open up most states? That's a massive failure in my mind. If you're admitting that a thousand people dying a day is perfectly acceptable because you don't want to provide sufficient stimulus packages to basically carry people through any longer, that seems to be a failure of the government.

As I said, what's the point of self-isolating if we haven't gotten testing up to the capacity that scientists would tell us what needs to be done to open anything up safely to prevent a second wave from happening? And again, if we hadn't poured money into schools and nursing homes to prevent those places from being hotspots, we wouldn't have done anything.

If we really cared, we could peg long-term stimulus packages to unemployment rates or to some particular economic indicators that would stop those things only when we reach a point where people are literally lining up for food banks en masse. But we don't seem to want to do that or to solve the problem.

***Q:** Are you cynical, optimistic, or pessimistic?*

**A:** From a historical perspective, there will be people who will live at the other side of this pandemic. There will be different reactions to it and historians will make claims about this pandemic just as they do every other pandemic. So, in that sense, human beings will go on. But again, to me, it's a wasted opportunity if we don't use it to fix some of the issues we know are wrong in this country.

***Q:** The name of our show is *Policy Punchline*, so I have to ask you at the end—what is the punchline here?*

**A:** I think all pandemics are different, so don't be fooled by assuming simple comparisons. Use this time as an opportunity to take action and to shape the world. We don't need to return to what it was before and whether you're in politics, academia, or working at any other job, there are ways in which people can now address some of these broader issues.

# Industry Perspective

James Steward

Jason Bordoff

Iwao Fusillo

Bruce Schneier

Martin Fleming

# 16

## Restoring Social Fabric: Art Museums in the Post-Covid World

James Steward  
June 16, 2020

“ *Museums are essential to our development as citizens. It is our responsibility as citizens and a nation to support the cultural enterprise. With the current turmoil, we will see changes in the financing of museums, designated spaces for art, and the way the public engages with art.* ”

— **policy punchline** by James Steward

James Steward is the director of Princeton University Art Museum, where he leads a staff of over 100, with an operating budget of \$20 million and a collection of over 110,000 works of art that span the globe and encompass 5,000 years of world history. In this interview, we discuss the role of art museums in helping us become better citizens and how the responsibilities of large art institutions may expand in the wake of the coronavirus epidemic.



*Q: It seems that at the economic impact of the coronavirus crisis on the museum world has been tremendous, and you recently hosted a webinar titled, “The Museum, Citizenship, and the Post-Coronavirus Age,” where you discussed the role of art museums in helping to make us better citizens, and you also offered your thoughts about the responsibilities of the Princeton University Art Museum and how they may expand in the wake of the coronavirus epidemic. Why don’t we begin by having you tell us a bit more about your thoughts from the webinar?*

**A:** I have long had a view that museums need to be part of helping all of us become better citizens in our society, and I think there are a variety of ways in which we can do that. Museums like ours are globe-spanning. They can invite us to understand ourselves as citizens of a broader set of communities rather than thinking of ourselves in a more parochial sense. They can open windows into difference. Most fundamentally, museums can awaken empathy—our ability to feel compassion for people whose life experiences might be very different from our own and those we don’t even know, which is something that I think is in short supply in our present world.

These appear to be true of museums generally but perhaps heightened in the present moment, not only because of Covid but because of some of the swirling social issues at large in our society. In a sense, this moment should be a provocation for museum professionals to think again about how we assure that we are doing the work that our communities need. Are there ways in which we can be gathering places, even virtually, for people who don’t necessarily share the same views? Are there responsibilities that inevitably arise for museums, like ours, that will undoubtedly weather the current economic storm in a context where many other cultural institutions will not?

One of the crucial issues is that if there is a diminishment of capacity in the cultural sector—if some museums fail or at the very least have to retrench their abilities to serve their publics—what does that require for those of us who can continue? I think the meaning of this is manifold. It may mean taking on a responsibility to engage the public in [new] arenas... For example, I hope there may be some important opportunities to bring together Princeton’s rich brain trust, including its students, with the needs of the communities around us, particularly in the arena of K-12 education.

Those are things we have long worked in, but the context that exists around us is shifting very dramatically at this moment. And if we feel, as I certainly do, that arts and culture should be part of the experience of young students today, then maybe we need to take on different responsibilities to ensure that this need continues to be met.

*Q: What are some of the initiatives that Princeton University Art Museum is currently doing? Are things going virtual? Before I left on campus, I remember museum staff going around taking videos and pictures of the galleries.*

**A:** The good news (and bad news) was that we had about two weeks' notice that we had to close. So, we sent our camera people out in force into the galleries to quickly develop a lot of digital content. I will say that we had a particular advantage in that we've been planning for some while now to have to close the museum next year for the construction of a new museum facility. And that meant we were already thinking about how to go virtual.

We were already asking the questions: What was that going to mean? How might we develop digital curricula that could be used in university classrooms and in K-12 settings? How do we provide digital access to the collections? We began digitizing the collections in depth some years ago in anticipation that digital access was going to be important. But, when March came, we had to pivot quickly. So, one of the things we did was immediately develop new layers of programming, accessible through digital tools. For some years, one of our museum signatures has been what we call "Late Thursdays," where we keep the galleries open late and do a lot of programming. Obviously, we are not doing that in the galleries now. Still, we quickly turned to develop [the] Late Thursdays virtually with live lectures every week, live art-making classes that follow thematized lines—programming that we pre-develop, pre-record, edit, and deliver so that it's downloadable via our website, for example.

One of the critical pieces was pivoting over Princeton's spring break to support faculty teaching when it moved into a purely virtual forum as well. Given that in a typical academic year, we now have courses using the museum collections in about 50 departments and programs of the campus. It meant that the turn to supporting that kind of faculty teaching wasn't just for art historians. It might have been for biologists, environmental studies faculty, or people coming to engage with works of art and how they make meaning from a variety of disciplinary perspectives. And it certainly kept everybody busy the last few months. Now, as we look forward to the fall, we're not yet clear whether we are going to be doing virtual instruction or in-person instruction or some blend of the two. We are using the summer to develop more and more of this kind of digital content so we can go wherever we need to.

***Q:** Going to your point about digital learning and supporting faculty, I took the art history seminar on photojournalism taught by Professor Katherine Reischl and Curator Katherine Bussard when I was a freshman, and I know they have been really excited to use this spring to teach the course in the context of the newly opened exhibition "LIFE Magazine and the Power of Photography," curated by Curator Bussard. It was such a massive, wonderful opportunity unfortunately missed because of Covid-19. The difficulty in teaching art history without having access to museums brings me to my next question—do you think that the art learning and viewing experience would ever be the same in a virtual format?*

**A:** The short answer is no, it won't be the same. But what we have to think about a lot is what the virtual experience can do best. There are things it does best if you think about the capacity that super-high-resolution images give us to go very close to an object or even to

investigate the object from a technical point of view in a way that you would never be able to necessarily do if you're standing a distance from a great painting by a stanchion in a gallery.

I sometimes joke about Mona Lisa and the Louvre being a sort of paragon of this point. In person, you can't get within about 30 feet of Mona Lisa. Virtually, you can get very close even to see the granular character of the brushstrokes. So, there is some sort of offsetting positive. But ultimately, I think what's lost is a sense of the thing itself, the ideas touched by the hand of its maker, often showing its patina of age. Those are among the reasons that I feel that at the end of this current situation, there will be an appetite for people to return to the social spaces of museums and rediscover the artworks themselves once again.

***Q:** Without a shared physical space where you can physically stand to view art, would it be impossible to make art present in one's life? As hard as it is to admit for a self-proclaimed art lover like me, it's tough for me to pick up art in life without having the chance to go to an art museum.*

**A:** If you're referring to the artwork itself, I think you're right. I have always been championing the idea that people should imagine themselves as collectors. It doesn't mean we all collect priceless objects, but to live with intentionally chosen things and to curate the lives around us, even if we don't use that verb to describe what we do. Often, we surround ourselves with things that have personal meaning. I do think, therefore, it is possible to live a visually rich life even when museum-going is something denied to us.

I also think that digital opportunities are exciting. One of the fascinating things about how we have deployed this programming is that we have had participants who have joined us from all over the world who wouldn't necessarily be able to do so in situ. If we have a live lecture in Princeton's McCosh Hall, we might be limited by the seating capacity of the building or the people who have elected to travel to Princeton to enjoy the experience. Virtually, we have people participating from Israel, from Texas, from California... In that sense, the world becomes one's oyster if you are traveling virtually. I have participated in both live and pre-programmed museum programming from museums in the Northeast, the U.K., and California because I suppose my appetite is undiminished and needs to be fulfilled in other ways. In this sense, we at Princeton are by no means alone in having toggled over so quickly to create digital programming that works on its terms.

***Q:** Hearing you mention the point that people have the opportunity to join in through virtual formats reminds me of this article I read in *The Washington Post* that claimed that the arts have largely rebranded themselves as an essential public good since the end of the Culture Wars of the late 1980s and early 1990s. Art leaders stress things like connection and engagement, promoting a collective experience. But the article goes on about how the somewhat overemphasis on collective viewing ruins the power of*

*private contemplation and solitary engagement. Just to play devil's advocate here, do you think Covid-19 could offer a unique chance for people to experience art on their own with the ability to reflect in our rooms in a solitary fashion?*

**A:** You're touching on something that has been a fundamental tension of museums in our time. If you go back many decades, museum-going was understood to be a privileged activity, an activity that could be tainted with elitism. Around the time of the culture wars, museums began to reinvent themselves as being about the meeting point of fantastic art, excellence (understood in a particular set of ways), equity (understood in other sorts of ways), and access. The balancing act is to try to provide all of these things, even in a physical space.

Under normal circumstances, I think this remains possible in many museums. The exceptions might be New York's Museum of Modern Art, for example, whose galleries would, under normal circumstances, be so crowded that having a private relationship with the work of art becomes all but impossible. At Princeton, that's generally not true. You may need to choose the hour of the day or the hour of the week when you come to the galleries if what you're seeking is that kind of uninterrupted dialogue with the work of art.

But I also think that the social aspect of museum space is critically important. I'll give you one little example. A year or so ago, we mounted an exhibition called *Nature's Nation*, which was about the relationship of American art and environmentalism from the dawn of American society in the 18th century to the present moment. And there were so many challenging and provocative objects on display that surprised people to see these objects brought together in this particular narrative, such that I regularly saw strangers reaching out to and engaging with one another because they needed to process their experience with others. If they hadn't come with someone else, it became a fascinating and somewhat unintentional social experiment to see that impulse to get outside oneself and move back and forth between that internal monologue we have with ourselves and external dialogue with another.

Is all of this possible, and can it be reinforced virtually? I absolutely think so. When people talk about returning to normalcy, I say, why do we assume that going back to past practice is desirable? It would seem that that would deny what we are learning right now about various learning modalities. These different pedagogies can be successful virtually, including the ability to open some of this out into a global discourse with fewer barriers to participation, though not entirely barrier-free.

Back to one of your earlier questions, I think one of the challenges for many of us who think about these things is to recognize that not every individual or family has the same access to technology that you and I may have. How do we, therefore, argue that a virtual platform is barrier-free? It's not. Many people still struggle with access to technology, with access to high-speed broadband. These barriers to participation continue to exist. To grapple with those riddles, arts organizations are going to have to partner with social service organizations and other partners, which might not have been our traditional partners of the past, to overcome some of those still unresolved barriers.

*Q: Nature's Nation is one of the most fascinating exhibitions I've ever been to. Curated by Karl Kusserow, it made me viscerally realize the importance of climate change debates and environmental issues. As you said, museums can be this shared physical space that creates a sense of anti-alienation, symbolizing a reunification of a social sphere that is currently fragmented by class and other societal divisions.*

**A:** That is one of the essential things that museums can do and not just suddenly in recent weeks, but over many years now. Museums forge connections with our citizens' lived experience to find connections into the very issues that you perhaps are thinking about, but by maybe repositioning them through the lens of the visual arts to both, carve out a safe space in which sometimes these very problematic questions can be explored [and] in a way that is not neutral.

I am not somebody who pretends that museums are neutral spaces. We are not. Every time we make a curatorial decision, we deny the concept of neutrality. But in that sense, I would say museums are by definition political spaces, but they do not need to be partisan spaces. I think these museums ought to be spaces in which people who do not necessarily already agree with one another can come together in a triangulated way, in which the work of art is the third point on the metaphorical triangle with the two opposing individuals. Such a space creates the opportunity for a more productive dialogue than we might have in some other oppositional context.

*Q: Your words also reminded me of a course I took this past spring, Philosophy of Contemporary Art, taught by Professor Juliane Rebentisch. We spent a lot of time on Nicholas Bourriaud's book "Relational Aesthetics," where he touched on many of the things we have discussed, such as the physical shared space of art museums and the creation of a utopian vision of bringing people together. However, Professor Tom Levin told us to be careful of the message because, as you mentioned, the art museum is a political space after all, not just a neutral utopian environment. Bringing the topic to the present day, what are the major takeaways from the Covid-19 crisis concerning the obstacles museums face in furthering this utopian environment?*

**A:** I wouldn't say that a utopian environment ought to be our goal. This question opens up a complicated set of problems. They remind of the undeniable fact that museums in the West are still, in many ways, a construct of the European Enlightenment, which is itself deeply embedded in colonialist enterprises. Museums that have globe-spanning collections like ours have the complexities of colonialism and its aftermath often interwoven in their collections.

Covid reminds me of the fundamental inequity found in our society. The disease's pathway has been striking different communities and people unevenly, often along racial and socioeconomic lines. To overlay this with the resurgence of our focus on issues of equity, diversity, inclusion, access, and social justice—for many museums, it ought to be the occasion to reconsider the kinds of projects we mount.

At Princeton, we now have a history of launching exhibitions that try to find traction in the contemporary world connected with our lived experience. In addition to grappling with environmentalism through the history of art, we mounted an exhibition a couple of years ago that focused on the history of migration, as it was visible through works of art made by Mexican immigrants to the U.S. early in the 20th century. Such a topic is inherently political but need not necessarily position itself as a part of partisan discourse.

I think there is work to be done in our institution and others to ensure that museums can be places of both comfort and provocation. Sometimes I think we have to be quietly provocative because I believe one of the fundamental issues here is that museums need to hold on to the public trust. We need to be seen as reliable, as places that put forward trustworthy information, which is such a fraught concept in recent times.

Generally, museums have withstood the assault on authority better than a lot of other institutions. If we are going to survive in the future decades, I think this must remain the case. It is a reason why I feel this delicate balance between being engaged in the world around us and avoiding things that are tainted by partisan politics is so critical if we are going to retain the public confidence in the work we do.

***Q:** What about the debate on whether museums should be reactionary to current events, such as the Covid-19 crisis or the Black Lives Matter movement? Many museums across the country have started collecting artworks and soliciting people's face masks, prints, and objects that capture the collective struggle of this nation battling against coronavirus.*

**A:** At the risk of saying something dangerous, for any museum that wasn't already doing some of those things prior to recent weeks, I don't know what reality they were paying attention to.

Museums indeed are, by definition, somewhat conservative. By that I mean they're slow to change, not least because of the history that informs many of these institutions. However, we have a responsibility to evolve as a society around us does. And even if we're prescient enough to anticipate issues that are going to be important in the fullness of time, it would be utterly irresponsible for a museum at this moment in the 21st century not to be paying incredibly close attention to issues of social justice and equity in representation. Museums that only decided three weeks ago that they suddenly need to invite artists of color to be part of their program are coming very late to the table.

I may not be very forgiving, but having said that, all of us can double down on these questions. Sharing our voice with others and inviting other forms of expertise to the table is something that those trained in the Academy don't tend to do so well. We need to recognize that there are forms of learned expertise beyond the credentialing Ph.D. programs of the Academy, which I value and myself am a product of, but we need to invite other forms of expertise to the table as well.

There are many ways in which this is going to be critical, one of which is found at Princeton. As you may know, Princeton University was built on tribal lands that formerly belonged to native populations. That history has been relatively invisible on our campus and in our galleries. I strongly feel that it's both a responsibility and a compelling creative

opportunity to engage in a new series of dialogues with native people whose historical roots were in this geographic location. This could take a variety of forms, including inviting native experts to add their voices to ours in interpreting the objects in our galleries or commissioning work that might specifically respond to the history of the land, including the history of the relocation of people. It's undoubtedly a rich vein that I would say we have only just begun to mine in potentially fruitful ways.

***Q:** Today's world has become so dynamic and volatile, with many elements forcing you to go beyond your traditional art history Ph.D. education to address these issues as a museum director. What kinds of problems do you have to think about as a museum director that forces you to think beyond what you learned in the Academy?*

**A:** If I had wanted to continue operating in a somewhat narrower scope, I would have remained a museum curator. By becoming a museum director, one has to cast a wide net, especially in providing leadership for an institution as globe-spanning as ours, keeping the university's mission of service at the forefront. Our museum hosts one of the most globe-spanning and diverse collections on any college campus in North America. I think it's both a fascinating reality and a complex responsibility. It forces the institution to tackle the questions of our moral obligation from taking on the stewardship of those collections.

These questions force me to think about more things than I ever did as a graduate student, including everything from the impact of good design in shaping a positive museum-going experience, to overcoming these resistances, and to creating a sense that we care for all of the collections, which we have a responsibility to treat with equity.

You may have observed that there's a very unfortunate upstairs-downstairs problem in the current museum building. The upper-level galleries are typically devoted to European and North American cultures, and the lower-level galleries are dedicated to non-Western cultures, the ancient world, etc. Without intending, such a layout could convey a sense of hierarchy of value and block the desire to understand these collections more synthetically, to identify and engage with how culture and ideas spread through the world, through points of contact, trade, exchange, unequal power, and relationships in history.

We are grappling with all of these ideas in making a new museum building. And, I think that in that sense, one of the silver linings of Covid is that it is provoking us to think deeply about these questions while we are in the process of designing a new museum. We have the opportunity to manifest some fresh thinking in creating a building that will then hopefully grace the Princeton campus for at least one hundred years.

***Q:** Would you mind telling us a little bit more about the new museum plans? Based on our conversation right now, it surprises me that the concern regarding Covid-19's impact on construction is less about completing the project in time, and more about this opportunity could be used to bring upon a new mission.*

**A:** Both of these concerns are in our minds. There are pragmatic questions that have to be answered, including how we're going to reopen the museum in regard to following the appropriate safety protocols, limiting attendance, mandating social distancing, etc. [Please note that after this interview the Museum, as University plans evolved, announced its galleries would remain closed to the public for the Fall semester.] But again, because we have a very unusual and privileged situation at Princeton, specifically in being able to conceptualize a spatially new museum while undergoing all of these new influences and sources of information and provocation, we are able to go beyond the mere construction concerns.

On the one hand, we're thinking about how to design a museum building that offers flexibility beyond what we ever might imagine needing so that a generation from now, whatever the societal impulses are, the museum can adapt itself to continue to serve those purposes best. Very pragmatically, one of the things that the new design will achieve is a leveling out of cultural engagement so that our focus on the arts of Asia, of Europe, of Africa assumes a form of parity in a way that more clearly messages our values at this point in history. That's unusual. Very few large collections and institutions have put most of their galleries on a single floor level because their spatial constraints make that project very difficult. We are pushing that envelope as far as we can because I think there are just so many pedagogical benefits in embarking on such a project.

***Q:** Looking at the future, I suppose there must also be an inequity among the museums and galleries in the sense that the very top institutions can embark on these new projects while surviving the current crisis, whereas most nonprofits remain struggling. Earlier, you brought up that Princeton University and other wealthy institutions have a duty to take on more social responsibilities and engage more in the public sphere. Would you mind telling us more about that?*

**A:** There are huge threats facing the cultural sector. There are estimates that as many as a third of North American museums will never reopen or will fail as a result of the devastating economic impacts of Covid. What that speaks to is an underpinning to your question. The reality is that the average museum in the United States is a very small enterprise. It might be a community-based enterprise. It might be a museum with a staff that can be counted on a single hand. Typically, those are institutions with very small endowments—the invested money that helps ensure a steady income and even things out from the good to the bad moments.

Resources are definitively distributed inequitably across institutions. It's a reason why I feel that those of us who can emerge from this still having the capacity in financial resources, in staffing, in [the] physical plant are going to need to, in a very mission-driven way, consider how we might step into the breach. If a museum in our state, for example, fails because of Covid, what would become of its collections? How do we help assure that those collections continue to exist in the public trust? That is a hypothetical, but I think a likely



reality of what lies ahead. Museums that do have the capacity need to step in to help and take on the responsibility of caring for collections and provide educational opportunities that otherwise might not be available.

At this point, it seems inevitable that these stresses are not only being felt by cultural institutions, but by all institutions. Education will experience some very significant strains in this country because of the stresses on local, state, and federal budgets. Often, what seems to happen every time there is a financial downturn is that the arts in public education suffer almost immediately. That's been true for 40 years now. And to some degree, museums have come to be essential partners to their local public school districts to help assure a level of arts education for young people. We have had a partnership program with the public school district of Trenton, NJ for about 40 years now. One of our responses in the current moment may well be that we need to grow that program to help ensure that there is a suite of opportunities available for students in the Trenton public school district at a variety of ages, to give one example.

The kinds of questions or proposals for the opportunities I'm putting forth are very much aligned with Princeton's long dedication to service, in words of our informal motto: "Princeton in the nation's service and the service of humanity." I think these are critical questions we have to ask ourselves right now, and we need to come up with short-term answers and longer-term responses.

*Q: Before I let you go, I think there is one poignant point of debate in the museum world, at least from an outsider's perspective. Should museums be allowed to sell pieces from their collection to pay for operating expenses and stay afloat? The Association of Art Museum Directors just decided at the beginning of June that you are allowed to do so for the next two years if you are severely hit by the Covid-19 crisis. You mentioned that fellow institutions like Princeton have a duty to step in. Should the government also be obliged to have this same duty? Should there be bailouts for institutions so that they don't have to sell their artwork?*

**A:** There are "bailouts" if we even want to call them that. They are probably inadequate in saving these institutions from what I'll call an "existential crisis." The specific issue you're raising around how we understand the importance of these collections is a critical one. Ordinarily, the museum industry sanctions and penalizes those institutions that treat their collections as semi-liquid assets. There's a history of struggling museums going to their collections to raise liquidity by selling artworks into the marketplace. However, doing so works against museums' fundamental enterprise, which is to care for the past and present in the manifestation of these objects.

On the one hand, I would say my response to the waiver of that penalty in the present moment is a recognition that these are exceptional circumstances. We're living through a combination of the 1918 Spanish Flu and the Great Depression, some of the

most intense stress points on society that we've seen in the last hundred years. So, it's a moment where perhaps exceptional measures should be on the table to stave off some of the direct consequences of the current situation.

That being said, any museum that undertakes to liquidate its collections casually should still be the subject of real approbation because, as I've been trying to emphasize, I think we have a responsibility to maintain public trust. If we remove that custodial, stewardship role, then I think we are putting ourselves in an inherently fragile position. Therefore, I hope very few museums exercise that allowable ability because I believe other steps can be taken. I do not recommend it, but, for museums in distress, I think it becomes possible to enter into a discussion with one's donors, with the court system, to consider whether one might use one's endowment more liberally for a short time, as opposed to selling off assets that will not return once gone. I suppose this is a long-winded way of saying I don't think there is a one size fits all answer to this problem because museums are so disparately resourced and therefore very disparately positioned to survive the challenges of these coming years.

*Q: I suppose in our history there have been instances where empires on the verge of collapse would sell their precious artworks and statues to remain afloat. I talked to my friend Will yesterday, an artist, and he cracked a relevant joke. He said, "I suppose if the Italian government can't remain solvent from the Covid-19 crisis, they could just sell the 'Mona Lisa.'" Well, Mona Lisa is in the Louvre in Paris, not Italy...*

**A:** Exactly! It is true that human history has indeed seen the movements of prized objects as fortunes rise and fall. That continues to be the case. In the last 20 years, China has become an aggressively collecting nation, a government with lots of museums, public and private nestled within it, in a way it wasn't in the previous decades when it was an exporting nation. Objects were leaving China to be acquired by collectors elsewhere in the world, including museums. This flow of collections in itself is something that you can map in a fascinating way across both geography and time, and I'm sure it will ever be thus.

I would say it is clear that we are living in an unusually fluid moment where many things feel kind of up for grabs. And to go back to the very beginning, I think it is a part of the museum's responsibility to be actively engaged in that discourse, not to be clinging in some religious fervor to past professional practices that may not necessarily be wholly relevant in the present moment. At the same time, however, museums must also cling to the core of their identity, responsibility, and ethics to be the repositories of some of the highest aspirations of the peoples of the past and the present.

*Q: I know the museum world is often seen as somewhat detached from government actions, but since the name of our show is Policy Punchline, I have to ask you at the end—what would be the punchline here? Does policy have a role in this current crisis to help the art world at all?*

**A:** In the abstract? I think it absolutely ought to. At the policy level in the U.S., this has always been a weakness if we think about the different ways in which nations engage with the cultural enterprise. If you look even in recent months and weeks into the discrepancy with which, let's say, Germany has attempted to grapple with this crisis among or with its cultural institutions versus the bailout here, I think it is clear at the policy level that we are poorly served here in the U.S.

It has always seemed to me that, again, it is a part of the responsibility of states as well as of individuals to grapple with this. In our society, obviously, we've largely regarded it to be the responsibility of philanthropy to assure that the cultural sector is alive and healthy. That may be a challenged model, but I think the outcomes, the solutions, and the pathways forward very much depend on what lies ahead in the political realm in this country.

*Q: That sounds like both an optimistic and also perplexing issue for us to tackle with going forward. Where can people learn more about the Princeton University Art Museum, about some of the ongoing initiatives you guys are putting forth right now?*

**A:** An obvious answer would be to go to our website and sign up for our weekly newsletter, which contains breaking information about events that one can participate in. We are currently offering a free membership program to encourage people to see our museum as a resource and as a part of one's life during a time of challenge. The website captures a lot of information that we publish regularly. We produce a quarterly magazine that has, among other things, essay-form writing, some written by me, archived on the website so that you can see my ongoing thinking about the responsibilities of cultural institutions writ large.

# 17

## Oil Price Crash and the Fossil Fuel Endgame

Jason Bordoff  
May 15, 2020

“ *I wouldn't have focused my whole career on policy if I didn't think it was necessary. We're not going to change at a systemwide level with just a couple of big actors. We need to change how millions of companies and individuals produce and consume energy, as well as change economic incentives and internalize social costs. Given what economists call negative externalities and the history of the environmental movement, we can deal with these issues only when policy forces us to account for those social costs and change our decisions. My optimism that we'll get there sincerely comes from talking to young leaders like both of you and the students we have at Columbia's School of International and Public Affairs and elsewhere. The passion and the wisdom that young people have is really quite inspiring.* ”

— **policy punchline** by Jason Bordoff

Professor Jason Bordoff is the founding director of the Center on Global Energy Policy at Columbia School of International and Public Affairs. He was previously a special assistant to President Obama and the Senior Director for Energy and Climate Change on the staff of the National Security Council. He has also held various senior positions in the White House and National Economic Council. He hosts his own podcast, Columbia Energy Exchange, which features in-depth conversations with some of the world's top energy and climate leaders.

***Q:** A lot has happened in the energy sector recently. Internationally, the Covid-19 crisis has caused a huge drop in oil demand and a lot of tension between the OPEC nations. In the U.S., on April 25th, the West Texas Intermediate price for oil futures delivered in May collapsed to -37 to -40 dollars a barrel at one point. It has never happened that oil prices fell into negative territory. What is your perspective on all the recent turmoil in the energy market?*

**A:** For people like myself who've been studying the energy markets for a long time, this has been rather unprecedented. The oil industry is no stranger to boom-and-bust cycles. This time, the necessary public health response to this pandemic involved social distancing and lockdown measures to varying degrees across the world. People were told to stay home and to stop traveling. Roughly 90 percent of transportation fuel being oil, oil demand collapsed, falling roughly 25 percent in the month of April. That was a shock to the oil market we've never seen before.

Basic economics says that if demand goes down, the price will go down. In response to lower prices, there's less investment. Over time, you start to see supply go down, but the system could not respond quickly enough. Once you drill a well, that well is going to usually produce for a while. It's costly and difficult to shut that well off. We ran into a situation where we were physically running out of places to put all of this oil.

That is why you saw, for just a brief period of a day or two, the price of oil actually becomes negative in the United States. The traders on Wall Street, who had probably never seen a barrel of oil, bet on the price of oil going up and down. They had contracts for a particular month that were about to expire and couldn't find people to take those off their hands for the following month.

Prices had to fall low enough in order to induce people to shut off the wells in the middle of production. That doesn't happen very often since it is costly to do and damages the wells. We also saw oil supply come off the market because OPEC and non-OPEC members—mainly Russia—reached a historic agreement to take 10 million barrels a day of oil off the market to try to help stabilize the sector. However, even that wasn't enough when demand was falling by 25 or 30 million barrels.

Geopolitically, at the very beginning of Covid-19, Russia and Saudi Arabia had a spat, because they couldn't agree to cut production. Saudi Arabia responded by actually increasing its production. The United States played matchmaker and brought Saudi Arabia and Russia back to the table. President Trump pressured them to figure things out, patch things up, and cut supply. Historically, it is rare to see the United States help Saudi Arabia and Russia come closer together.

For decades we've come to believe that lower oil prices are good for the U.S., not the other way around. 1986 was the last time that happened. Then-Vice President George H.W. Bush went to Riyadh to ask the Saudis to make oil prices lower. We were a huge oil importer at the time and low prices are obviously better for consumers at the pump. Over the last decade, the U.S. became the largest oil producer in the world and was on the cusp of becoming a net oil exporter. Suddenly, an oil price crash caused a lot more pain to

companies and workers in the United States, particularly in oil-producing states like Texas, Oklahoma, North Dakota. Then, you had senators who represent those states get angry and lobby to push up the price of oil. Eventually, President Trump took up the mantle and pushed other countries, namely Saudi Arabia and Russia, to cut production.

***Q:** You wrote an article pronouncing that Saudi Arabia came out stronger than some of the other oil-producing nations. What were some of the factors that led to Saudi Arabia being in that position? Why might Russia, at this point, be left behind because of this fluctuation in the energy market?*

**A:** I was responding to the fact that every time oil prices collapse, there's the same stream of articles about how petrol states are imperiled because oil prices are low. They claim that we're going to see political instability, and we're going to see fragile states collapse. These articles lump all oil producers together, and I'm not sure that's right.

It is certainly the case that oil producers like Iraq or Nigeria, economically fragile as they are, are going to have a lot of difficulties dealing with an oil price collapse. A country like Saudi Arabia is also greatly impacted by its fiscal situation. We have already seen the Saudis cut domestic spending and delay investments. However, they're in a much better place since they have half a trillion dollars in reserves that they can draw from. They have demonstrated an ability to borrow successfully in the international market. By drawing on their reserves and borrowing, Saudi Arabia can weather the storm.

I was also interested in thinking about what the oil price collapse might look like in the slightly sooner short term, medium term, and a few years out, not just in the immediate future. There is a reasonable scenario in which a boom will come soon. The question is the demand outlook. How quickly will oil demand come back once the virus passes? Even though we don't know when that is, what does it mean when the virus passes? We have to wait until we have a vaccine. Are we going to develop mechanisms for testing, tracing, and social distancing that will allow us to reopen? And then at that point, do people go back to pretty much life the way it used to be: getting in cars, driving heavy-duty trucks, and getting on airplanes—or will that take longer?

The evidence we're seeing so far suggests to me that it's going to be a while before people are getting on long-haul international flights, but a lot of oil demand will come back. The data in China shows that freight travel is back to where it was before. Car travel in cities is actually a little bit higher than before. People don't want to be crowded on subways, so they're driving instead. That tells me that oil demand is going to rebound pretty close to where it was before.

Supply could lag oil demand because of U.S. shale oil production, which had gone from 5 to 13 million barrels a day. Now, U.S. shale will probably fall to around 3 million barrels a day. Once prices recover, shale will start growing again, but not at the same rate that it did before. I mentioned before how a lot of oil around the world is being shut in, let's say around four or five million barrels a day. Production is also at risk of semi-permanent

damage, which means it will never come back to the market. Further, large oil companies, like Chevron and Exxon, are slashing their capital expenditures budgets. When you combine all those factors on the supply side, we could definitely see a boom if demand comes back.

On another note, Saudi Arabia is on unstable standing in Washington, D.C. on both sides of the aisle. The rhetoric of Vice President Biden and of several Republican senators has been quite strong and harsh. This served as a reminder that independence is a fallacy, at least when it comes to oil markets, energy dominance, and energy. It does not matter how much oil we produce or how much oil we import and export. If the price of oil collapses or spikes, we're still going to feel that pain in the U.S., whether it's at the pump or felt by workers and companies in the oil patch.

I was struck by all the talk of extraordinary remedies for this crisis, such as reconstituting the Texas Railroad Commission or having the G20 come up with a supply agreement. However, none of it ended up happening. We still did what we did for decades, which is to call Riyadh and ask them to do something about this. It just goes to show that, until we start using a lot less oil, the Kingdom of Saudi Arabia maintains a unique point of geopolitical leverage because it is the only country willing to hold spare capacity and put the oil on and off the market.

***Q:** The U.S. supply growth is fascinating to watch as well as the related political dynamics on the international stage. How are other countries like Venezuela, Nigeria, or Iraq holding up? What would happen if this is a prolonged oil glut?*

**A:** It is going to be really painful for a lot of these countries with declining GDP growth. Venezuela is nearly a failed state—basic foodstuffs, medical equipment, supplies, and grocery stores are already scarce. It is a tragic situation for a country that has the largest oil reserves in the world. Some of the states are in the midst of internal conflict. This is going to be an accelerant to make those conflicts much worse. I do think you're going to need the IMF step in to provide some debt relief or other assistance to these countries. They simply do not have the ability to make their way through this crisis on their own.

***Q:** Internationally, the IMF might provide some debt relief to nations. Do you see the U.S. providing any relief to oil-based states that have been hit hard? What are your thoughts on the relief for these oil companies or oil states and the use of the Strategic Petroleum Reserve? President Trump claims he is planning to lease out some of the reserve. How typical is something like that?*

**A:** For some of the petrostates we talked about, there may be ways in which the oil price gets a natural boost because of the cut in production of 10 million barrels a day, which we've never seen before. Now it's not just OPEC and Russia, because even that wasn't enough of a cut in production. They're only about 40 percent of the world's oil supply and they cannot

offset a 25 or 30 percent decline by themselves. The next day, they had a meeting of energy ministers from G20 countries. The matter at hand was if G20 would commit to cutting oil production. I did not think that would happen, and it did not.

A number of free-market economies, who came to the meeting promising to commit to an oil production, cut. OPEC did not want to do it if other people were not doing it. They got a commitment from other countries, including the United States, to cut production because low prices would force production to fall naturally. In fact, that is what is happening. With the oil market already rebalancing, we've seen oil prices rise. That agreement probably is not going to be enough to help Nigeria, Angola and similar countries recover. Therefore, IMF assistance is the next step.

The U.S. considered other options to help producers, such as filling up the U.S. Strategic Petroleum Reserve. The U.S. Strategic Petroleum Reserve holds around 700 million barrels of oil in salt caverns created in the 1990s. Under President Obama, a civil war broke out in Libya, and a million barrels a day of supply from Libya was taken off the market. Oil prices went up pretty high to around \$125 a barrel, and we did an emergency release of oil from the Strategic Petroleum Reserve in partnership with other countries in the International Energy Agency.

There were 77 million rather empty barrels, so one idea was just to fill them up. However, this became a partisan issue. Many Democrats claimed we couldn't fill the barrels since they did not want to act in support of the oil industry. One could also say it is not about helping the oil industry and a simple matter of filling up the barrels when the oil is cheap, rather than when it is expensive. However, there was no support on Capitol Hill for allocating funds to do that, so the Trump administration was unable to do it.

In the end, we made some of that space available for companies to temporarily store their own oil. Other ideas included paying companies to not produce oil or limiting imports of oil to the United States. However, these ideas required Congressional support, which was unlikely given the partisan matter of the issue.

There's a limit to what the federal government can do. As I mentioned, there was a discussion that the state of Texas might set restrictions on how much oil could be produced in Texas. That didn't happen because the industry itself opposed it. There are disagreements on what should be done between the large companies like Chevron and Exxon and these small indebted companies in the shale patch in Texas, for example. By the time Texas was starting to think about this, it was almost too late because market forces had done the work of rebalancing and explaining why U.S. production is falling off a cliff right now.

*Q: You mentioned how the Saudis are willing to take oil on and off the market, but it seems Saudi Arabia was pretty reluctant to keep oil off the market. It seems that the competition between those countries was vicious, possibly leading to an end game in which Saudi Arabia could simply keep the oil underground and wager that oil prices will come back up again in the future. Why not this time? Columbia University's Adam Tooze gave one potential explanation: countries are scared of all the activism surrounding*



*climate change issues, and the days for fossil fuel are numbered. What are your thoughts on that? Are the Saudi and Russian responses still the same as they were before? Do they think the days of fossil fuels are numbered?*

**A:** It's certainly an increasing concern and I think that while some things will be different coming out of Covid-19, some won't. I think the so-called ESG pressures—social and political pressure on oil companies—will continue to be there. Oil was already falling into disfavor, and over the last 10 years, it has been a pretty terrible sector to be invested in. Furthermore, there is an increased pressure to move toward a clean energy economy, which we are nowhere close to being on track to do. I don't think that pressure is going away. It might even be stronger coming out of this.

Having said that, we use 100 million barrels of oil a day. We put 4.2 billion people under lockdown, and the International Energy Agency projects this year that oil demand will fall 8 percent. That's a big collapse, but it's not 100 percent. It's just a reminder of how difficult it is to get off of oil. In some areas, we know how to do it, like electrifying cars. But cars are only 25 percent of oil demand. So, we would need to reduce the oil consumption of ships, planes, heavy-duty trucks, industrial uses, and petrochemicals. Some of those are a lot harder to operate without oil. It's going to take a while.

I think that while many of the petrostates, like Saudi Arabia, are concerned about the long-term move away from oil, they do not think it is happening quickly. I don't think it changes how they think about the amount of oil they put on the market today, which is mostly driven by the revenue maximization calculation: price multiplies volume. They are also concerned about what that is going to do to the price and what that will mean for overall revenue and geopolitics. Saudi Arabia cares about its relationship with the U.S. When the President of the United States goes on Twitter or picks up the phone privately and says, "We really want you to do something," they listen. That's a major part of the diplomatic dialogue between the two countries.

***Q:** Do you think that the conversation regarding climate change and the long-term shift toward renewable energy was not a large factor for the Saudis and Russians during this particular Covid-related oil drop?*

**A:** I don't think it was a huge part of the decision to cut production by 10 million barrels a day in the midst of this historic price collapse. I think it is part of what motivates a country like Saudi Arabia to develop something like its long-term Vision 2030 plan to diversify its economy. Saudi Arabia wants to be less oil dependent and develop other parts of its economy because it knows that the days of being able to rely solely on oil revenue are limited in a multi-decade horizon. It's very challenging to do that, and they're also learning how difficult it is to diversify an economy.

**Q:** *To what extent do you think the Russians or the Saudis fear such a transition? Aramco, the Saudi state oil company, had a very underwhelming IPO a few months ago. People claimed the Saudis were so rushed into taking the company public — since they needed to liquidate parts of their assets into cash — that they didn't even care about the underwhelming valuation anymore. It seems to show that they know the days of fossil fuels are numbered. Based upon recent moves by the Saudi state, do you think there is any validity in that argument?*

**A:** I can't speak for their motivation, but my guess would be that they are concerned about their ability to depend on oil revenue in the long term. That is a multi-decade horizon and a sobering reminder of how difficult it is to deal with climate change, global temperature targets, and getting rid of oil. We've had goals, targets, and annual U.N. meetings for a very long time, and oil demand has gone up, not down, every year.

The primary drivers of the growth in oil demand are our population growth and GDP growth. It's true that we've seen significant growth in electric vehicles, but it's still a small share of the total. Climate math is really hard to make work.

Here's one way to look at it. The cost of solar has fallen 90 percent in the last decade and the cost of wind has fallen by 50 percent. The cost of batteries has fallen something like 85 percent. Two thirds of the investment in new power generation last year went into clean energy. These are amazing statistics. However, for almost every one of those years in the last decade, coal, oil, and natural gas use went up. Both sides of the story could be happening at the same time.

Throughout the history of the energy sector, we have always talked about an energy transition. People typically think of it as a chart going from zero to 100 percent starting in 1850 with these great shifts. We went from wood, to coal, to natural gas, to oil and increasingly to renewables. However, they are shifting as a share of the total. If you look at that same chart, not as a percentage of the total, but by total energy use, we've never used less of anything. We're using more wood now than we did in the 1800s. Total energy demand is rising, and emerging markets around the world are growing, in South Asia, India, and China. The total pie is getting much bigger.

Dealing with climate change means not just meeting incremental energy demand growth with clean energy, but also substituting the 80 percent of the energy mix around the world that still come from fossil fuels. That number hasn't changed in 30 years. Thirty years ago, it was 80 percent, and today it's 80 percent. It's a bigger number because the total denominator has gotten bigger. We need to bring that pretty close to, if not all the way to, zero. That's a staggering challenge that we are nowhere close to reaching yet.

It's going to take more time and policy support. This year we put carbon emissions on hold in response to Covid-19. Four billion people under some form of lockdown brought carbon emissions down by 8 percent this year, and we've never seen anything like that. However, if we took seriously the target of lowering global temperature by 1.5 degrees, which is what nations committed to in The Paris Agreement, carbon emissions would need

to go down each and every year for the next decade by 8 percent. What Covid-19 achieved this year, we need to do every year. Unfortunately, there is a good reason to be skeptical that we're going to get there.

***Q:** Some of the trends in climate change as a result of Covid-19 are huge topics of discussion these days. In your view, what do you see for the future of clean energy? Do you see a hopeful future as people identify climate change as more of an issue? Or a less hopeful future in which people focus more on economic choices and use their cars more often?*

**A:** There are three broad categories to this: economic incentives, social changes, and policy dynamics.

In the short term, oil demand is going to fall 8 percent this year. Coal is going to fall 9 percent. Natural gas is going to fall 5 percent. The only form of energy that's going to grow this year is renewables, partly because renewables are so cheap. Once you have the upfront capital expense of solar projects, it's almost free to run. Renewables tend to be first in the dispatch order and get policy support as well. We have seen a sharp decline of investment in new renewable projects because the whole economy has kind of frozen up. In the immediate term, it's going to be a mixed effect of increased use of clean energy, but also some cutback of investment in new projects. A study this week found that hundreds of thousands of jobs are being lost in clean energy within the United States.

The more interesting questions are a little less answerable, like whether there might be longer-term structural shifts in society. We're building a center on global energy policy at Columbia, and it's growing quickly. Before this pandemic, we were in the middle thinking about how we're going to raise the money to have a new building on the Columbia campus, but maybe that won't be necessary. Maybe we'll think differently about the ability to work remotely.

Everyone's going to be rethinking how they commute and how they work. That may have an impact on energy in the longer term. On my podcast, I spoke with the Indian Oil and Gas Minister last week. We've all seen the pictures over Delhi of clear skies, and people like that. Will there be some social push to preserve that and keep that going? I think that's certainly possible.

The other possibility is that many parts of the world are spending trillions of dollars on economic stimulus and economic recovery. And if we're smart about how we spend those dollars, we should be making investments not just to rebuild the same way things looked before, but to make some investments today in a more sustainable energy economy moving forward.

History suggests when economies are suffering and people are feeling pinched in their pocketbook, that tends to be the overwhelming policy priority. I worry that the ambition of environmental policy may wane as a result if there is a real or perceived tradeoff

between economic growth and environmental policy. Think about the quintessential poster child in this: the Yellow-Vest protests in Paris. You raise fuel prices slightly and people take to the streets. I think this is a moment when energy prices are low, and one could take away fossil fuel subsidies and have a price on carbon. It is going to be hard to do that in a time when people are losing their jobs and are concerned about their economic future.

***Q:** Many people have argued that the Covid-19 crisis is only a preview of what's to come for climate change and analogize between these two situations. Firstly, climate change is a worldwide, time-sensitive crisis, albeit that is approaching in a couple years rather than months. Secondly, governments must act very quickly and decisively for the common interest, sometimes even against personal liberties. Do you think coming out of the Covid-19 crisis, people will say, "I would actually like to sacrifice a little bit of my freedom in order to achieve this greater good"?*

**A:** I hope so, and that should be the outcome. We need to figure out how to better communicate the urgency of climate change. People saying that the cure is worse than the disease in regard to both of these issues. Additionally, there is immense economic pain occurring as a result of the lockdown measures. But, the alternative to these lockdown measures and this economic pain is letting the pandemic rage out of control. If we did not take these lockdown measures, from an economic standpoint, it could have ended up being much worse. We could have caused more damage to the economy if we didn't incur some economic pain now.

Climate change is similar because addressing climate change comes with a cost. There are certain areas where clean energy is the cheapest source of fuel. However, it is not cheap to get to deep decarbonization. If we want to achieve a net zero carbon economy, there is a cost to doing that. There are higher costs to suffering the impacts of climate change, which people frankly don't really appreciate.

We just had the 50th anniversary of Earth Day, and I was reflecting about what it was like in 1970 when one out of every 10 Americans took to the streets, regardless of partisan lines or age. It wasn't a partisan issue. It was the American people saying, after the 1950s and 1960s, that we can't live like this anymore. There was smog in our cities; you couldn't drink out of lakes and waterways. There were signs saying, "DON'T SWIM HERE," because of the toxic water. It was finally the American people saying, "We can't do this to our air and water. It's not acceptable. It's not okay." We need that same level of urgency among people about the impacts of climate change. This is starting to change with student school strikes and Greta Thunberg on the cover of Time magazine, but we're not there yet.

***Q:** One phrase that I really love, that you use, is “turning ambition into action.” How do you think that we can do that as young people hoping to make a difference when it comes to these issues? How do you view different techniques when framing this issue? How would you approach this to help spur action?*

**A:** First, what you’re doing right now is just one good example of how to do that: helping people understand the issue better through your own interest and passion in these topics as well as deep expertise in these topics. Over the last 30 to 40 minutes, you can hear some degree of concern and skepticism, like a glass half empty. But, one thing that makes me most optimistic is seeing the passion with which students on campus think and express concern about this.

My work thinking about policy design is a little more wonky or technocratic. I ask the questions: When we have a moment of opportunity in Washington to do something on climate, what is going to deliver the biggest bang for the buck? What’s going to make the biggest dent in emissions? However, what I spend every day thinking about is not going to happen without activism. It’s not going to happen without people taking to the streets. We need an increased level of urgency, and we need young people demanding that companies and political leaders act.

Based on polls, American people overwhelmingly believe climate change is real. However, for many Americans, it’s not their number one or two priority. It’s not climate denial; it’s just still further down relative to the economy and jobs and other things. That needs to change. It’s promising that it’s already changing on both sides of the aisle, although they start from a very different place. Even more, the level of prioritization that people in their 20s put on this issue is totally different than people in their 50s or 60s. I think that is going to continue to build. It will soon become a political necessity for elected representatives to have an answer.

You might disagree about what the right answer is. We see some signs of this when Republicans also feel the need to care about this issue. It would be more market-driven or more innovation-based. But they’re not saying, “I don’t care about it much anymore.” The Green New Deal was almost helpful in that regard. While the Republicans could attack the Green New Deal as being a socialist ban on airplanes and hamburgers, the next questions are: What do you want? What’s your alternative? You started to see a small group of moderate Republicans that responded by agreeing to put a price on carbon or invest in energy innovation. It wasn’t sufficient to the scale of the problem, but at least they were engaging in discussions about solutions.

***Q:** What would be your policy prescriptions? What are some of the things you think we would have to implement in the next 5 to 10 years? Do you think something of the scale of a Green New Deal is necessary?*

**A:** The Green New Deal is a short document. It's a set of goals and ambitions. It's not actually a set of policy action items. The goal of net zero emissions is one we have to work toward. The Green New Deal framed it in the broader context, not just of climate, but of other social objectives of inequality, environmental justice, public health, housing, and all the rest.

You would need to look at how we get to that goal, and there's no one way to do it. My focus is on the things that make the biggest dent in emissions with the lowest cost possible. I think we absolutely should have a price on carbon, which is necessary, but not sufficient. It actually makes a bigger difference than people think it does in our modeling. A \$50 a ton price on carbon would reduce emissions in 2030 relative to 2005 by about 40 percent. That's a pretty big dent in emissions.

I think we also need a big investment from the government in energy innovation and R&D. We need to drive down the costs of different technologies. Solar and wind costs have come down a lot and renewables will help. However, we're also going to need a broader set of technologies for the hard-to-abate sectors, including hydrogen. How do we make cement and steel? How do we power airplanes? We're going to need to broaden the set of technologies available to us.

Climate change is such a hard problem to solve because it's the ultimate "Tragedy of the Commons" global problem. It doesn't matter where a ton of CO<sub>2</sub> pollution comes from. To solve the problems of climate change, we need really strong international cooperation and diplomacy. Obviously, pulling out of the Paris Climate Accord was the wrong thing to do, so we need to reengage there. We need to focus on reducing non-CO<sub>2</sub> greenhouse gases, like methane emissions. We would also need investments in public infrastructure and mass transit.

This is a moment when we'll need to think about rebuilding our economy coming out of this economic collapse. The cost of government borrowing is very cheap. Let's think about some of those things that will pay long-term dividends, like investments in energy innovation or in clean energy infrastructure.

**Q:** *Do you have any book recommendations besides Daniel Yergin's *The Prize*, which a lot of energy scholars frequently talk about?*

**A:** Daniel Yergin's *The Prize* is a classic. I have read it a bunch of times, and it focuses on the geopolitics and history of oil. His next book, *The Quest*, is also interesting and looks at a broader set of energy tools. Dan wrote a book called *Energy Future* in the late 1970s with a grant from the Ford Foundation before he wrote *The Prize*. It's a really interesting book, given the historical context of the late 1970s, for defining the energy problem. It wasn't about climate change back then; it was about oil security and air pollution and the future of technologies. He wrote whole chapters on efficiency and solar.

Amory Lovins wrote a good article for *Foreign Affairs* about choosing between a hard path or a soft path to meet our energy goals.

There was also a book called *Energy of Human History* that came out a couple of years ago by Richard Rhodes, a great author. It starts in Elizabethan England with extracting coal from the ground and goes up to the present. It really helps demonstrate how transformational energy, largely hydrocarbons, has been for human development. It also shows all the harms and pollution that have come with that.

On geopolitics, Megan O'Sullivan at Harvard wrote a great book a year or two ago about renewable energy. Varun Sivaram from MIT wrote a book called *Taming the Sun* just a year or two ago. Peter Fox Penner has a great book coming up soon on clean energy and the electricity grid and smart grids. Those are some more recent ones.

*Q: As the head of a global energy institute, are there any specific countries you like examining? What specific country would you recommend a young energy scholar to look into?*

**A:** There's no one country. The history of energy in the Middle East and Saudi Arabia is quite interesting, but I also find it really instructive to look at countries that are on the leading edge of the energy transition we need. The Scandinavian countries investing in clean energy and renewables. In Norway, half the cars are electric vehicles. Denmark turned their national oil and gas company into an offshore wind company.

And then the last thing: the future of whether we make it or break it for the climate is in the emerging markets in South Asia. It's not just China and India, but Pakistan and Vietnam. If you add up all of those smaller South Asian countries, we need to look at the path they're on. Will they replicate the path of growth with coal, or are they going to try to take a different path? I think that's going to be really important for the future of not just energy markets, but also the environment.

*Q: The name of our show is Policy Punchline, so I have to ask you at the end—what is the punchline here? And also, are you optimistic or pessimistic?*

**A:** I wouldn't have focused my whole career on policy if I didn't think it was necessary. There's a lot of exciting and encouraging developments with companies that are promising to decarbonize. The World Economic Forum in Davos this year was almost like a climate change conference. The heads of BlackRock and all these big investment banks are now talking about the urgency of climate change.

That's very encouraging, but not sufficient. We're not going to change at a systemwide level with just a couple of big actors. We need to change how millions of

companies and individuals produce and consume energy, as well as the economic incentives and the way we internalize social costs. The problem is changing our decisions from what kind of car we buy to where we build our next factory to our energy use.

Given what economists call negative externalities and the history of the environmental movement, we can deal with these issues only when policy forces us to account for those social costs and change our decisions. I think we can be pretty innovative. It turns out the history of the environmental movement is one where we've been able to achieve our environmental goals much more cheaply than people at the time thought we could—because of innovation.

However, that's not going to happen without policy. My optimism that we'll get there sincerely comes from talking to young leaders like you and the students we have at Columbia's School of International and Public Affairs and elsewhere. The passion and the wisdom that young people have is really quite inspiring.



# 18

## Fourth Down Situation: How the NFL's Data Chief is Responding to the Covid-19 Crisis

Iwao Fusillo  
June 2, 2020

“*My punchline is about the future. You always look forward by looking backwards, and when I look at the evolution of the chief financial officers and how they became the go-to executive for CEO and public board positions, I believe the same thing will happen for chief data officers in the next 20 years.*

”

— **policy punchline** by Iwao Fusillo

Iwao Fusillo is the Senior Vice President for Data Analytics and Insights at the National Football League (NFL). He previously worked at American Express as the Global Head of Data Strategy and Insights.

**Q:** *The sports industry is projected to lose around \$61 billion in revenue in 2020 due to Covid-19, according to a new research study published around April 20th. It said that Major League Basketball (MLB) is going to lose \$4 billion this year, while they made \$10.7 billion last year, and another estimate is around \$75 million a day [in losses]. According to ESPN, college football could lose \$4 billion due to Covid. How badly is the sports industry hurting these days? What's the plan for the NFL?*

**A:** Being in the off-season gives us a really lucky timing advantage. We weren't interrupted, and we are planning to play the full season in the fall. From my experience in the past two seasons that I've spent with the NFL, the off-season is almost a busier time in many ways than the season itself. We are in fairly regular planning mode right now, and we get the added advantage of watching our colleagues in other leagues pull together their events.

I was super impressed with NASCAR's implementation. They have done a terrific job of showing their fans the social distancing protocols that the broadcasters were using to bring NASCAR events to audiences around the world. We're looking forward to MLB, NBA, NHL, and Formula One.

**Q:** *What are fans saying about sports coming back? Do they want to start watching games live again? Is there a concern about live events? What's the sentiment here?*

**A:** We're using data to understand the fans' mindset and what they're looking for in the upcoming season. We do that in a couple of ways. One, we have our own proprietary research: the NFL fan tracker is a rotating group of fans who we survey on a daily basis. During these unprecedented times, we are asking them about a few things. One, their appetite for live sports, and the conclusion is that the demand is there. Two, we look at attendance. Three, we ask what things fans would be looking for.

We also do syndicated research, meaning we hire a third party to survey the general U.S. population with similar questions. Our go-to partner for syndicated research is a company called Nielsen, known for its measurement of TV audiences. With these dual methods, we get both a fan-centric view and a general-population view.

Here are some surprising statistics. From a consumer survey finished on May 20th, we know that 8 percent of the general public would be ready to attend a live sporting event tomorrow, literally tomorrow. That's significant. Eight percent of 300 million people is a lot of people who'd be ready to go tomorrow. Twenty-one percent would be ready to go in 30 to 60 days. Nearly 50 percent would be ready in three to four months, in time for our season. By the way, every time we have Nielsen take that measurement, typically weekly, all of those numbers rise. If we were to have asked those questions 94 days ago, at the start of Covid-19, the answer would have probably been zero percent across the board because states were shutting down and nobody really knew what was happening.

My recommendation to any business, any company, restaurant, movie house, hotel, or airline, is to constantly survey their fans and their customers to understand their sentiments. Our Fan Tracker asks what people are expecting when they return to live games. We've done seven waves of consumer research over 94 days. Are they expecting PPE (personal protective equipment)? Are they expecting social distancing? Are they expecting incremental disinfecting and cleaning services? The answer is yes to all three. More importantly, we're able to measure it very specifically.

***Q:** If you go to a restaurant, you can place the tables apart, or in Hong Kong, they put shields between tables. You really can't do that at sporting events. If people feel like they can go to a sporting event in three months, they really want to go back to pre-Covid-19 life. What do you think is driving this sentiment? Do people really miss sports or are they confident that the curve will be flattened in three months? Or, is it irrational? Do people just want to go see a game no matter what else is going on?*

**A:** All companies, except for those with their heads in the sand, are measuring all of the Covid-19 metrics. They're looking state by state at test positivity and mortality rates, etc., but the reality is that there is an emotional component, a confidence component.

I was listening to a Zoom call hosted by Carlyle, a group that owns an extensive portfolio of companies. A gentleman at Carlyle was pointing to China, saying that China has had a V-shaped economic recovery. A recovery like that depends on an emotional component. How fast people return to dine at a restaurant after it opens is an emotional decision. Carlyle compared China to California, and they said that the speed with which people are going back into retail establishments or going back to restaurants seems to be driven by their comfort level. And that's where we are.

It's just good business practice to listen to your customers. That's what we do at the NFL, and that's what our colleagues at the NBA and MLB, NHL, and NASCAR do. We're in the business of listening to our fans. I'd be shocked if any of the leagues did not do a good job of building and instilling that confidence through outward communications to their customers. I have no data to suggest this, but the comparison from Carlyle's analysis suggests that the more that sports, entertainment, airlines, and hospitality companies can communicate that we've listened to our fans and responded to what they've said they would like to see when they come back to our establishment, the faster we can reopen.

On whether the NFL could be a proxy for other industries, the emotional connection that people around the world have with sports is strong. It's probably stronger than anything else you can think of. I can't think of anything else that brings nations and brings the globe together. I know that sounds grand, but we feel passionate about that at the NFL. We really, really feel that we're here to help in the nation's recovery. We have 100 percent confidence we're going to do it.

***Q:** Let's dive into what the data analytics have looked like in the past 90 days and will look like in the future. A recent Covid-19 business intelligence analytics report indicated that 50 percent of the top 500 U.S. companies surveyed are using data analytics more because of the Covid-19 crisis. It's quite clear that the Covid-19 crisis is accelerating the trend of using data analytics as a staple feature of decision making. Why is data analytics important? What do companies stand to lose by not incorporating data into their decision making?*

A: To answer your question, I'll hearken back to the discussion we were just having before the podcast. My daughter is almost 17, and she'll be applying to colleges in the fall. One benefit of having gone to Princeton is that if you have a child who's applying, Princeton will set up a nice full-day experience for your child's visit. One of the amazing parts about it was being able to attend a couple of classes.

So, I was sitting in Politics 301 with my daughter, and I was struck that a political science, not data science, class was being taught to code in R. I talked with the professor Rocio Titunik after the class, and she said, "I feel it's my obligation to make sure that every student who graduates from Princeton knows how to code in R or Python and understands data analytics because every business you can think of—healthcare, banking, consulting, sports and entertainment, hospitality—all run on data and analytics."

I'll give you a sense of data analytics' importance and universality. Sam Palmisano, the former CEO of IBM, and Ken Chenault, the former CEO of American Express, have pulled together what they're calling a data consortium. Their premise is to bring together companies like the NFL, Facebook, Nike, MasterCard, Visa, American Express, IBM, and name-your-company, who do data and data-decisioning well to get playbooks out there more broadly. Everybody wins. This is not a competitive arena where we only want the best companies to use data and analytics for good decisioning regarding sales, support, operations, finance, or employee safety.

The reality is [that] not everybody knows how to use data to drive decisions. Because big data tools exist, because data storage has become so cheap, [and] because computing power is now universally available even to the smallest of small businesses, the temptation is to use data and data-driven decisioning for everything that you do. And that is not a good thing, because if you try to use big data for everything, you will not get anything done.

My advice for any company embarking on a data journey is to be targeted. Pick, at most, three applications to drive your data-driven decisioning. Get those quick wins. Establish that there is a clear return on investment for infrastructure in data, analytics, and talent. Data scientists are more in demand now than they have ever been. These tools, in many ways, didn't exist when I entered the field 20 years ago. Now, the tools are there, but we need to find the right applications and the highest-return investments to make.

**Q:** *How are you personally responding to this crisis as you lead your group in the NFL?*

**A:** My number one leadership principle is “make sure you learn from every crisis that you manage.” I think many leaders follow the same type of principle. Most careers are 30 to 40 years. Over the course of your career, you will have to lead through three global crises. That is just the reality. Why? Because they happen every 10 years, almost like clockwork.

For me, my first crisis was 9/11, 2001. My second was the financial crisis in 2008. Here we are, about 12 years later, in the current 2020 pandemic. The best leaders will learn from each of their crises. During both 9/11 and the financial crisis, I was with American Express using data to establish a single source of truth for decision making. After 9/11, as we looked at our global merchant portfolio at American Express, we had a number of merchants that faced financial difficulty paying us. We did not have a credit risk assessment capability, which would have had to analyze, at the time, eight million merchants in real time to understand who is a credit risk and who isn't. You need that basic knowledge to manage through any global economic crisis.

When I came to the NFL, we had several thousand corporate partners: sponsors, product partners, media partners, and the like. Using my experience from American Express, we set up a credit risk assessment capability in a matter of days so that we could analyze the several thousand partners in real time. That was a great single source of truth. We do not want opinions entering into credit risk decisions. We have to make difficult, data-driven decisions.

Another example is using the economic recovery from the financial crisis to inform our expectations regarding an economic recovery from the pandemic. We are all hoping for a V-shaped recovery. I'm not an economist, but I'm betting on a V-shaped recovery. In the financial crisis, there was something fundamentally wrong with the economy. We had banks that were undercapitalized. The most important sector in the economy had an issue, so it's not surprising that the recovery from the financial crisis took three years.

But I wouldn't expect the Covid-19 recovery to take three years. I would hope for it to be, maybe half of the length of the 2008 crisis. However, in a data-driven approach, you still need to know where the recovery is happening. We have looked at publicly available data sources like Google Trends and syndicated research like from Nielsen. Another source I haven't talked about but would recommend to anyone in data science is YouGov, which provides brand sentiment information, even on a daily basis, to the major, global brands. YouGov gives you a leading indicator as to where consumer sentiment is: are consumers ready to spend in your establishment to buy your services, to buy your products? That, to me, is really the key.

And that's the data-driven approach that we took at American Express, after the financial crisis. I learned from that. I brought that to the NFL and again, in a matter of days, we stood up early detection for consumer sentiment and consumer willingness to re-engage with our partners and our products. More to come, but those would be the two examples that I would give to your listeners.

***Q:** How are you using data to navigate decision making and planning in uncertain times like these where facts and trends seem to change weekly?*

**A:** This pandemic, unlike any before it, has led the world of data professionals to crowdsource the best and most real-time data on Covid-19 cases, testing, mortalities, and even more granular data. If you were to go back and try to find, for example, county-level infection cases for H1N1, you can't find it. That's crazy to me. Why wouldn't the world's data scientists and the world's medical scientists have access to that data? That is no longer the case in this pandemic. Now, we have tools like CoronaDataScraper.com. I'm not sure if you've ever gone to that, but that's probably the best, crowdsourced data on Covid-19 cases and mortality data. There's incredible data around socioeconomic status by county. You can do all kinds of interesting analysis.

Here's the big "But." I do not mean to be critical of the media, but the media tend to confuse decision-makers, businesses, and the general public. If you were to ask a non-data professional any statistic around Covid-19, "What are the number of cases globally today? How many people have been tested? What is the test positivity rate in New Jersey?" no non-data professional can answer that question. That is a terrible weakness to any company. Every company that operates in the U.S. or globally needs to know with absolute precision what the case volumes are and what the test positivity rates are in every region around the world in which they operate. And when they don't know that, they're operating blind. On top of that, of course, there is the consumer research. If you do not have a basic fact base, that is a big problem.

Our data analytics team's solution to this problem has been what we call a Senior Management Dashboard, which tracks all of these types of metrics and many more on a weekly basis. Every Thursday morning at eleven o'clock, I go through that dashboard live on a Zoom with every senior vice president at the NFL and above. We talk about how many people are watching tv during the crisis every week. What are they watching? Is it different by demographic? What is Gen-Z's consumption of TV versus live streams? Is a female different from male? Are different ethnic groups different? You got to have these fact bases in front of you if you're going to scenario plan and to and to understand how to help in your own company's recovery.

Going through that fact base also adds the cross-functional discussions that we wouldn't otherwise get now that we're in this odd environment of working remotely. We don't bump into each other in the hallways anymore, but those Zoom calls are a proxy for forcing people to bump into each other. If we lose that connectivity, we can miss some important opportunities: connection with our fans and opportunities to help our partners, sponsors, media partners, and product partners.

***Q:** Many of us struggled to find accurate data in this crisis. Everyone relies on data, but it seems hard to agree even on some of the facts. How do you actually collect your data to get the best set of facts that you're comfortable with? What do you do if your set of facts disagree with your colleagues at the NHL or NBA?*

**A:** In the land of Covid-19, you always want to have the chief data officer in charge of a single source of truth. Today, it's typically only a data professional, like me, or the equivalent of myself at Facebook, MasterCard, Nike, etc., who can interrogate the data and realize there are weaknesses. And then either exclude that data or disclose that there are weaknesses in the data.

For example, we have to recognize that Covid-19 mortality rates are generally understated. Why? The coroner's offices were deeply deprioritized from testing resources. Coroners do not know [whether or not] someone who died from something respiratory died from Covid-19. That is an inherent weakness in the dataset. We are increasingly seeing that some states are reporting a new, add-on dataset, which is probable Covid-19 deaths. The important thing is for the chief data officer to disclose the data's shortcomings. Then everybody knows the caveats, and the right decisions can be made.

The disaster is a non-data professional looking at data presented on, for example, a news show by non-data-professionals. Some of their data visualizations make me cringe—a map with 15 colors on it. Did anybody ever teach you the first rule in data visualization? More colors mean you don't know what you're doing with data visualization. You should not have to use different colors to get your point across.

If you have non-data professionals, let's say in a media team trying to sift through complex, new data sets, you could be operating with a false or misstated set of facts. Not to get political about this, but you question some of the data put out on the websites of certain local governments. Is it an intentionally skewed set of truths? Did you intentionally remove the probable deaths because it didn't tell such a good story? Did you intentionally remove nursing home data from the entire dataset because it didn't tell a good story? That's where you just get nervous.

A data professional will never do that. A data professional will always say, "Here are three different ways to look at the data: certain deaths, probable deaths, and nursing home deaths. All three give you three different stories and perspectives, and you should use all three." More generally, though, we are not trading notes on the Covid-19 data with the other sports leagues, there is simply not enough time. It's only been 94 days. We're all operating at Mach speed here. However, I do trade notes quite significantly with the other leagues. I know most of the data professionals at the NBA, the MLB, the USTA, and NASCAR. We trade notes on data sets themselves as well as data infrastructure. What are the best practices out there? Returning to the idea of the data consortium—the Sam Palmisano and the Ken Chenault initiative—data professionals are trying to convey that we work together across industries.

***Q:** I find your attitude on collaboration really interesting because, on the one hand, it seems that any sports league that incorporates data to engage fans will benefit, potentially at the cost of other sports. With the NFL appearing to be in many ways a leader in data analytics and across the sports industry, you still advocate for the importance of collaboration, for sharing notes, for sharing insights with other sports leagues. Especially when the NFL seems to have a competitive edge, why do you see collaboration as so important?*

**A:** We are all competitive, but the hard facts show that the average avid sports fan is generally a fan of three or more sports. There is a rising tide effect for all of the leagues to get to some minimum level of data competence. The NFL is likely on the high end of sophistication. Much of that is simply because we modeled our operating models off of those in the financial services and healthcare industry. It took seven years to build a data-driven model at American Express and 18 months at the NFL. It's not like there's some magic. We had the blueprint, and we made no mistakes.

The second thing that made for an 18-months versus seven-year journey is infrastructure—the advent of cloud computing. When I built the data and analytic practice at American Express 20 years ago, we had to spend nearly a billion dollars in computer infrastructure to store the types of data that we needed and to have the computing power we needed. Today, we use AWS (Amazon Web Services). You can just call AWS and get the infrastructure stood up tomorrow at a cost in the hundreds of thousands of dollars, not hundreds of millions, and you don't need to hire anyone full-time. Today, there are companies that will rent you data scientists by the project. You rent what you need, and then get going.

I have been able to share that journey, not only with our U.S. colleague [sports] leagues, but also European soccer teams and other international leagues. Each league is a small business. When standing up the data and analytic practice at American Express, it would have been impossible for a small business to use data and analytics at all. We couldn't do it. One is because of infrastructure, and two, you wouldn't be able to pay the talent to come in there. I highly recommend that you build up your own data science department, but you do not need to do that out of the gate. Now, there is no such thing as a cold start. You can start. You can walk, then jog, then run. Ten years ago, you could not do that. You had to go right to max speed, and, unless you were American Express ready to spend a half a billion dollars, you couldn't do it.

***Q:** Another really interesting aspect of this current crisis is that the medium through which fans experience the game is changing. Fans are not going to the stadium, and people are watching less TV. The Wall Street Journal reported that large cable and satellite TV companies are losing customers in the first three months of the year because*



*all the sports bars are all canceling subscriptions. Instead, everybody's streaming things, so engaging fans on social media has reached new levels of importance. How are you dealing with this transition?*

**A:** We have great respect for The Wall Street Journal and CNN and all those who have reported those facts. This is where I return to our own data from Nielsen. Again, Nielsen is “the currency,” as the industry calls it, for TV measurement. The Wall Street Journal is right in that there has been a singular decline in what Nielsen calls “households using TV,” and it’s been a single-digit, long-term percentage decline.

The NFL, however, has bucked that trend virtually every year that they have been in existence. For the past couple of seasons, to give you the stats, we have had two back-to-back years of 5 percent increases in game viewership. At the same time, there have been single-digit decreases in households using TV. For us, the facts are different. They’re different from any other programming, whether it’s other sports leagues, the Grammys, the Academy Awards, or other entertainment that has been on a tough track.

Part of the appeal of the NFL is it’s a relatively short season. It’s a three months season. It is, in effect, a perishable piece of inventory for fans to view and for the networks to sell against when they’re selling advertising time. You’ve heard all of the crazy statistics on Super Bowl ads and things like that. When we look at our next generation of fans, I consider them to be the Gen-Z like my 17-year-old daughter, and I would argue that millennials are probably not even the next generation anymore as they’re now the mainstream fans for us.

I’m not sure if you were able to watch our virtual draft this year, but it was an amazing feat performed by our events group over three days, a virtual experience that would rival many other sports leagues’ games. It was a fully virtual event filmed in every corner of the U.S. that you could think of. Filming in a coach’s home, a head coach’s dining room, a player’s home with all of their family, the commissioner’s basement, and seeing him eat M&Ms gave it a personal touch. Those are things that brought that Gen-Z population to the TV.

Let me give you some statistics on the draft. We have a real-time data feed. From our partnership with Nielsen giving us data on how many people are watching, and from our own data sources, we know how many people were watching through various sources of social media exactly when the commissioner Joe Burrow was making announcements about various picks; how many people were watching on TV; and what the Twitter feed looked like...we’re able to triangulate all those things.

Lo and behold, we saw the largest year-over-year increase in the Gen-Z population watching the draft—a 71 percent increase in TV viewership, not even social media. No one has been able to pull that off. Then, social media was obviously through the roof. We had 70 million people watch over the three days, the most watched draft ever [and] it’s not even a game and we’re in the middle of a pandemic! By the way, for us to count a “watch” is a high bar. You actually have to sit there and watch for a prolonged period before we count you in.

We had incredible executives like Peter O'Reilly and Michelle McKenna, our chief technology officer, pull the draft together in 30 days. They had to pivot from a life event to this virtual event, and 70.1 million people watched this thing. It's staggering. While a game lasts three hours and the draft is a three-day affair, a regular season game draws about 16 to 17 million viewers, so those viewership numbers give you a little bit of dimension. These are the figures not reported by the Wall Street Journal.

We have our clubs with many highly engaging players. A senior executive, Ian Trombetta, helps the players post videos and other content to their social media. We have had 146 million video views of club content. About 300 million people follow the players on various social platforms, Facebook, Twitter, and Instagram. The players' number of social media followers is actually six times that of followers of the NFL. That disparity makes sense if you think about Gen Z. Since they're more likely to relate to a player than the League, they are more likely to feel a connection to that player's health, wellness, and philanthropy.

***Q:** On a slightly more “philosophical” note, why do Americans love the draft this much?! Why was the draft more attention-grabbing than the actual games? So many comedians have made fun of this puzzling phenomenon; it's just amazing.*

**A:** This was certainly something of a phenomenon way before I joined the NFL. I think part of it is that the NFL has a relatively short season, and there is that pent-up demand for football in the off-season. There's also excitement for the next generation of players and getting into the minds of the teams and their strategies. It's fascinating, and it's all emotional. Data does play a part, but I think much more of the draft's popularity comes from the structures of the game and the NFL's fan engagement.

***Q:** Why don't we talk about the long term for a bit? What do you think you've learned from the shifts that the pandemic has brought about?*

**A:** In the past 90 days, I've seen a massive acceleration in the use of data analytics. I would encourage all of my chief data officer colleagues around the world and in various companies around the world to avoid doing what I did because I had no other options. Back in the early 2000s, I built [a] heavyweight, inflexible infrastructure. Now, at the NFL, we have found lightweight, rentable, highly-programmable infrastructure that we can implement in an agile development fashion. The pandemic taught us that if you made investments in heavyweight, inflexible, on-premise infrastructure, you were in trouble during this pandemic.

The NFL could pivot to deploy credit risk dashboards to all 32 teams for their thousands of partners within days only because the NFL is on the AWS Cloud. On the other hand, you've probably heard about the stories of the IRS system still being programmed in COBOL and Pascal. I'm dating myself, but I graduated from Princeton in 1988 and I

learned to code in COBOL. That is machine language. It's crazy. Why would anybody have that type of infrastructure these days?! Do not make those types of investments, unless you're the government. Go cloud, go lightweight, go programmable—that's the key.

Second, prioritize. You cannot do everything. I remember day one of working remotely pretty distinctly. To every person on my team, I said: "Take a look at your priorities. I guarantee you, by the end of the week, 90 percent of the things you were working on pre-Covid-19, you will not be working on now. You need to change your priorities." After 9/11, that's the one thing I did wrong. We tried to stay with the same priorities. I realized that the world has changed. And as important as Initiative X, Y, and Z were pre-pandemic, they are not important at the moment. That said, they will probably be important again in 2021.

In my mind, if you are in the midst of standing up a data program, do no more than three standups. Do two to three things and execute them flawlessly. Another piece right now, which will not be true 20 years from now, is that most executives and most companies are not data professionals. Therefore, they are very impatient about progress on data-driven projects. They assume that if I invest today, tomorrow I will have a return on investment because that's how marketing works. That is not how investments in data and analytics work. You have to make sure, especially if you're in the early days of your data program, that if you have three initiatives, they all drive a positive return. If not, you run the risk of having your entire data program end in today's world.

**Q:** *Can you give us an example of something the pandemic has illustrated to be a high priority?*

**A:** One priority is what we touched on a bit earlier. When I arrived at the NFL, I was quite surprised to learn that we did not have a central credit risk management capability for the thousands of vendor relationships that we have. That, to me, is a basic capability that any business should have. We stood it up in a matter of days. We continue to enhance it with agile development. Central credit risk management capability that will stand the test of time and enable us and drive millions and millions of dollars of reduced credit losses.

On the other hand, an example of the biggest initiative that we were pushing for the 2020 season and is now a 2021 season initiative is an NFL loyalty program. Airline and hotel rewards are some of the biggest drivers of data-driven fan experiences and engagements. Gone are the days of having to guess at what is important to a fan. We already use models to say, "We think Arjun is interested in this piece of merchandise; we think Tiger is interested in buying a ticket to the game," and we're reasonably good at guessing. Now, if we build a loyalty program where points are being earned towards certain types of experiences, we won't have to guess anymore. We'll do this in 2021. Delaying these types of capabilities are hard decisions, but one year of delay is not going to make a huge difference in 101 years of the league.

***Q:** Especially with the rise of contact tracing apps, issues of data privacy are coming to the forefront as we deal with the pandemic. What is the NFL doing to stay ahead of privacy regulations? With a potential wave of regulation that's coming, such as Europe's General Data Protection Regulation (GDPR) or California's new privacy regulations, what can a fan like myself expect the NFL to do with their data?*

**A:** I run a data privacy steering committee for the league as the head of the Global Head of Data and Analytics. One of the simple principles that I've laid out for the NFL is "Don't do anything that you can't explain to your mother. Or, if after explaining it to her, she feels creepy about it, don't do it." That should be the bar that we all have.

I predict that, in the next three, five, or seven years, third-party cookies will cease to exist because they do not pass my mother's test. One, I cannot explain it to her. [Do] you think you can explain third-party cookies to an 85-year-old Asian woman who grew up in Japan? She's never going to understand that. If she understood it, that feels creepy.

My mother knows exactly what I do. This is especially important to the NFL, where all of our relationships with our fans are direct, one-to-one relationships. Let me give you an example. Most of our fans let us know who their favorite team is. What do we do with the data? We give you more relevant offerings and services, whether that's merchandise, tickets, or content of the website or mobile app. What fan is not going to want that? What fan doesn't understand that? To me, that's the value of having a one-to-one relationship.

I like the idea of self-regulation, which is one of the fundamental principles for why Sam Palmisano and Ken Chenault pulled the data consortium together—because they want this group of highly-advanced, data-driven companies to set the playbooks and best practices out there so that regulators like the California attorney general's office don't feel like they have to regulate anybody. Or, if those offices feel like they do have to regulate, they'll write the regulations according to what the data consortium group of companies is doing.

What we do not want are non-data-professionals at the California attorney general's office, not to pick on them, to write regulations that are actually difficult, costly, and potentially nonsensical to implement. For example, the California Consumer Privacy Act (CCPA) was written by non-data-professionals, in my humble opinion. It was nearly impossible to implement a system that would do what was required by this California law. Some of our partner companies spent upward of 10 million dollars to implement a system just for California! We used some tricks to spend in the hundreds of thousands of dollars, but companies the size of the NFL were spending upward of two million dollars. There's no reason a company should have to spend two million dollars to adhere to a poorly written regulation. That's more money than we spend on the AWS Cloud rental. Instead, a data consortium could write these laws about data privacy computer vision, in a way that's costing a few hundred thousand dollars rather than two million dollars to implement.

The one counsel I would have to anybody entering the field of data science is communications is really important. Being able to take a reasonably complex science—computer science—and take it down to a decision-maker level says a lot. Again, 20 years

from now, I don't think that's going to be necessary because I believe most C-level executives will be well versed in the jargon, but today they're not.

***Q:** Companies like Google and Facebook are allowing employees to work remotely from home until the end of the year, and Twitter, along with a handful of other companies, are allowing their employees to work from home indefinitely. How do you feel about this so-called work from home revolution? How would you maybe approach this question from a data-driven approach to try to assess whether work from home is effective?*

**A:** I think working from home depends a lot on the business. When I think about my data and analytics role at American Express, when I think about many different roles at Twitter, at Facebook, and at Google—these companies that have all announced some variety of a remote working environment—their work cycles are far more predictable. I remember when I worked at American Express, I generally did the same thing every day. There is not an off-season, a regular season, and a postseason. There wasn't a draft and a combine. Every event for the NFL and our colleagues in sports leagues is different.

I think in the short term for the NFL, working from home seems like a viable proposition. I'm thankful for my team. We have been working 100 percent remotely for the past 94 days, which feels like 94 years. We feel fortunate because we have tools like this Zoom technology. When 9/11 hit, the American Express building was right next to the World Trade Center. We were in a remote working environment for almost a year. Zoom did not exist; smartphones did not exist; there was no video contact at all. It was hard to work from home at that point in time. The productivity levels were challenged, and feelings of real self-isolation were an issue because being on the phone is not the same as being on a video call.

However, I do not think remote work is a long-term solution for the NFL or any sports league. I'm bringing my team back into the office in the next few weeks. It was a cool experiment, but it's over for us. Also, I don't think working from home is a good idea for folks who are early in their career with high ambitions to advance their career and take on incremental responsibilities and incremental roles.

My parallel to this is that for my last job at American Express, I used to manage global teams in Australia, India, London, Mexico, Canada, and everywhere you could think of. If a team member said, "I'm ambitious and I'd like to take on new roles and someday maybe have your job," then that's great; that's the loveliest thing I can hear. The one piece of advice I told them was, "If you are working in the Canada office, the Australia office, the India office, you must do a two-year rotation in the New York or London headquarters. You cannot be out of sight and out of mind." This advice may not transfer to other companies like Google or Facebook. In today's remote world, to those who want increasing roles and responsibility, I would say, "You have to think about a balance where you're not in a 100 percent remote environment." Every person's career is a function of their own ambition.

***Q:** You are quite optimistic about the NFL's plan to come back. But just to push back—in the past couple of months, we have seen some implementations and experiments in the UFC and MLB that have had some issues. Do you think our return to sports is a little rushed?*

**A:** It's by pure luck that we have the advantage of time, and I think you're right. There will be new implementations, even within the game itself. You pointed to a couple of good examples where we can learn from our mistakes. The best leaders are not looking necessarily for perfection. The only way to be perfect is to not do anything. I've had this conversation with folks on my team about going back to the office next week. I get it. There are folks who would rather not.

I brought 200 people back into the world's financial center World Financial Center after 9/11. As strange as this may seem, high floors were a big fear factor for people back then, and I was on the 46th floor with my entire team. When I brought people back, there was a visible nervousness around people, but the alternative was to shut down and live in the corner of your bedroom for the next 50 years. While I do not want to necessarily force anyone to go back to the office, not returning to normalcy seems nonsensical to me.

But let me give you another example. My wife will be turning 62. She has type II diabetes and an autoimmune disease. Getting Covid-19 would be a serious risk for her. I could take the point of view that, while I'm not productive working from home, I do not want to put her at risk, so I'm going to stay at home until I retire from the NFL. As a leader, that doesn't seem like the right thing to do. I told my team this directly, "I have the highest risk factor of all of you, so I will be scrutinizing the return-to-work protocols. Are they taking my temperature or not as they go into the office? Is there social distancing? Are there one-way hallways? Are we not allowed to use printers? These are the types of things I'll be looking for. I'm going in first, and if I feel 100 percent comfortable, then I'll bring you back." I did the same thing after 9/11.

That's why I'm optimistic because good leaders will figure out what to do in the face of uncertainty. Will there be tripwires along the way? Of course, but if you don't hit those tripwires, then that means you have not done anything. And if we haven't done anything, we did not help raise the nation's spirit. And, last time I checked, it seems like everybody wants us to raise the nation's spirit. Also, returning to the beginning of our podcast, we know from both our internal fan tracker and the syndicated research that fans want to go back.

Collectively, all of the leagues have always been smart about this. For example, the race, in which NASCAR featured its broadcaster and pit mechanics' social distancing protocols, was the most watched race outside of the Daytona 500 since 2017. Even when the drivers were standing next to their cars, clearly more than six feet away from the next driver, they were wearing masks. Those are the things that make up, what we believe to be, a positive fan experience.

We surveyed the viewers, and that went over very well, and we're going to learn more. It goes back to what you guys had premised this podcast on, which is we have learned

a lot in this pandemic about the power of data and that real-time feedback loop as we prepare for a regular season and as we see our colleague leagues stand up their seasons.

Not everything is going to be perfect. During our virtual draft this year, did someone's Wi-Fi glitch out? Yes, it did. Did anybody care? Not really. It actually added an element of realism. We're in the midst of a pandemic. These guys are trying to raise the nation's spirits by continuing on. The nation was counting on us to do that. Can you imagine the disappointment of 70.1 million people if we didn't?

***Q:** The name of our show is *Policy Punchline*, so I have to ask you at the end—what is the punchline here?*

**A:** My punchline is about the future. You always look forward by looking backward, and when I look at the evolution of the chief financial officers and how they became the go-to executive for CEO and public board positions, I believe the same thing will happen for chief data officers in the next 20 years.

I'm a little upset because I won't be working in 20 years. Not to reveal my age, but there is an ounce of wanting to be still in corporate life 20 years from now because I believe a significant portion of CEOs of Fortune 500 companies will be ex-chief data officers and professionals with data science backgrounds. That was my takeaway from my day with my daughter at Princeton. The world will become data-driven over the next couple of decades.

# 19

## Is Contact Tracing Dumb? False Positives, Loss of Trust, and an Uncertain Path Back to Normalcy

Bruce Schneier  
May 1, 2020

“ *In times of crisis, we make tradeoffs we would not necessarily make otherwise. These tradeoffs need to be necessary and proportionate. When the crisis goes away, we need to return to normal.* ”

— **policy punchline** by Bruce Schneier

Bruce Schneier is a renowned security technologist, dubbed a “security guru” by The Economist magazine. He is the author of over a dozen books, including his latest, “Click Here to Kill Everybody,” as well as hundreds of articles and academic papers. His influential newsletter Crypto-Gram and his blog Schneier on Security are read by over 250,000 people. He has testified before Congress, served on several government committees, frequently appears on television and radio, and is regularly quoted in the press.



*Q: There has been a lot of buzz about contact tracing technology. Its nuanced technical touch promises to help us identify who we've been in contact with, identify infected regions and ultimately guide policymakers about when to open the economy. Quoting from the MIT Technology Review: "The idea is simple—since Bluetooth is constantly scanning for other devices, your phone can use wireless signals to see who you have been near. Someone who has a positive diagnosis can tell the app, which will inform everyone else who has been in the proximity to alert them about risks of possible transmission." This sounds like a fascinating idea because it theoretically bypasses worry about mass surveillance because no location or personal data information are recorded by the contact tracing app. What do you think of Bluetooth based contact tracing apps?*

**A:** I think the apps are well-designed for privacy protection, but using them for contact tracing is just kind of a dumb idea. People are finally coming around and Singapore was the most recent country to dump their contact tracing app.

This is a standard security problem of identification and the thing to look at are false positives and false negatives. Unfortunately, using an app for contact tracing is kind of a dumb idea because it has too high of an error rate to be valuable. Think about false positives—when the system registers a contact, but you don't actually get the disease. There are lots of reasons for this to happen.

Between Bluetooth and GPS, there is a lot of drift. There will be times when the app does not register that you are close with an infected individual since it does not understand the context of the interaction. For example, you can be very close to an infected individual, but there might be a wall between you. While the app may count this as a contact, it is not relevant in terms of the disease. Furthermore, it is highly probable that contact between people who are less than six feet away for more than ten minutes does not result in transmission. Meanwhile, there will be a lot of false negatives—when you get the disease, but the app doesn't tell you anything.

Even Singapore, which is a compliant population, only had a 20% penetration for the app. There are also transmissions that occur further than six feet away, such as those that have happened in restaurants across the room through the ventilation system and through surfaces that are touched and then touched again at a later time.

Here's another problem: we don't have ubiquitous, cheap, fast, accurate testing. What if you come back from grocery shopping and the app pings you saying you had a contact? Do you isolate yourself? The app would not be useful if you can't get tested immediately. On the other hand, if you come back from grocery shopping and the app does not ring, does that mean you are safe? It does not! You could have gotten the disease to any number of ways that the app did not register.

So, here's my problem. We give the app to people. They download it. All these errors happen and suddenly people are tweeting that this app doesn't work. "I got the disease. The app didn't say anything," or, "The app says I got the disease, and I didn't get the disease." Now, everyone loses trust in the app. Trust is vital. Having an app with so many errors is worse than having nothing at all because of the loss of trust.

I do not think Apple, Google, or the government are trying to sneak in a surveillance system through this app. Honestly, they have all the surveillance they need. I think there really is this desire of techies to do good. However, this is not a problem that an app is going to solve. Real contact tracing is done by health professionals through interviews like they are doing in Massachusetts or South Korea and that works. I am not impressed with the app solution.

***Q:** What is an example of a good solution that could work from a technical perspective?*

**A:** Cheap, ubiquitous, fast, accurate testing—that is what will work. It has nothing to do with your smartphone. I want people to be able to test themselves five times a day if they have to, where everyone knows exactly where they stand.

A key problem is that you could be asymptomatic and pass on the disease without knowing you have it. That is what makes this situation so dangerous. If we could give everyone a sticker that they can tape to their forehead that glows red when they have the disease, that would be great. It sounds like science fiction, but that is the kind of technology that will make a difference here, not those contact tracing apps.

***Q:** What do you think about recent proposals to issue immunity passports after we have begun to recover from the virus?*

**A:** The idea of immunity passports is as follows. I have some kind of wristband or code on my phone or something that says, “I have immunity,” so you may let me into the crowded nightclub, Disney World, sports stadiums, or restaurants. We should think really carefully as a society before we do this. My guess is it’s coming because it could be so valuable.

There are ways to do this correctly. It’s not so different from your driver’s license in that it is a credential you carry that enables you some permissions. While we can do this technically, we need to think about whether we want to do this as a society. There are real dangers to liberty in having a society of haves and have-nots and creating two tiers of citizens. Is that the kind of world we want to live in? I think we’re heading that way. While I’m not convinced it is the right thing to do, there is no problem, technically speaking.

***Q:** During times of crisis, civil liberties often are impeded. What can we do to ensure that, after this crisis, we will return to a state of the world in which they are no longer impeded?*

**A:** We have to ensure that anything we do is temporary. As you said, in times of crisis, we make tradeoffs we would not necessarily make otherwise. However, these tradeoffs need to be necessary and proportionate. When the crisis goes away, we need to return to normal. That is what we did not do well with 9/11. The crisis became the new normal.

If there is a contact tracing app on our phones, it should not be there in five years. It should only be there for this moment that we need it. However that is hard. We have a lot of function creep and it is easy to let the measures put in place be used by other things, making us suddenly feel that we cannot lose those measures.

Surveillance will do really well in some of the aggregate work we have seen during the crisis. It's not based on individual surveillance, but it's based on population trends. For example, there is a website that posts aggregate data on people's temperatures all across the U.S. based on data collected from interconnected thermometers. That is very useful in detecting hotspots for Covid-19. Now that doesn't affect civil liberties since it is anonymous and aggregated data that is really powerful.

#### Post-interview Discussion between Tiger Gao '21 & Ayushi Sinha '20

**Tiger:** *Let's dive deeper into contact tracing technologies. To me, the first layer of the problem is the technology itself. Does it actually work? Will it actually not be as effective as we think it is because of false positives and false negatives? The second layer of debate is whether people will actually use the technology even if it indeed works. There are certainly many people who don't want to feel like they're being "traced" regardless [of whether] Google and Apple are providing a decentralized solution that does not track you. Ayushi, given your technical background in computer science, what do you think of contact tracing?*

**Ayushi:** There are a few barriers to effectively implementing contact tracing. One is making sure the technology itself works—whether you use Bluetooth or geospatial technology to do the tracking. The second barrier is that you have to have faith in people to be good actors and keep this app activated at all times if they agree to use it. Third, you need to guarantee that most people have a smartphone and the proper technological infrastructure for this app to be effective. It will be likely that the communities hit hardest will not have access to this technology. Finally, you are also relying on the fact that people will indeed go get tested fast if they get an alert on their app.

**Tiger:** *Let's imagine a world in which these barriers to contact tracing didn't exist—that everyone is acting in good faith—and let's focus on the effectiveness of the tech itself. How effective is the technology? And would you mind telling us a little bit about the differences between the iterative versus single-step approach to contact tracing technology?*

**Ayushi:** The single-step approach to contact tracing is the more limited approach. Imagine a "Covid-19 family tree" that tracks everyone who tested positive and all those who they were in contact with. Whenever you are notified that you may have Covid-19 because you came in contact with some person A who has tested positive, you are placed under the branch of that person A.

However, this would not be very realistic because you might have interacted with many different people who could be at the heads of their own branches and not just person A. Then, the single-step approach would be incapable of accurately portraying that scenario as it cannot account for such a complex form of social interaction.

This is where iterative contact tracing comes in. In iterative contact tracing, if you have possibly interacted with more than one Covid-19 positive person, you would start your own branch, rather than being placed under the branch of some person A, whom you might have interacted with. This will likely be more effective because it's important to tell anyone who has been in contact with you to get tested before the virus possibly spreads.

**Tiger:** *I think it's highly important for people to realize that statistics and probabilities are much more complex than they initially seem, which means that false positives and false negatives could highly skew the accuracy of any testing and contact tracing technology.*

*In my probability theory course this spring, my professor gave us an interesting problem: Let's say there's a 1/1000 chance that somebody has this rare disease. If you fear you have the disease, you go to the doctor and get a test. There is a 95% probability [the test] comes back positive, if you actually have the disease. However, if you don't have the disease and get tested, there's still a 2% chance that the test comes back positive falsely. So, what is the actual probability of you having the disease?*

*People who have not studied concepts such as conditional probability might think the answer is 95% because there's a 95% chance that if you have the disease, you will test positive. But that is not the answer! After a series of rigorous calculations, the professor showed us that there is, in fact, only a 4.5% chance that you actually have the disease when you test positive.*

*I think this example shows how difficult it is to really make sure (and how low the probability is) that I actually got Covid-19 even if I got alerts from my phone about coming into contact with someone who tested positive. In other words, there are so many complicating layers of false positives and false negatives when dealing with the contact tracing app.*

**Ayushi:** You make an excellent point about how false positives and negatives can complicate the effectiveness of contact tracing.

Historically speaking, contact tracing has been very effective in controlling smallpox and SARS and partially effective for the hand, foot, and mouth disease, which shows that contact tracing could still be a decently powerful tool when used to uncover asymptomatic carriers. Without contact tracing, you may never be prompted to go get tested. While there are problems with false positives and negatives, contact tracing has indeed been somewhat effective in [monitoring] previous diseases where there were a lot of asymptomatic carriers.

**Tiger:** *One study suggested that if contact tracers successfully detected 90% of symptomatic cases and reached 90% of their contacts, they could reduce transmission by more than 45%. That is if you could notify people and if they could get tested immediately, it would actually help reduce transmission drastically. But, given the false positive and false negative example I gave earlier, it is really, really hard to reach this idealistic level.*

*It seems that the important pillar of this technology is testing, testing, testing. In other words, the technology can only work if you actually get tested immediately after being notified. If the testing capacity cannot be improved on a national level, merely having phone alerts doesn't help at all. This is why Mr. Schneier said that we need to fundamentally rely on "new-fashioned testing" across the country and also why prominent practitioners and scholars like Arthur Caplan (in his podcast interview with Policy Punchline) and Paul Romer (in his webinar interview with Prof. Markus Brunnermeier) have all expressed that testing is the absolute key for resolving this crisis.*

*Meanwhile, some people might not want to use contact tracing because they feel this technology hinders them from going back to work. Would you mind telling us a little bit more about those cases?*

**Ayushi:** There's a divide between people who see contact tracing as enabling a new normal and those who see the high false-positive/negative rate as impeding their ability to earn an income.

Let's take the example of college students and assume they have access to smartphones. To preserve the social experience of college, I might personally be in favor of a contact tracing app that really relies on Bluetooth, such as Apple and Google's app, if it will allow me to return to a life of normalcy. It does not feel very different from using my student ID to swipe into every campus building anyway.

However, there might not be that many people who are comfortable with and used to this kind of 24-hour location tracking that college students experience every day. At the end of the day, all contact tracing attempts to identify an individual and you can't really do this anonymously, even though Bluetooth data, as opposed to geospatial data, is better at protecting personal privacy. So, in fear of technology and the government impeding personal liberty, some may simply oppose contact tracing.

In addition, many minority and low-income communities might not opt into contact tracing that has a high rate of false positives and negatives. Say a worker does not actually have Covid-19, but just because he got an alert saying that he came into contact with someone who had Covid-19, he may be asked to stay home and not be allowed to earn a wage anymore. For many of these individuals, the thought of not working for 14 days simply because they might have Covid is terrifying. The impact of a false-positive [test result] on certain low-income workers can be incredibly detrimental.

As we evaluate contact tracing technology, we must also consider how the same technology can both hinder people from doing what they need to do to survive on a daily basis and also empower other people to return to normalcy. The question becomes who do we ask to opt in and to what extent.

**Tiger:** *I absolutely agree. You have just presented a terrifying scenario for so many Americans and I think that's why we are already seeing plenty of political backlash against contact-tracing technology.*

*These are very difficult moral, ethical, economic, and political questions to answer. When the Los Angeles mayor said that life may never go back to normal until we have a cure, people got very mad. They think they have already followed the social-distancing measures for months and it's now become unreasonable to ask them to stay in for longer.*

*Most Americans certainly have every intention to keep their fellow citizens safe, but they find it hard to grapple with the possibly devastating consequences of further lockdowns—losing their livelihoods or the small business they've spent years building—and I think that's why we're seeing a growing number of narratives urging policymakers to further contemplate the tradeoffs between lockdowns and reopening.*

# 20

## The Future of Work, Covid's Impact on Labor Markets, and Digital Currency

Martin Fleming  
June 13, 2020

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*We may be only four or five percent of the way down a path that's going to take 20 or 30 years for us to fully take advantage of its capabilities. The notion that artificial intelligence is about to take over the world really misses the challenge and the difficulty that organizations face in deploying these kinds of solutions.*

”

— **policy punchline** by Martin Fleming

Martin Fleming is IBM's Chief Economist and the head of IBM's Chief Analytics Office. His research focuses on artificial intelligence, the future of work, and digital currencies.

***Q:** Can you tell us a little about yourself, your educational background, research interest in economics, and what influenced your decision to join IBM?*

**A:** I studied economics at Tufts many years ago, earned a Ph.D., and wrote a dissertation on the use of selectivity bias, as it applies to labor markets and the employment and training of workers. This is an area of focus some of you may be familiar with if you know the work of James Heckman from Michigan University.

I then spent a number of years working for Reed Elsevier, which is an information services firm. They had a large economics department at the time. Quickly, I moved into a strategy role with them and worked at the intersection of economics, strategy, and technology. Then I spent a few years with a consulting firm in Cambridge, Massachusetts helping a variety of firms. This is where I became familiar with IBM and where they invited me to join twenty years ago.

For the past ten years, I have been in the chief economist role and I have also served as chief analytics officer. In the technology industry, it has been quite common to bring together economics and analytics. You can look at a firm like Amazon, where more economists are currently employed than at the Federal Reserve Board in Washington! Google, Zillow, Netflix... many firms are now bringing together the skills of economists and data scientists in the analytics space, and IBM has done the same.

***Q:** Would you mind telling us a little bit more about your research at the intersection of A.I. (artificial intelligence) and economics, as well as IBM's current research focus and research priorities?*

**A:** Sure. One example that illustrates the growing role of A.I. in business is Amazon. In Amazon's case, they want to make sure that they are getting your purchases to you in the most timely and efficient way. They need to be able to work out the complexity of networks and network structure and optimize those networks. You see very large trucks on the highway, and Amazon never wants to have an empty truck traveling around. So, being able to do that efficiently and effectively is a challenge.

Amazon also has localized delivery service, which adds another layer of complexity. So, network optimization is a place where economics and data science have come together over the years. Those are the kind of problems that we're all focused on: how to be able to deliver greater value to consumers and customers while at the same time creating efficiency and effectiveness for the organization who is delivering that capability, so that both sides are able to benefit.

I've spent a great deal of time looking at the impact of technology, particularly machine learning and artificial intelligence, on labor markets, and seeking to understand what that means for work in the future.



***Q:** Beginning with your early career as a consultant, can you go into some specifics about what kind of businesses you might advertise new technological developments to? And were there any businesses that might be hesitant to make changes to their models?*

**A:** When I first started in consulting more than twenty years ago, machine learning and other artificial intelligence capabilities were very limited at the time. It's been the improved computing capabilities over the last few decades that have made artificial intelligence work truly possible.

We had a number of engagements with AT&T, which was trying to see how they could transform what they were currently offering. If you remember your history, we used to have landline phones with long cords, and each individual state required that telephone companies provide service, even to those who didn't use phones very much. So, you can see it wasn't the greatest business to be in, and it was during the early Internet era, well before the iPhone was even created.

So, the strategic challenge that communications companies faced is how to move out of the regulated space and long-standing requirements they had. They wanted to better meet the needs of customers that were just beginning to enter the Internet era. But all that work is long past now, and we are focused on many different challenges.

***Q:** In your recent report, "Cognitive Enterprise," you encourage businesses to rip up the playbook and make changes within their organization to accommodate the introduction of A.I. How exactly can A.I. help businesses grow? Many criticize A.I. for overpromising its capabilities. It has mainly helped in areas such as marketing analytics but has done little in medical diagnosis, for example.*

**A:** I'm sure that all of the listeners to the podcast today have used artificial intelligence. The simplest artificial intelligence application is when you're typing a text message and your phone predicts the word that you're trying to type. That is a small, simple artificial intelligence machine learning application.

Any application that is attempting to help you and predict the outcome of the action that you're taking is, in principle, a machine learning or an artificial intelligence application. Another example is when Netflix makes a recommendation to you as to what video you might like to watch. The people at Netflix have done a great deal of artificial intelligence work to be able to provide that recommendation to you and hopefully improve your satisfaction with their service and enjoy whatever video you end up selecting. It's all about helping to make decisions and producing better quality outcomes.

**Q:** *You hear a lot of fantastic stories about companies like Google and Amazon reaping the benefits of A.I. Are there any more conventional brick-and-mortar establishments or sectors that might not have embraced A.I. in the past, but that might benefit from its implementation in the future?*

**A:** You're right that a lot of the early applications have been in the technology industry. A close cousin of the technology industry is the financial services industry, where a lot of A.I. applications are beginning to emerge. These applications range from making personal finance recommendations to consumers to making recommendations to investors. Likewise, in insurance, many of the large property and casualty insurance firms are attempting to help both themselves and consumers by making better decisions.

A smaller area is the pharmaceutical industry, where a lot of pharmaceutical research is being done by data scientists using the applications of A.I. to look at the chemical compounds that come together to produce new drugs. Using traditional physical efforts is a time-consuming process and a number of potential combinations can be eliminated through the use of artificial intelligence, helping pharmaceutical firms arrive at a successful combination of compounds more rapidly. These are some of the areas where we've already seen some applications and the work is continuing.

We're on a long path here. We may be only four or five percent of the way down a path that's going to take 20 or 30 years for us to fully take advantage of its capabilities. The notion that artificial intelligence is about to take over the world really misses the challenge and the difficulty that organizations face in deploying these kinds of solutions.

**Q:** *You've written a lot about the future of work and how it will be impacted by A.I. The Covid-19 crisis has somewhat caught us off guard, forcing many workers to transition to working from home. Has Covid-19 disrupted any of the trends that you were previously predicting?*

**A:** It really has created an enormous opportunity for transformation. Working from home is one example, but if you think a bit more broadly, consumers are looking to make decisions in a fundamentally different fashion.

There has been a lot of fear and anxiety about the spread of the virus. One piece of data to help to bring home the point is that in the month of April in the U.S., 33 percent of all the income earned was saved. The savings rate is usually in the order of 6 percent. We've already seen the attitudes of consumers shift quite significantly, and it's going to take time for all of that to unwind itself.

Ask yourself the question, are you seeing folks attending large events, sporting events, or theaters? I think the answer is no. College students are the exception, as they are still gathering in large crowds, but that's not happening with most of the rest of the world. All this to say, consumer purchasing has been dramatically impacted by all of this, and it is going to take time for that to unwind.

***Q:** On the topic of the future of work, we saw that the Fed released a report that said the unemployment rate at the end of the year was expected to be 9.3 percent, which is a huge number we haven't seen in a very, very long time. And you had released your own report on the future of work in 2019 when Chairman Powell was commenting on the first tight labor market the U.S. had seen in years. Now with this sudden transition, what would your thoughts be on how the next few years might play out?*

**A:** We are going to see the U.S. economy and the global economy struggle over the next few years. You have to first begin by having a view about public health conditions and you also have to separate public health from healthcare. Healthcare would be care delivered in a physician's office or hospital setting, which, of course, matters in this case because the capacity of the system to deliver care is the constraint that policymakers face in the presence of Covid-19. Public health is around epidemiology and virology, understanding the virus and the spread of the virus, and where that might be headed into the future.

Our view is that it is going to take time for the global population to develop sufficient immunity for the virus to no longer be a threat. The virus will never completely go away, like many other viruses we have seen before. So, we can hope over the next three or four years there will be sufficient immunity, probably as the result of a vaccine, that will mean that the virus will no longer impact our lives on a daily basis.

So, the questions are how are we going to reach that immunity and how long will it take? It's probably not going to be herd immunity and we are probably going to have to get a vaccine to be distributed worldwide. Billions of people will have to be vaccinated to build up that immunity and that will take time. Having a vaccine developed in 12-18 months would be a record pace, and even then, the vaccine would have to be manufactured in large quantities and deployed through the healthcare system.

The reason why I took you through all that is because it impacts the economic outlook. We recently got a forecast that was published by OECD, which is expecting a recession in the second half of 2020 and the beginning of 2021. This would be caused partly by the continuing waves of infections. Workers are fearful to return to work and consumers are fearful to leave their homes. This affects the supply and demand of the labor market, and we can see it's driven by the public health outlook.

***Q:** If automation is fairly easily accessible for employers, and if it's harder to bring employees back to work due to Covid-19, do you think employers may simply choose to automate their jobs and not bring workers back? It seems that this would be especially likely if the government subsequently chooses to raise the minimum wage or raise corporate taxes in the aftermath of Covid-19, as some labor economists have argued.*

**A:** Automation doesn't happen like that; it's just not how it works. When businesses automate a business process, they first ask, "Do we need the talent?" They need data scientists. They need developers. They need folks with business acumen and strategy skills so that they can understand the business process.

Second, the business process has to be transformed. If the process is not working and a company wants to introduce some automation, it shouldn't attempt to fix the process through automation. Rather, it should introduce automation in the process of transformation. Third, companies have to change the behavior of individuals. It becomes a change management challenge because nobody likes to have to change the way they do things.

All of that—the talent, the business process, the transformation, the change management—has to happen after the technology has been put in place. The shift is difficult. I would assert that it's not the most difficult piece of it, but it is still difficult nonetheless. Even a large organization like IBM thinks of itself as having dozens of business processes, all needing to be transformed. It doesn't happen quickly. It takes time to do all of this change that's occurring. You can't just snap your fingers and wish for it to change. It's real work.

***Q:** Are there any aspects of working in a corporate office and having some kind of face-to-face interaction that you feel will still be important to maintain in the future?*

**A:** Our view has always been that getting folks to work together, to sit in the same room, and be able to interact on a daily or weekly basis, is a very productive environment because everybody is all working together. Now, that's not possible, of course, when a pandemic is on. Nonetheless, there still continue to be benefits to having teams work together in a productive environment.

We've got to learn differently. How can we make use of the video conferencing capability that we all have so that we can work together and be creative, be innovative, and build off of each other's ideas? There will be other circumstances where folks need to come together, keeping the appropriate six-foot distance, but still sitting around the same area where they can engage in creative work and innovation together. The world is re-learning the difference between those two different modes of operation, and it's going to take time.

***Q:** Morgan Stanley's CEO, James Gorman, recently said that he doesn't foresee thousands of Morgan Stanley employees crowding back into skyscrapers. A lot of Silicon Valley startups have said that they're very comfortable commanding their employees remotely. For a very traditional tech giant like IBM or Oracle, is it more difficult to completely transition to remote work?*

**A:** No, I wouldn't agree with that. 95 percent of IBM employees today are working from home, and it will likely stay that way for much of the rest of the year. As far as I know,

decisions have yet to be made around when a return to the office environment will occur. Many, if not all, technology companies are still working from home.

***Q:** Many companies have begun using Zoom or other video conferencing software to connect their employees, which allows them to record all workplace interaction. Do you think that the transition to working from home will create more opportunities for employers to improve workplace efficiency through the use of A.I.?*

**A:** More data is certainly always helpful. Being able to take video or audio and turn it into data—what we would call natural language processing—is an important area of work, and a lot of progress is being made. However, it requires an enormous amount of effort to be able to deploy those capabilities. There is an enormous amount of unstructured data in the world, and we're only beginning to tackle that challenge.

***Q:** Where do you think data science and A.I. education should begin? Has IBM focused on changes in college education? What about at the high school level?*

**A:** There are certainly high school students that are learning how to code in Python, which is a great first step. We're seeing more and more of that. One of my roles at IBM is to lead the data science profession and one element of the data science profession is a certification that we've created with an outside third-party group, so that those who get certified within IBM will also have that recognition externally.

We're now in the early stages of working with two universities to begin to introduce that certification capability into their academic programs. Students who are studying data science can earn a certificate and learn about the recruitment and hiring process. We're beginning to see more and more of that activity at the undergraduate level.

***Q:** When we interviewed Iwao Fusillo, the chief data officer at the NFL, he said that there will be more chief data officers who take on CEO roles in the future. Satya Nadella at Microsoft, Sundar Pichai at Alphabet, Shantanu Narayan at Adobe, and just recently from April onwards, Arvind Krishna at IBM. These are four Indian-born executives who were trained as engineers and rose through the ranks in technical positions. Their backgrounds are very different from the stereotypical corporate American manager's background in sales and general management after receiving an MBA degree, such as Ginni Rometty, who was IBM's CEO for the last eight years. Do you think we're seeing a fundamental sea change, such that tech companies, or even companies in general, are better managed by people trained in more technically competitive backgrounds?*

**A:** Absolutely. The combination of data science and business acumen is really what we're looking for in data science. Now, there is no Renaissance person who has the whole package of skills, so you have to team people together. But, over time, we hope to develop those skills so that the folks who bring the data science skills can learn the business skills, and the folks who come with the business skills can learn the data science skills. We all have our strengths and limitations, and through experience, a company can help to even those things out.

**Q:** *Do you foresee the Covid-19 pandemic leaving long-lasting impacts on the economy?*

**A:** Economic shocks have, unsurprisingly, a significant impact on global economic activity. I'm sure many of your listeners will have learned about the great financial crisis of 2008-2009 and realize that in the subsequent 10 years, the global economy, and in particular the U.S., has really been quite disappointing in terms of productivity growth, wealth accumulation, and increased income inequality.

It turns out that economic shocks of the magnitude of the great financial crisis quite often have these persistent effects where disappointing or subpar growth conditions exist for an extended period. We can look, for example, way back in history to the 1970s, when there were two very large oil price shocks, both of which were followed by recessions and then both of which subsequently were followed by very weak economic growth.

You are probably familiar with the "China shock." David Autor at MIT has done a lot of work with his colleagues on the impact that the entrance of China into the global economy and its emergence as the world's factory has had on many parts of the United States. Not only have we seen job losses, but we've also seen quite dire social consequences, like opioid addiction, increased incarceration rates, suicides, and divorces. It is an economic shock that has had quite deep and profound social consequences.

However, not all economic shocks result in such pessimistic or poor outcomes. If you think about what happened during the Second World War in the United States, industry and manufacturing converted on a massive scale to wartime production. The auto industry was producing military vehicles. There were clothing manufacturers who were producing uniforms and equipment. Even an organization like IBM converted production to produce weapons that were needed by the military. There was an enormous disruption to economic activity.

There was a large military that was built. Many young men joined the military, learned new skills, learned new behaviors, new ways of living, became much more disciplined in their lifestyles. And, of course, many women who weren't in the military went out to work because the men who left had to be replaced by the women who stayed home. When all of this came to an end, with all this skill that was built up through experience in the military, through experience in the workforce, and the benefits of the GI Bill, there was an enormous increase in the education level of the workforce. The transformation of the manufacturing sector and all the skill that was built up resulted in a period of very strong economic growth.

The key is that when economic activity was disrupted, businesses did not return to their old ways. They found new ways with new technologies, new manufacturing processes, and new facilities combined with the new skills that workers had acquired. The resultant transformation contributed to a 30-year period of very strong growth.

Of course, there was also the Cold War, during which the enormous investment in the space program and the military created considerable intellectual property and intellectual capital, which also added to growth. One quick example that I find quite interesting is that one of the reasons why cell phones work so well today is because of data compression. There were enormous advances in data compression in the space program in the 60s and the 70s because data was being transmitted over such vast distances in outer space. Data compression became very important and has now led to enormous innovation that we are still continuing to realize all of these years later.

So, that's an example of a shock—a military, World War shock—that then led to enormous, enormous growth. We can debate the causality, but it's quite an interesting coincidence as to how all of this happened, with industry transforming from the old way to the new way, new skills, new technology, and new intellectual property being developed.

My question is, “Is the pandemic a shock of equal magnitude?” And if we're going to go through this for three or four years and we're going to disrupt our lives and be forced to find new ways to do things, is that going to result in some very positive outcomes in terms of growth, productivity, income growth, wealth, and perhaps even more or less unequal distribution of income? Those are some of the questions that we have begun to think about.

*Q: As we expand to a more global perspective, are there any economies beyond the United States that IBM might be focusing on the most? We hope our listeners know that IBM stands for International Business Machines.*

**A:** Absolutely. IBM operates in about 200 countries around the world. IBM's revenue looks a bit like global GDP in that it is distributed roughly in proportion to economic activity globally. Of course, China and Japan are very important markets for IBM. All of the growth and innovation that's occurring in those markets are places where our teams are doing quite important work. Likewise in Europe, which is now coming together in a more single-market, more unified fashion. And, of course, Africa and Latin America, which are growing very rapidly, and certainly beginning to transform and adopt many of the technologies that we're talking about here.

*Q: Returning to what you mentioned earlier about the magnitude of the current pandemic crisis, have any other economists mentioned any opinions that are contradictory to yours on what they think about this crisis?*

**A:** I haven't heard any yet, but I think it's only because it's too soon. We'll have as many opinions as we have economists on this topic, I'm sure, before too long. However, when we talk with C-level executives who are leading large organizations, they're really focused on two real priorities.

The first priority in all of these discussions is the health and safety of their workers and their workers' families. For all the criticism that business leaders and the business sector get, it has really been quite heartening to see the real genuine concern that business leaders have over the health and safety of their workforces.

The second is the notion of this longer-term transformation. I would say that most leaders don't have a firm or clear view as to where that transformation is headed or what it might look like. But, intuitively, they believe that the kind of disruption that we're experiencing is going to result in significant change over a period of a few years. It's still a bit nascent, but nonetheless, there's a recognition that we're in for some fairly significant change.

***Q:** A popular example of how quickly things change, especially within the technological sector, is Moore's Law, the idea that the number of transistors you can add to chips doubles every two years. Do you feel like your outlook on the future of work also changes every one to two years?*

**A:** That's an interesting question. I was talking with a group of colleagues recently, and we were not talking about Moore's Law, where we see capabilities doubling every 18 months, but about a law that is yet to be named around artificial intelligence, where capabilities are doubling every three months. There's a real recognition that the kind of innovation and growth necessary to be able to deliver the kind of value that we all want in both our personal and our business lives is happening at a pretty fast pace. I don't know whether or not anybody has proven the three months yet, but the hypothesis is that we're seeing very rapid change.

***Q:** You spoke about how A.I. is beginning to take hold in emerging economies. How will these advancements affect workers in developing countries? What about lower-income workers in developed countries?*

**A:** That is an interesting question because the technology could possibly have a differential impact across different regions of the world. In the United States, Western Europe, and Japan, the impact has been more on the middle-wage workers. We use the term job polarization, where the low wage and the high-wage workers are where more employment is appearing, and it's the middle-wage workers that have lost employment share.

In the developing and emerging market world, where low-cost labor has been important, many of these low-cost roles are perhaps more easily automated. One example is call center work, which we see quite a bit of in a country like India. As more and more



natural language processing capability, both for voice and for text, becomes available, there is likely to be less demand for call center workers across many of these countries.

So, the impact could be quite different across different geographies. In the U.S. and Western Europe, it will likely be more of an issue around the distribution of income and wages, particularly for middle-income workers, whereas in emerging market economies, it may be more of an issue of the share of employment for low-wage workers.

***Q:** You previously spoke about how shocks like World War II and the Cold War led to an enormous transformation of technology and an eruption of intellectual power. Right now, there is a lot of intellectual capacity being built up, and IBM research and people like you are very much at the forefront of this innovation. How are IBM and other corporations using research to take us to the next step? Do you think private corporations' research departments have a better understanding of topics like A.I. than government agencies or universities who work on A.I. research?*

**A:** It's certainly true that research organizations in the private sector are working much more closely with the really detailed and large business problems that need to be solved. So, they have the advantage of being able to do research that is directed to practical implementation and opportunities to create value.

Now, in the case of IBM, for example, we have created quite a unique partnership with MIT, where instead of IBM providing a very large financial contribution to MIT, both MIT and IBM together have formed a partnership, each contributing \$250 million over 10 years to jointly research artificial intelligence and related topics around causal inference. This is a way of being able to bring the academic community and the research community together to address and attack problems in a very practical way.

I would also suggest that partnering with governments is an important part of this. We have important partnerships with the U.S. government and, quite importantly, with the European Union.

***Q:** Another topic that we were hoping to touch on is digital currencies. Could you speak a little bit about your own research on this topic and IBM's involvement with promoting blockchain cryptocurrency, and how it might compare to what other countries in Europe and China have already tried to implement?*

**A:** The first distinction that I always try to make is the difference between a cryptocurrency, like Bitcoin, and a digital currency. Cryptocurrencies are typically used as a way of compensating developers who are contributing code in development projects. I think of those currencies as being much more like securities, which grow in value and allow one to accumulate wealth as a result. A digital currency is much more like cash, used for transactional purposes and to make transactions more efficient.

The challenge today is that when we want to make payments, particularly in the business sector, it's a very inefficient process. Imagine that we have a very large ship that leaves Japan and arrives at Long Beach Harbor with 10,000 automobiles, and there is \$5 million worth of payments that have to be made by the receivers of those automobiles to the manufacturer in Japan. It's going to take three or four days for that payment to occur. That is, in effect, a 1 percent tax, reducing the value of that payment to the manufacturer. It's a very inefficient process because every transaction takes three or four days to be completed.

A digital currency, on the other hand, is much more immediate. I can send both of you an email, and you'll get it in a few seconds. But, if I want to send you \$10,000, it's going to take four days. There is no real reason for that delay, other than the fact that there is a large number of incumbent bankers who generate a lot of revenue as a result of the payment system, as all of this cash is sitting on various balance sheets overnight at various places.

Naturally, there is a reluctance to transform that business. Somebody is going to come along and figure out how to do this more efficiently and be able to competitively threaten the existing established players. Now, we do have banks like J.P. Morgan Chase who recognize this and have been quite active in creating their own version of a digital currency. That's certainly a smart strategic initiative. But nonetheless, there's certainly a great deal of reluctance to address that source of inefficiency.

However, along come a number of smaller countries and one not so small country—China—who are launching a digital currency. The challenge is, of course, that a very large proportion of the world's transactions occur in dollars. If a digital currency is going to be really successful, it has to be a Federal Reserve digital currency because of the volume of transactions that occur.

Now, because the dollar is the world's global currency, there are enormous advantages to those of us who live in the U.S. Our interest rates are lower, meaning we can buy homes and cars and all kinds of other products, and the business sector can borrow funds at lower rates. There is what has been referred to as an exorbitant advantage of having the dollar as the global currency. There's a bit of a war here between maintaining the advantage that the U.S. has with the global currency and other nations trying to take advantage of the inefficiencies that exist and, shall we say, supplant the dollar. This is going to play out over an extended period of time, and I'm not sure anybody knows exactly yet where it's all going to take us.

***Q:** Can you talk a little bit more about how the Federal Reserve might take control of or manage a digital currency? Bitcoin is, by nature, decentralized, and it also has an interesting taxation scheme where it's treated more like an investment with capital gains. That's probably not what the federal government would have in mind if they were to introduce a new digital currency.*

**A:** There have been some very interesting proposals. For anybody who is really interested in this topic, Julia Coronado and Simon Potter at the Peterson Institute have a paper outlining exactly the kind of proposals that you're asking about.

You can imagine the Federal Reserve creating a digital currency and putting on its balance sheet a third liability, in addition to reserves and cash, and it would look like an electronic version of cash. Then, they could make that available in various ways, either to banks, dealers, or even consumers and households. Now, that's probably the most far fetched idea and would be a very radical change, and it would require significant legislative change, but you can imagine that at some future point in time.

***Q:** When you talk about adding a third element to the balance sheet, does that mean a digital currency used by the federal government might have some kind of centralized ledger system? Or, will this still be something decentralized?*

**A:** For a central bank digital currency, it would be centralized. It would sit on the central bank's balance sheet, whether it's here in the U.S. at the Federal Reserve or any of the other countries who are already doing this. That's another difference between a digital currency and a cryptocurrency, which of course is decentralized.

***Q:** Do you see any serious technological vulnerabilities with something like a cryptocurrency that we might not have seen with minted money? Is there anything that maybe IBM could get involved with?*

**A:** Of course, there are enormous issues, but there are security issues with physical currency as well. A very small proportion of \$100 bills are circulating in the U.S. Most of them are used by other somewhat nefarious creatures around the world for various transactions. There are certainly security issues on both sides of this, and like any electronic transaction, there is always going to be the need to pay attention to cyber risk.

But, with respect to the larger question of the involvement of an organization like IBM, you can imagine that if the payment system today, which is being operated by the financial sector and large financial institutions, switches over to a real-time payment system with a digital currency, a vast proportion of their IT infrastructure would have to be fundamentally redesigned and changed.

Of course, for an organization like IBM, that would be a tremendous opportunity, but on the other hand, it would be a significant change that the banking system would have to go through in order to be able to accommodate real-time payments because they're not set up to do that today. The rails that all of these transactions ride on are really based on this two- or three-day payment process.

***Q:** We quickly touched on some other economies around the world that might be implementing something like this. Do you feel that the U.S. or IBM has their eyes on any country in particular that might be piloting cryptocurrency right now?*

**A:** The Monetary Authority of Singapore is probably the central bank that has been the most active and ambitious in this space. Now, China, of course, has announced a digital currency and has begun to launch a currency. They are very active as well, in a much more limited fashion, in terms of its use and its circulation. There are other nations that are beginning to look at this work—other South Asian nations and Middle Eastern nations—and there are a number of smaller central banks that are building capabilities in this area. Somebody is going to figure this out at some point and it will change the way we do things.

***Q:** One thing that came to mind after hearing the distinction you made between cryptocurrency and digital currency is Facebook’s Libra. Although Zuckerberg went to Capitol Hill and testified, there was so much opposition, not just from U.S. lawmakers but also from European lawmakers and the Bank of International Settlements (BIS). I suppose that’s where the clear distinction comes in. Do you think that in our future, a digital currency, which is managed by the government and helps with transaction and payment, will make our life easier, whereas something controlled by a corporation will not make people feel safe enough to give their money to?*

**A:** Facebook, of course, faces their own challenges. Some of us are old enough to go back to a time in 2004 when we clicked on the “I Agree” button on Facebook and didn’t really know what we were agreeing to. Facebook probably didn’t know what they were asking us to agree to either, and subsequently have used all of our private information in many different ways, some good and perhaps some not so good.

It’s a bit of a reputational issue that Members of Congress, and also Central Bankers, have with Facebook. They are quite explicit in saying that they didn’t understand the privacy implications when we were joining the Facebook global network, and they’re certainly not going to repeat that if and when Facebook begins to be part of a group launching a digital currency. So, the regulators are taking a very active role because of the use of private information in the past. They’re not going to be fooled again.

***Q:** Do you have an expected timeline for when we should expect to see the implementation of a digital currency system?*

**A:** It’s really difficult to know. Certainly, the Chinese are going to push hard over the course of the next couple of years. The Federal Reserve has announced a plan to have a real-time payment system of sorts, which is a good first step. The Bank of England has a real-time payment system that they’re implementing.

It's going to depend on where the pressure comes from and who's willing to respond, but I don't believe it's going to happen quickly. One way to think about this is that the British pound was the global currency for a very long period of time, and early in the 20th century, the dollar became the world's global currency. These cycles last a long time. Now, we're talking about technology and a digital currency, so the cycles are probably not nearly as long. But nonetheless, the unit of measure is probably centuries: we don't know whether it's a quarter of a century, a half a century, or a full century, but it's not years. These things happen over a long period of time.

***Q:** Is there anything else that is going on in your mind or in IBM's mind that you think we haven't touched on? Anything interesting that you think might be good for our listeners to know?*

**A:** I think the topic of interest for me at the moment is the topic that we've spent time on: what is it that will follow the pandemic? The virus is not going away. We, as humans, develop immunity to them. The question is, how long is it going to take to develop enough immunity that we can return to a life where we don't have to be concerned with social distancing and wearing masks. That day will come, but it's going to take time. And when that day arrives, what will the world begin to look like? What will the transformation begin to be? Will it be more of the same or will we see some fundamental differences?

***Q:** Since the name of our show is Policy Punchline, we have to ask, what's your punchline?*

**A:** My punchline is that we're very likely to see very dramatic policy change and transformation over the course of the next several years. In the U.S., it is more likely to occur under a Biden administration, perhaps less likely to occur under a second Trump administration.

That's part of what we're seeing in the streets today. There are riots, protests, and a reaction to the racism and bigotry that we see. But I think a lot of the reaction that we see in the streets is also reflective of much greater pressure in terms of not only the pandemic, but the disappointing economic performance in general.

From "Les Misérables," there's this famous song, "Do You Hear the People Sing?" Well, the people are singing in the streets, and there is now enormous pressure for change. That is where the policy punchline comes. What are the changes that we're going to see in policy as a result of all of this pressure that has built up, not just in the racial sphere, but also for workers and from a labor market perspective, as well as campaign finance and the role of money in government? I think that we're going to see some quite significant change.

There probably will not be any presidential candidates promising the voters of America radical change because that's probably not a good way to get elected president. But ultimately, I think that's what's likely to emerge, and it's in part a reflection of what we're seeing in the streets today.

# Greater Reflection

Branko Milanovic

Nicholas Lemann

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# 21

## Capitalism Alone: A Reflection on Inequality, Social Fractures, and the Future of Capitalism

Branko Milanovic  
February 27, 2020

“ *Capitalism is now the single system in the world. It has been extremely successful in increasing standards of living throughout practically the entire globe. I'm optimistic that capitalism will continue to do so in places like Africa in this century. However, capitalism can produce goods and services efficiently only with a value system that puts the acquisition of wealth above everything else. We are not incentivized to be altruistic in such a system that is designed to generate wealth, so we have to behave in a self-interested way. But is it always desirable?* ”

— **policy punchline** by Branko Milanovic

Branko Milanovic is a visiting presidential professor at The Graduate Center, CUNY, a senior scholar at the Stone Center on Socio-economic Inequality, and the author of “Capitalism, Alone: The Future of the System that Rules the World.” Prior to these roles, he was a lead economist in the World Bank’s Research Department for 20 years. An inventive author and scholar, Professor Milanovic discusses his thoughts on money in politics, rising inequality, and imminent changes to our economic system.

**Q:** *Could you give us a quick overview of what you argue in “Capitalism, Alone: The Future of the System that Rules the World”?*

**A:** The book is written with two big events in the background. The first one is that capitalism is now alone, which means that it’s the only mode of production and the only way to organize economic life that exists today.

Now, I’ll have to explain that a little bit because some people may find this strange, or maybe they imagine that it has always been the case. Even if you go back only 200 years, you had a large part of the world with unfree labor and you cannot have capitalism with unfree labor by definition. You have to have legally free labor. This includes the United States until 1865 with slavery and parts of Europe with forced labor until the mid-19th century. Similarly, in India, to some extent in China, and then obviously in Russia with serfdom, there were different modes of production, not only capitalism.

Then after the 1917 revolution, there was, of course, another way of organizing production, which was essentially socialist or communist, with centrally planned economies and with the preponderance of state ownership. It is only after the fall of communism and China’s transition to capitalism that it has become the only mode of production.

The second big story in the background is the changing relative income ratios between the incomes of Europe and North America with respect to Asia. That’s also a huge development because historically, the gaps between Europe, for example, and China and India were relatively small. It was only with the Industrial Revolution that these gaps became large and led to the colonization of India and the quasi-colonization of China. What we are now witnessing is the return to the relativities which existed before the Industrial Revolution.

These are the two main sorts of background themes. The book deals with the capitalism of the West, or what they call the liberal or meritocratic type, and the capitalism that we see in China and elsewhere, which I call “political capitalism.”

**Q:** *How would you characterize liberal capitalism and political capitalism?*

**A:** First, let me just say that the “liberal” or “meritocratic capitalism” terminology comes from John Rawls. He used it in a slightly different context when he talked about the different types of equalities. In his view, “meritocratic” simply means that there are no legal impediments to a person achieving any position in society. It is really used as a very technical term, saying that there is no caste system or legalized class system. It is not like nobility, where only the nobles could accede to certain positions.

For Rawls, “liberal” means a little bit more than “meritocratic” because he was interested in two types of adjustments that you have to make in order for people to have similar opportunities: taxation of inheritance, which makes the starting positions of the poor and the rich more similar, and public schooling, which makes the likelihood of achieving certain positions in life more equal regardless of family background. “Liberal,” then, really means inheritance taxation plus public education.



The term “political capitalism” applies to China in particular. The concept comes from Max Weber and essentially indicates capitalist societies where the state is a bigger player than in “liberal” or “meritocratic capitalism” and the state office is used for private or economic gain.

*Q: You explained that liberal capitalism could be defined by certain characteristics such as taxation and public education, but didn't political capitalism also start providing these adjustments? How would you further distinguish the two systems?*

**A:** Yes, it is not that public education doesn't exist in political capitalism, but I simply single out the fact that the state plays a much bigger role in political capitalism than in the liberal or meritocratic system.

The definition of political capitalism is my own. There are three features that I single out. The first one is the existence of an efficient and professional bureaucracy, which is supposed to manage society and deliver a very high growth rate of the economy. The second is the absence of the rule of law. And, the third part is the autonomy of the state, meaning that the state is not captured by either professional interests or by class interests. Under liberal capitalism, by contrast, the state is essentially captured by the bourgeoisie or by capitalists and does things that are actually not autonomous.

*Q: So, are you suggesting that in political capitalism, the political class has autonomy and independence, as opposed to how the wealthy people indirectly control electoral politics through their donations?*

**A:** In liberal capitalism, there is an increasing importance of wealth and, as Marxists have argued, the state is often simply doing what the rich want—to be very blunt. There is the famous saying by Marx that the government is the committee that manages the common affairs of the bourgeoisie. But, notice here that the economic power takes over political power. The difference in political capitalism is that the autonomy of the state means that the state has the power to do things, but the state then can also take economic power. That is, officials can use the state to enrich themselves.

Therefore, I think there is a possibility of convergence in both systems where the endpoint is a combination of economic and political elites into one, but the origin of how the elite came to the top is different. In one case, it could be through political power that is used to acquire economic power, as in China. In the other case, it could be that economic power is used to “buy” political power, like Jeff Bezos, Michael Bloomberg, or Donald Trump. The end result, however, is that there are two elites combined into one. The melancholic conclusion is that the end goal of the elites in both systems is to take economic and political power.

Just to summarize the definition of political capitalism, the first characteristic of political capitalism is efficient bureaucracy. Francis Fukuyama argued, in my opinion quite persuasively, that China was the first state that was ever formed in history and that overwhelmed other social groups or never allowed them to dominate the state (premature state formation). It has an extremely long track record of nationwide examinations and the formation of a bureaucracy. The second point is the absence of rule of law and the third point is the autonomy of the state.

Now, what I find interesting is the contradiction between the first two points, which leads to corruption. Bureaucracy, in principle, simply follows the law. But if you have an absence of rule of law, which is necessary in order for the state to be able to impose certain decisions or to give people preferential treatment for political reasons, then bureaucracy cannot fully and always implement the rules. The contradiction between the need for an efficient bureaucracy, on the one hand, and the absence of rule of law, on the other hand, means that corruption becomes inherent to the system. Corruption emerges at that intersection. So, I think it is a mistake to see corruption in China as an anomaly. I'm not saying corruption is necessarily bad; I'm just saying that through some kind of incentives and bribery, it is, in fact, a lubricant for the system.

***Q:** Would it be correct to say that there is less corruption in a liberal meritocratic system than in a political capitalist system? You argue that in the liberal system, the rich are able to capture political power. But, given regulations, transparency, and free press, would voters be able to offset this to a degree?*

**A:** You actually have two questions there. The first one is about corruption. I'm not saying that corruption is nonexistent in liberal, meritocratic democracy. We all know that it does exist. I'm actually arguing that in political capitalism, it is really an integral part of the system because of the contradiction explained above.

Now, to answer the second question, one can argue that liberal capitalism is a system where real power is exerted by people who have money. Clearly, voting matters. But if you look at the percentage of people who vote by income level, it is increasing in income level practically everywhere. In other words, people who vote are people who are actually better off. Secondly, sometimes you have compulsory voting, like in Belgium or Australia. In that sense, everybody has the same chance, but where they do not have the same chance is that their concerns are not equally represented in the legislature or the government due to the influence of money. This is something that many recent empirical studies have shown.

Looking simply at what issues are being debated or taken into consideration by the legislators, it is evident that the concerns of the rich are much more likely to be debated, to be addressed, and to be legislated than the concerns of the poor. So, in that sense, we do not have the same power. I also think that we are moving further away from "one person, one vote" and it's becoming "one dollar, one vote."

I do not want to go into the details of today's elections, but I think it is a remarkable fact that in the U.S., there is now a person like Michael Bloomberg who is openly trying to buy an election. I think that has never been done in such a blatant way before. Trump, of course, didn't do it like that, simply because he didn't have money. He was outspent, as you know, by Hillary by a 4 to 1 ratio. What Bloomberg is doing is something that is quite extraordinary.

***Q:** What about the progressive wing of the Democratic Party represented by Bernie Sanders and Elizabeth Warren? Should that give people hope in the sense that if you muzzle the public and fail to address the issues for long enough, people will rise up in a grassroots fashion for a "political revolution"? For example, if you look at the Overton window of sociopolitical discourse, it has very much shifted towards what the people are concerned about, such as issues like inequality and healthcare.*

**A:** I agree with you, but I would like to skip from today's politics since the objectives of my book were not to deal with today's politics. I introduced Bloomberg because it reinforces what I was saying about the power of the rich. I'm very happy to some extent that he is confirming what is in the book, but the book was really written to last longer than one electoral cycle.

For example, I checked after the proofs were out and saw that I mentioned Trump only once. I think the word populism appears maybe once or twice. So, it was not written to be an explanation of the electoral cycle in the U.S. I'm not sure if I reached that objective. But the objective was to give us a much longer-term vision of what defines liberal capitalism and what are the dangers of the formation of an exclusivist upper class, both in liberal and political capitalisms.

***Q:** In the book, you address inequality and argue that this divergence between the rich and the poor fundamentally erodes the stability of a social welfare system. How do we solve some of those urgent issues, especially when it comes to inequality and the transmission of family advantages across generations?*

**A:** I will start with liberal capitalism because this is something that is more developed in the book, simply because my knowledge of the U.S. system is better and the access to data is better. Not only that, but the Chinese transformation to capitalism also happened over a much more recent time period. [In China] there are basically, one, maximum of two generations who have transferred advantages under this system. But in the U.S. case, there are, of course, many more generations, so one can observe the intergenerational transmission of advantages better than in China.

I argue in the book that there are systemic forces that increase inequality in contemporary capitalism, or what is also called new capitalism. I will not list all of them,

but there are six of these systemic forces. They start with the rising share of capital in total output, which I think is the result of a difference in the bargaining power between labor and capital that has changed in the past thirty years and is now much more in favor of capital. Working in the same direction is the emergence of robotics and artificial intelligence, which replace routine labor, causing the share of capital in total output to go up. This automatically, or quasi-automatically, leads to an increase in interpersonal inequality because people who receive capital income tend to be rich. That's why the rising share of total GDP or net income that goes to capitalists leads to increased interpersonal inequality.

There are other elements and I would like to point out two of them. One is homoploutia, which is the association in the same individuals or the same households of both high capital income and high labor income. This is a new concept, which appears for the first time, I think, in this book. The second element is homogamy, which means that people of similar education and income level marry each other. These two factors are very important and interesting because they lead to the reinforcement of economic advantages. For example, if you are well-off and marry somebody who is similar in capital income and has a job that is paying very well, the family advantages are obviously much reinforced.

*Q: Didn't these forces exist a long time ago as well? Haven't the rich always married within their class? And couldn't one argue that today's society is more egalitarian than ever in that people with skills and ideas have more access to resources and can become the "new rich"?*

**A:** I think that today's upper class is the most educated and quite open to outsiders, compared to the classes that were previously more defined by external criteria like nobility or clergy. It is true that the rich tended to marry other rich people, but, largely because of the emancipation of women, homogamy nowadays is different in the sense that a couple is often composed of two quasi-indistinguishable individuals. This was not the case in the past. Wives might have come from rich families but they were not working or were less educated, or were often educated in what Adam Smith called "decorative" not "useful" knowledge.

The two partners now would have acquired similar levels of high education and all the other accoutrements that go along with education, as well as possibly having inheritances. What we have now is different from the past in the sense that both of those individuals are not simply coming from a wealthy family. They are actually themselves accomplished individuals who are contributing income and working.

*Q: When it comes to inequality, you also mentioned in the book that it is a common failure of economists to distinguish between systemic and incidental factors, illustrated by the lack of understanding of some of Thomas Piketty's key formulations such as  $r >$*

*g, where the rate of return on capital exceeds the economy's growth rate. Do you think contemporary economists have lacked the ability to comprehensively understand issues of inequality and the formation of more solidified social strata in the upper class?*

**A:** I definitely think that economists were unaware of this issue until probably 10 years ago and still now to some extent. The basic reason that economics has failed is because it considers all individuals, whether poor, middle class, or rich, as simply economic “agents.” So, it obliterated the systemic and class differences. Economists have spent two decades or more discussing inequality in labor incomes, increasing returns to education, and so on. It was important work, but it failed to draw conclusions.

First, it failed to look at the distribution of capital income. In all rich countries, the Gini coefficient of capital income is twice as high as the Gini coefficient of labor income. The change in the shares of capital and labor was not discussed because the assumption was based on very flimsy evidence that the capital-labor shares are basically fixed.

Similarly, when you discuss inequality of labor incomes, you are discussing individuals without looking at who is married and related to whom because individuals appear as individual wage earners, while those wage earners mate in a non-random way. So, when you want to study society, it is important to study the class reproduction of that society. But, the class reproduction of a society does not happen with individual wage earners. It happens within the household. This means that you have to go from wage earners to the place that truly matters, which is the income of the household and what that household does for its children. You then enter into a territory that was too “forbidden” to economists, the transmission of class advantages across generations.

So, you can see now how unsatisfactory it is to look only at the distribution of wage incomes and issues like the return to education. This is only the first step on a long road. But economists often stopped there. Thomas Piketty made a great contribution by bringing capital back to the game. Before Piketty, because of the methodological and ideological (I would say) limits they imposed on themselves, economists were unable to see that high inequality might lead to a fundamental change in the structure of society. That is why economists were, until about 10 years ago, in my opinion, completely missing what was happening.

***Q:** Do you think the economists today are more aware of those systemic flaws in the way they study those issues?*

**A:** I would rather say they are systemic forces. They may not necessarily be flaws because, for example, homogamy is not a flaw. It is actually people deciding to marry people who are more similar to them and it is very natural. People go to the same schools; they develop similar interests. So, I would even say it is positive that we have a much greater choice about whom we want to partner with, compared to our parents deciding whom we should marry.

But that positive force might be a force for greater inequality. One has to realize the implications of that: not all things which lead to higher inequality are bad by themselves. To be flippant, I would say, this is “private virtue” producing “public vice.” That makes it more difficult to deal with inequality. If some of the underlying forces are actually good or desirable, how do you then design policies that stop that increase in inequality?

*Q: In another interview, you said that incremental steps that address inequality cannot fundamentally address inequality. They're inefficient and ineffective. Can you elaborate on this idea?*

**A:** The steps that have been taken in building a welfare state are absolutely important. They were the ones that reduced inequality in Western countries and, most importantly, enabled much greater equality of opportunity for those who come from less privileged backgrounds.

There are four elements of the welfare state that I think are very important. The first one is high taxation. The second is the use of tax revenues for transfers, like pensions, unemployment benefits, child allowances, and so on. The third is the importance of trade unions, the bonus of which is reflected in the ability to move the distribution in favor of labor. As I mentioned before, the labor power of trade unions was much greater in the past and consequently, the distribution of total net income was more in favor of labor than it is now. There was an interesting thesis that Bob Solow was arguing, which I think seems quite plausible. His argument was that the distribution between labor and capital was never determined purely on idealized, marginal productivity principles, but that there was always a rent element. That rent element, which is about 10 percent of GDP, is distributed as a function of relative powers. When trade unions were more powerful the rent element went more to labor and less to capital. Now, it is the opposite.

The fourth element is more widely spread education. To summarize, the elements are high taxation not only on very top incomes, but also on the middle class, high social transfers, power of trade unions, and more widely spread education, with an increase in the average years of schooling. I believe that all of these elements, which are, in my opinion, desirable to check inequality, have changed now.

So, to go back to your question, we are now facing a different situation because a revamping of the welfare state to check the current increase in inequality will be difficult. An increase in taxation on the middle class is clearly not going to work, not in this country nor in Europe. First, people do not want to pay more. Secondly, globalization is limiting governments' ability to actually tax them more.

Then, trade unions in my opinion are never going to play the role that they played in the past. They have declined in all OECD countries because the nature of the job has changed. Ironically, they are now much more important in negotiating with the state rather than with private employers. We still have trade unions in health, in education, but when

you look at Walmart or Amazon, you don't have trade unions at all. Workers do not have bargaining power. Many work units are now much smaller and are physically dispersed, which makes it more difficult to organize an effective trade union.

***Q:** You have argued that the 20th-century tools to address inequality will no longer be feasible in the 21st century. What are some of the new tools?*

**A:** Exactly. The new tools, in my opinion, have to start with a different vision. That different vision should be one where the ownership of capital is much more widely spread and where the ability of people with modest means to achieve very lucrative education is equal to that of rich people.

In the 20th century vision, decisions on redistribution are made based on market income inequality, which, before redistribution, can be quite high. People come with very different capital that they own and very different "human capital" skills. Then the state redistributes income through taxation so that even people with much less human and financial capital receive something. But, notice that the main place where redistribution occurs is at the level of redistribution of the currently created income.

In the other vision that I was arguing for, there would be much more equally distributed human capital and financial capital. In this system, redistribution by the state need not be as high as it was in the previous system simply because the differences in income would be much smaller to start with. Let's suppose that the gaps in financial capital between poor, middle class, and rich people are relatively small, much smaller than they are now. And let's suppose that skill levels are very similar. Then our income from labor and capital would be much more similar than it is now. Thus, there is less need for the state to tax the rich and to distribute to the poor. It's as simple as that. The state would not need to have as large a redistribution function as it does now if we enter both capital and labor markets with endowments that are more similar.

***Q:** Just to make sure that I understand correctly, you are saying that in the old model of redistribution and combating inequality, it is more about redistributing income through measures like high taxation or high transfers. But today, because what actually matters is one's human capital and financial power, those have become the metrics that we need to tackle and worry about. Therefore, if we can live in a society where people have relatively the same access to high education, that would be a much more preferable system than simply having large social safety net programs.*

**A:** Yes. In a nutshell, the typical welfare state system is the following: Let's suppose you're a rich guy with lots of financial capital and a high level of skills. I don't have financial capital and I don't have many skills. You earn a lot, but then the state would tax you, taking some part of your earnings and giving it to me. It's a transfer and redistribution in my favor.

Now, under this new vision, let's suppose that both you and I have more or less the same financial capital and human skills. Then what happens? Maybe you have a little bit more of both of them, so your income is a little bit higher. My income obviously is a little bit lower, but the state does not need to redistribute as much as it did in the past.

It is very important to realize that if you want lower inequality, you essentially have two ways of achieving it: either by having endowments more equal so that less redistribution is needed or by allowing the endowments to be unequal and then redistributing more. The final outcome is the same and the question is: Does your vision strive for equalization of endowments and a relatively smaller role of the state in redistribution? Or, is your vision one in which endowments could be very unequal, but the state plays a larger role in redistribution? People often do not realize that the distributions of endowments in Sweden and the U.S. are not very different. The difference is that the state in Sweden takes much more from you at the redistribution stage through taxation and gives to others who have less. The difference between the U.S. and Sweden is mostly at the level of taxation and transfer. The difference is not that the endowments in Sweden are much more equal.

*Q: But it seems like that old system of heavy redistribution was quite effective, no?*

**A:** I agree with you that it is very effective, for now. However, we have these systemic forces of inequality that are pushing it ever higher—the rising share of capital in total income, homogamy, homoploutia. The only way to counteract them is to increase the role of the state further and my argument is that that's very unlikely politically. We have reached, I think, the end of the ability of the state to use this old fashioned means of redistribution, simply because the middle class does not want to pay higher taxes, trade unions are much weaker, and you thus lack the political power to redistribute more. That's where my argument for equalization of endowments comes from. We have to shift our focus from the redistribution of current income to making endowments more equal.

*Q: I know you don't want to discuss current affairs, but since we're on the topic of taxation and redistribution, what do you think of the policy proposals made by Bernie Sanders and Elizabeth Warren, such as a wealth tax?*

**A:** Well, we do not have the numbers yet, but by the reduction of both corporate and personal income tax rates, Trump's policies so far certainly have increased inequality. There is little doubt about that.

But what is interesting in both Sanders' and Warren's plans is that they are not in contradiction with what I was saying before. It is really the inability to increase taxation on the middle class. They are talking about taxation at the very top of the income distribution



and they are talking about wealth taxes, which will only kick in after some 10 or 50 million dollars. I'm not saying that it's not a good idea. I'm just saying that it shows the political inability to further increase taxation for the middle class.

*Q: So, if they were to increase taxes on anybody with over, say, one million dollars of wealth, it would be very politically unpopular, even if those people would still be considered very wealthy relative to the rest of the world.*

**A:** It would be very politically unpopular and that's why they are not doing it. It shows that even Bernie and Warren are not the typical Western European social democrats, because social democracy was never directed only towards the top. A social democracy would have taxes directed towards the affluent middle class to provide citizen-related benefits for everybody. The philosophy was not to take money from the top and give to the poor, which is quite illiberal in a sense.

The social democracy philosophy was one in which the large middle class—people from the 30th to the 95th percentile—would play a much larger political role. They would pay much more in taxes while also getting benefits such as public education and free healthcare in return. It was a societal project, not a project where you just grabbed the money from the top. Now, I'm not criticizing Bernie or Warren because the U.S. conditions are such that you have really obscene wealth at the top and the middle class, rightly so, doesn't want to pay any more than it does now. It's a political nonstarter even in Europe. There is also the psychological aspect that you would not be very happy to pay more than 50 percent of your income to the state. And many people in Europe are already there.

*Q: In the book, you argue that it is wrong to think that in today's circumstances, people are still, as Aristotle described them, political animals who value involvement in civic matters as a general principle. In today's commercialized and hectic world, citizens have neither the time, knowledge nor the desire to get involved in civic matters unless the issues directly concern them. How much do you worry that civic connectedness is being eroded by technological innovations or whatever other factors that may be at play?*

**A:** It's a really important development. There is a part in the last chapter of the book which deals with life under hyper-commercialized capitalism, which makes it impossible to have this kind of broad interest among the citizenry. In a very commercial society, every minute is very valuable and has a shadow price. Even when people go on the Internet for leisure time, a lot of that is related to their economic interests. Either they gain something or they find good deals. In either case, it is economically motivated.

Activities that used to be called free time are no longer really free time because there is, as I mentioned, a shadow value placed on that activity. This means that we have less and less time for broad political issues, which are, strictly speaking, economically a

waste of time since our likelihood to influence the final outcome in the direction we favor is close to zero. And you need quite a lot of knowledge, leisure time, and idleness for political concerns. That's why I think that when we do political things nowadays, we do it only when it really affects us directly.

Sometimes, we ourselves may not even actually do anything, but we pay somebody to do it for us, which is the role of lobbyists. We are, as individuals, further removed from political activity. Our political activity becomes giving money to somebody else who becomes an official political actor. To think that in the modern world we have this kind of citizenry that is concerned about broader issues really flies in the face of what we have seen in many countries. People do not actually have time and are not interested in these things.

**Q:** *Is there any way we could fix this problem?*

**A:** I don't think we can fix it. I think it will become worse, but we have to deal with it. We have a society where money is power and in order to make money, you need to be on your toes all the time and use your time most efficiently. If you sleep seven hours, it's like wasted time. In a society like that, you cannot expect people to take interest in issues that do not concern them and that are also very complex at the same time. I fully understand it. It is difficult to commit time to something that does not relate to your life.

That's why I think we have to see the existence of corruption and lobbying, which is de facto legalized corruption, in the context of a hyper-commercial society. We have lobbyists to fill a specialized function because we simply do not have the time. The management team of Goldman Sachs is not going to become lobbyists themselves because it would be a total waste of their time. The most they will do is to testify in front of Congress for an hour, but the division of labor means that the bulk of the political work will be done by lobbyists they hire.

**Q:** *You mentioned in your book that there is some kind of unfounded fear of technological progress and that a universal basic income (UBI) would likely not work. How do you view the relationship between technology and some of the issues that we just talked about? How might technological advances transform the way we look at capitalism?*

**A:** I think technology would actually make the system more capitalistic, more like "turbo-capitalism." Earlier, we mentioned technology in the context of raising the share of income that belongs to capital. As we know from the work of David Autor, as well as many others, technology tends to replace routine labor, therefore eroding the labor share. So, I see it as a force that pushes inequality up.

It's interesting that you asked me about UBI. Let's suppose that we all agree that technology will replace labor and thus a lowered share of total income would go to labor compared to people who have capital income. Then many people would argue that we have

to have a guaranteed income for everybody and that is where UBI comes in. UBI is often supported by both the Left and the Right, but for different reasons. The Left believes that they would be able to make tax rates high so that they can have a reasonably high UBI. The Right supports it for an entirely different reason: “Once we pay these guys to do nothing, they cannot come back to us and say we want to tax you even more.” In that scenario, you might have people like Jeff Bezos saying, “Well, we paid you for doing nothing, so why do you want now to tax us more?” This is the incompatibility because the expectations of both sides are different and they cannot both be satisfied.

But I have a more philosophical objection to UBI. I think that a society where a certain portion of the people does not have the tools to work would essentially atrophy. It’s like not exercising or not using your brain for a while. You can do that for one day, for one week, but gradually, your ability to use your brain, to work, and to function in society deteriorates. The danger is that it would lead to a society where 10, 15, or 20 percent of people would not be participating in the labor force. There is no UBI in the U.S., but there are unemployed workers who are discouraged and who have withdrawn from the labor force. The labor force participation rate among white men in the U.S. has declined very significantly after the 2008 financial crisis.

Imagine that you lose your job and are unable to find a new one. Suppose that there is UBI, so you are able to survive. Gradually, you would move outside of the system. You would eventually choose to spend your time playing games on the Internet, drinking, and doing other wasteful activities, which is why we’re seeing the opioid crisis today. If you were to stimulate a given percentage of people to stay in their pajamas the whole day and not really participate in society, I don’t think that would be a very healthy society. It is not like this portion of the population would go to the philharmonic orchestras during their free time; they would not be functioning in society anymore.

*Q: Since you worked for the World Bank for many years, I want to ask you about imperialism, colonialism, and the theory of dependency, which is quite prominent in comparative politics and concerns the interaction between the global North and the global South. Do you think international organizations like the IMF and World Bank are neoimperialist organizations, as many have criticized them to be?*

**A:** To some extent, yes, and to another extent, no. As you know, I worked for the World Bank for some 20 years. Before World War I, there were two ways to make sure that an investment in a foreign country was not nationalized or destroyed. One was to send warships, like what Great Britain and France did. The other way was to take over the entire customs or management of the Treasury. That was the case in Egypt, Tunisia, and China. These were crude methods.

Now, international organizations are able to guarantee property through more sophisticated methods. For example, Argentina is now de facto in default and, in order to restart functioning, it has to fulfill certain conditions that the IMF is going to impose. But, the

IMF is imposing conditions that are favorable to creditors who need to be repaid. So, in that sense, the IMF is acting as a collecting agency. You can also see the protection of property rights in other locales as being much more sophisticated compared to the past. You have multilateral treaties guaranteeing investors' rights and protecting assets from nationalization. In that sense, yes, the IMF is maintaining the property of people from country X in country Y, but they're doing it in a more sophisticated way. It used to be much cruder.

***Q:** Do you still have an overall positive evaluation of these organizations and their impacts?*

**A:** Yes, I have a positive evaluation because it would be a more difficult adjustment in the absence of an international organization that is, in principle, owned by and serving the global order. I think the same holds for the World Bank, even though we cannot empirically find a positive effect of World Bank lending on growth, for example. I've seen around four studies and they all indicate that the effect is "zero plus." In other words, it's practically zero, but it's slightly positive and not in the negative. Is this sufficient? I do not know.

***Q:** The Julis-Rabinowitz Center hosted our annual conference this February, which is about development finance in fragile states. A lot of government officials and scholars showcased extremely interesting work, at least on a case-by-case basis. In development economics, for instance, one could definitely make the argument that through new tools like randomized control trials (RCTs) and microfinance, significant progress has been made in the developing world.*

**A:** Yes, I agree. One important role of those two organizations is that they facilitate knowledge sharing and information. Without them, we would not have standardized information about developments in a number of countries done in a "bureaucratically scientific" method. I worked on household surveys for 30 years, which is something that private companies can never deliver because they're not into following certain rules. They're more interested in finding out who has the money in order to sell more cars or ships. They are understandably not in the business of finding out about poverty or inequality. Thus, there is obviously a need for the production of such public knowledge goods.

The IMF and World Bank allow for a standardized system of national accounts, standardization of the balance of payment, knowledge about growth rates, knowledge about gender differences, knowledge about climate change, and so on. All this is inconceivable without organizations like the U.N., the World Bank, and the IMF. The importance of the knowledge function is not often mentioned. When the IMF goes to a country, whether it's Mali, Zambia, Burma, or Iran, there is the same framework and the same type of information that is being obtained. Serbia, my country, would not have the knowledge about itself without international organizations.

*Q: There is obviously so much in your book that we do not have the time to go through. Would you mind just quickly summarizing your vision on the convergence between political and liberal capitalism and how you see capitalism evolving in the future? I ask this because I was just talking to a friend of mine yesterday and he made the argument that capitalism will have to go away at some point. It has served its function in terms of creative destruction, bringing on innovations, getting rid of feudal systems, and so on. But in order for us to address inequality, to bring out new innovations, and to advance to the next stage of human progress, we'll have to find a new system other than capitalism, right?*

**A:** Let me present some empirical analysis about capitalism first, which I think might answer your question. The empirical part is, as I was saying at the very beginning of our conversation, that capitalism is now much more dominant as a system than it ever was in history. That is why my book is called "Capitalism, Alone." Capitalism has also deeply penetrated into our ordinary lives. Because our behavior as individuals is affected by the commercialization of leisure time, I would say that capitalism is actually much more powerful today than it ever was in intruding into our private lives. We hardly have them anymore.

Then the question becomes: are there certain dissatisfactions with inequality, with class structure, with climate change? Do we have an alternative? I think there are several problems here. One problem is that our way of thinking has become deeply capitalistic, in the sense that we cannot not think capitalistically, because everything has a shadow price now. Once you start thinking of everything in terms of pricing, then your state of mind changes. For example, I remember when a friend of mine went to an American museum for the first time many years ago and noticed that all the paintings had how much they were worth written underneath. He said that it's phenomenal because everything is now very transparent. You don't have to say that this painting is Rembrandt and beautiful. You could just say that this painting is worth three million dollars versus the other one that is worth one million. It is very transparent and we have all become used to thinking in those terms. We have one single currency: money.

That is why I do not see alternatives, or we do not have very clear alternatives. However, I recently wrote on my blog that there are three possible ways of thinking about the alternatives to capitalism. John Roemer recently wrote a very interesting, very mathematical article. The argument is that if there is a mental change in our approach and if we become much less commercially minded, then the capitalism that we know in ordinary life or production would become much more cooperative.

What is important in John Roemer's approach is that the change essentially comes from a mental, ideological change that we need to do it ourselves. One example that struck me is how we behave regarding the disposal of garbage. Nobody is checking whether we are sorting between bottles, plastic, and paper. You don't need to do it, but we do it because we are driven by our belief that the actions that we do should be the same actions that we wish others to do, which is really the Kantian approach. It is an interesting possibility (the

possibility raised by Roemer) even if I don't believe we are going to change in that direction. In fact, as you know, my opinion is the exact opposite: we are becoming more capitalistic every day.

Another possibility, argued by Piketty in his latest book "Capital and Ideology," is to supersede or transcend capitalism based on policies that would squeeze the range where capitalism rules in two different ways. If you increase taxation on wealth significantly, you would obviously reduce the economic and political power of capitalists. If on top of that, you increase participation in the management of the workforce, you would actually take some of the management role away from capital. He has plans, for example, that no single individual would be able to own more than 10 percent of the management vote, regardless of their share ownership. So, capital is limited in two ways—you tax them and then you limit their management role. But, this change needs to come from policy action. And policy action needs to come from ideological change.

The third possibility comes from me, which is based on the future change in the relative bargaining power between capital and labor. Imagine the following: the population of the world is going to stabilize around 10 billion or so. Meanwhile, we would keep on producing more and more capital because the economy will expand. So, the ratio between capital and labor would change in that labor would become increasingly scarce factor production. This is the very opposite of what happened with the end of communism and the integration of China and India into the capitalist world economy. Then, there was an inflow of labor under capitalistic conditions. Now, you would actually have much more capital and a given amount of labor.

Capital would become so abundant that individuals would essentially take the entrepreneurial function themselves. Labor becomes the entrepreneurial element and capital is simply borrowed. People might say that that is kind of strange and that it's not going to happen. But, in reality, if you look at startups today, they function exactly on that principle. People have ideas but not capital, so they find angel investors. Capitalists are no longer hiring labor. Labor is actually hiring the capitalists. Then, we can argue that it is no longer capitalism because there is simply no hired labor.

These are the three possibilities. I'm not seeing any of them happening tomorrow, but I wanted to mention them because all three of them act on different principles. As I said, I don't think a change is imminent, but I think if we want to think about the change, we have three distinct ways of doing it. The first depends on the change in our own mental framework, or what John Roemer calls "the Kantian approach." The second depends on policy changes, circumscribing the role of capitalists. The third depends on the change in the proportions and bargaining power between capital and labor: capital would be the one factor that becomes more abundant and labor would be the factor that becomes scarcer.

***Q:** What would be your punchline for this interview?*

**A:** One punchline from my book is that capitalism is now the single system in the world. It has been extremely successful in increasing standards of living throughout practically the entire globe. I'm optimistic that capitalism will continue to do so in places like Africa in this century. However, capitalism can produce goods and services efficiently only with a value system that puts the acquisition of wealth above everything else. We are not incentivized to be altruistic in such a system that is designed to generate wealth, so we have to behave in a self-interested way. But is it always desirable?

# 22

## Transaction Man: The Rise of the Deal and the Decline of the American Dream

Nicholas Lemann  
April 1, 2020

“ *As you think about an economic society, we need to think about what kind of society would give most people a good life, a measure of security, and freedom. I think you need to have that question settled by a struggle between governments and market institutions rather than by saying market institutions can do it on their own. This will produce messy and disorganized solutions that don't look good in a lab or a classroom, but they will work better for most people and better attend to people's needs.*

”

— **policy punchline** by Nicholas Lemann

Professor Nicholas Lemann is a veteran American journalist and author of six books, including his latest, “Transaction Man: The Rise of the Deal and the Decline of the American Dream.” He is the Joseph Pulitzer II and Edith Pulitzer Moore Professor of Journalism and Dean Emeritus at the Columbia Journalism School. Previously, he has worked at The Atlantic Monthly, The Washington Monthly, The Washington Post, and a variety of other newspaper and magazine companies, writing about politics, education, business, social policy, and other topics.



*Q: Could you start by giving us a brief overview of your recent book, “Transaction Man?”*

**A:** I would start with the idea that an economy is made, not born. I’m trying to write a political history of the American economy in the last century. The premise I start with is, although market forces exist, countries vary greatly in the way they set up their economies. Accordingly, the structure of an economy affects the political and social life of a country, not just its economy.

The U.S. has always been a capitalist country, but I would argue that it has been through many different versions of capitalism over the last hundred years. Picking on any topic of this dimension, you have to simplify it a little bit. I have done so by dividing it into three phases and picking a representative character for each phase—we journalists love characters and use them to enliven larger policy issues.

The overall argument of the book is that the American economy changed from being institution-oriented to being transaction-oriented over time. The first is institution-oriented, with Adolf Berle as the representative person. The second is transaction-oriented, with Michael Jensen as the representative person. The third is network-oriented, represented by Reid Hoffman.

It’s important to understand first that around the late 19th century people who we would now call thought leaders would almost all have said that the mega fact of the U.S. was the rise of big business—the industrial revolution coming to the U.S. The country and constitutional system were founded on the idea that this was an agricultural nation, with some artisans, shopkeepers, and a small banking sector.

In the decades after the civil war, big industrial behemoths arose, the so called robber barons included people like John D. Rockefeller, Andrew Carnegie, and so on. The political question became, what do we do with this? We have a political system and a constitutional system that is set up with the idea of limiting the power of the central government. The founders did not really consider the possibility of private business and private wealth growing to a point where they are equally powerful as, or more powerful than, the federal government.

That was a political question that was very much on the table from 1890 to 1940. There were a series of arguments debating how to deal with the unforeseen rise of trusts, which were foundational to that period of American politics—to the changing shape of the parties and nature of government. If you were born in that era, you’d think about the relationship between government and big businesses like how young people today naturally think about climate change.

*Q: You dive into these different economic mindsets that change throughout the century. Can you tell us more about the first representative character who illustrates the initial phase of capitalism in the U.S. and his institution-centric mindset?*

**A:** The first major character in the book is a man named Adolf Berle who was born in 1895. He was a child prodigy who obtained three degrees from Harvard by the age of 22 and emerged as one of the most promising young political thinkers in the country by his mid-twenties. Berle was later a law professor at Columbia and a key adviser to Franklin Roosevelt. He thought of himself as one of the great thinkers of human history who had been given a unique opportunity to sit at the side of an unusually powerful president at an unusually important moment.

Back in the 1920s and 1930s, the industrial corporations were new and shocking because they were unaccountable institutions controlled completely by private interests. They were more powerful than the government and the church. The government did not control them. They were supposedly controlled by their shareholders, but the shareholders didn't really have a say either. These corporations were quickly moving toward total control of the American economy.

Berle argued something very dramatic must be done to control the corporation so that it does not dominate the world without any supervision or control. The early days of the New Deal were a wonderful opportunity to impose government control because of FDR's huge majorities in both houses of Congress.

Berle helped push through a tremendous expansion in government generally, as well as a very strict regulatory regime on businesses of America. Wall Street was tightly controlled and limited in its power by the invention of the Securities and Exchange Commission, the FDIC (Federal Deposit Insurance Corporation), and other organizations that still exist today. Later on, the corporation, itself, became heavily regulated. Berle felt he was creating a regime of very large corporations whose power was balanced by the tremendously enhanced power of the central government. He believed this would be the basis of a good society.

**Q:** *Columbia Law Professor Tim Wu expressed in his book, "The Curse of Bigness: Antitrust in the New Gilded Age," that he does not agree with the vision put forth by Berle regarding big government.*

**A:** I published that book, so I know it quite well. Tim Wu's hero, and my hero too, would be Louis Brandeis. He was a Supreme Court justice and a key adviser to President Woodrow Wilson. He was a great champion of antitrust. Berle had a fascinating relationship with Brandeis. Berle's very first job out of law school was working for Brandeis, who was a friend of his father's. But, there was a really important fork in the road in liberal economic thinking because Berle was tremendously opposed to antitrust. For his whole life, he battled any effort to break up big corporations, which is why Tim Wu doesn't like him.

Berle reasoned that you need corporations to be really big because it gives big government a good target to shoot at. If you have a world with companies like General Motors, General Electric, and AT&T, that, in his view, would last forever, then the government can tell these companies to behave in certain ways. He liked the idea of very

big corporations and a very big government working together with a little bit of tension in order to create a good economic society for all.

During his younger and more hot-blooded days, Berle claimed corporations were horrible and that they were a menacing new element in society that must be controlled. After WWII, in his middle ages, Berle became very satisfied with the world he helped create. He spent his post-WWII years writing a series of books saying American capitalism is wonderful because the government has made big corporations behave. Now, corporations are regulated and unionized. They provide secure employment, pensions, and healthy working conditions. Berle believed in a managed, planned economy.

***Q:** Why did Berle's society fall apart and give rise to a transaction-based society?*

**A:** There's an old saying the past is a foreign country and it really is. When you study history, you have to be really careful to understand that people in the past did not think the way we do today. Berle was the liberal establishment at his day but spent a decades-long career writing countless books and essays while almost never mentioning people of color or women in his liberal vision.

He wasn't what we would call racist, he was just unaware. I'm sure we're all unaware of things now that will one day seem crazy to be unaware of. Because a lot of people were excluded from the vision he felt he had helped create, the political consensus behind it was a lot less robust than he thought. That's one thing that made his vision vulnerable.

A second thing that made it vulnerable was that Berle thought corporations were completely economically invulnerable. That is, no economic distress could ever happen to them. Of course, that turned out to be wrong. The obvious examples are Japanese and German auto companies that became meaningful competitors to the American auto companies in the 1960s and 1970s.

Finally, Berle claimed corporations are threatening because they are unaccountable. This is because they don't have to listen to their shareholders because their shareholders are so widely dispersed. That reasoning really changed in the late 20th century.

***Q:** Who was the major player that changed this reasoning? I think this transition would give rise to the second representative character in your book.*

**A:** The second major profile in the book is Michael Jensen, who is a conservative economist. He was trained in the very conservative economics department at the University of Chicago. Jensen though Berle was right in saying corporations ignore their shareholders completely. However, while Berle's answer to that issue was the government, Jensen, as a conservative, found a different solution.

He said corporations should empower their shareholders and reorganize themselves to serve their shareholders, not the interests of their managers. He proposed several ideas that have become standard practice in the corporate world, including paying corporate CEOs in stock options to incentivize them to have their stock perform well and having many mergers and acquisitions so that the shareholders could take control of companies and break them apart.

Jensen was an early advocate of what we would now call hedge funds and private equity companies—the very powerful investors who would take over the control of companies. The U.S. doesn't have a European-style welfare state. Instead, it has these big corporations that provide secure employment, healthcare, pensions, and things like that. I would argue that his ideas had a huge effect on the American economy and on American politics because they have been a driver of inequality and populist political energy on the Left and Right.

***Q:** The historical backdrop of that period was the dramatic financialization of the American economy, where heavy deregulation of the financial industry and “the Great Moderation” movement in policymaking shape the U.S. to be the world’s financial center, which then fueled the rise of the private equity industry that relies more on creating value through transactions.*

**A:** You’ve said it exactly right. I think it’s an extremely important change in the American (and global) economy and politics. I wrote the book trying to call attention to it because I don’t think people trying to understand the world today understand the importance of this.

It’s essentially a transition period between two versions of capitalism. The first version of capitalism is institution-oriented and has a big, eternal, regulated corporation as the central institution. The second version is transaction-oriented with finance playing a much more important economic role. And deals, fluidity, and, to some extent, instability, have become key.

Bill Clinton was president when Jensen’s ideas about financialization were at their very peak in 1997. He was heavily deregulating the financial system that Berle had heavily regulated years earlier. An organization called the Business Council composed of the CEOs of the biggest corporations in the U.S. issued an official statement in 1997 saying the only purpose of a corporation is to enhance shareholder value, full stop. A corporation should only be judged by [its] stock price.

Twenty-two years later in the summer of 2019, the same organization issued another statement indicating a clear change of mind. They said the corporation is a social institution and its purpose is to serve multiple stakeholders in the interests of society, not just its shareholders. That is going right back to Adolf Berle’s vision for a corporation and their statement was clearly in response to a very different political mood in the world, compared to 22 years ago.

*Q: What's wrong with the shareholder value regime?*

**A:** The shareholder value regime only works up to a point. Some would argue it doesn't work because it promotes very, very short-term thinking by corporations. Corporations were built up in the mid 20th century to be social institutions as well as economic institutions. They were understood to have a purpose of making money, but also a purpose of providing some aspects of a traditional welfare state.

They gave average, middle class and working class people a way to live, a way to obtain the basics of life, and have a sense of security. Particularly in the U.S., corporations were what we had instead of a traditional welfare state. One example of this is that Britain has a National Health Service that not even Margaret Thatcher dared to question, while in the U.S., healthcare is primarily delivered through large private employers.

When you reorient the corporation away from a mixed social and economic mission to just an economic mission and give it just the goal of shareholder value, you end up blowing up a lot of the basis of an economically and politically stable society. That's what happened.

Generations of Americans grew up with the idea that if you got a job in a big corporation or in a traditional profession like law and medicine and were reasonably good at what you did, you would have a job for life. Your healthcare and education needs would be taken care of. You would have a sense of security and community. You would later retire with a pension. It's really, really powerful when you remove that element from society. That is what happened in the late 20th and early 21st century. That's the world we're living with now.

*Q: Wouldn't some people say the idea of creative destruction is just the nature of capitalism?*

**A:** Yes, they would say that and I would want to really push back against that. I was invited to give a series of lectures at Stanford called the Tanner Lectures. After the last lecture, Nobel Prize-winning economist Kenneth Arrow stood up and said, "My dear boy, this is all very interesting, but wasn't all this inevitable because it was just a result of markets functioning?"

I'll go back to what I said at the beginning: markets are made, not born. There are a lot of different versions of capitalism. We've been talking about two very different versions of capitalism that are both capitalism.

A core idea of history is that nothing is inevitable and everything could have turned out in a different way. In this particular case, you can tune the dial of capitalism in different ways to make it more or less stable and more or less oriented towards shareholders, etc. This is why Germany has a pretty good economy that works very differently than the American economy.

It's like a sports game. Once you start the game, the teams play and what happens happens. But, the shape of the field and what the rulebook says affect the way the game is played. I don't think it was inevitable that all this would happen. I think it happened as a result of the decisions that were made.

***Q:** Wall Street and the financial sector eventually grew so powerful that they were even able to survive the 2008 financial crisis with help from American taxpayers. Do you think we should not have saved the industry? Would that choice have led to the rebirth of the American capitalist system and left us with a different version?*

**A:** When the 2008 financial crisis happened, it was clear the U.S. and other economies had gone too far in the direction of financial deregulation. So, we re-regulated the financial system through the Dodd-Frank Act and other means, to some extent. Since then, things have moved back in the previous direction in terms of maintaining a financial system that's more regulated and has a more powerful central government role to manage risk and provide safety.

The financial crisis could have played it out in a lot of different ways. As they say in finance, if you completely deregulate the financial system, then the banks get all the upside, and the government owns the downside because they can't say to the banks, "You guys screwed up, so we're going to let you fail." All of the consequences created by the banks failing are just too powerful. This tradeoff is the heart of the problem with deregulation.

These institutions have what economists call "moral hazard." They know they're going to be saved if they turn the risk dial too high and encounter severe problems. That's what happened with the big financial companies in the 2008 crisis. The liberal critique of the Obama administration's response was that they should have provided a much, much, much bigger stimulus.

These issues are in play again. There was a great historian named Richard Hofstadter who wrote a wonderful essay in the early 1960s called, "Whatever Happened to Antitrust." He said that from 1890 to 1940, the main event in American politics was what to do about the economy. After 1940, that became a subsidiary question. He was writing in the 60s during the period of the corporate welfare state and saying that nobody was talking about economics anymore.

Well, now, we're talking about economics again. We have people like Bernie Sanders and Elizabeth Warren on the Left, people like President Trump on the Right, and their equivalents all over the world, all really breaking open the late 20th-century consensus about how capitalism should be managed by the government. Everything's on the table, and these are frontline issues again.

***Q:** It seems that the overall question you're looking at is not just about how the economy is doing but how to build an American economy, or any economy, to create a good life for ordinary people. You boiled this down into three big ideas, arranged chronologically. We've talked about the first two representative figures, Adolf Berle and Michael Jensen, so why don't we talk a bit about the third, "network man."*

**A:** The third major figure is Reid Hoffman, a very important figure in Silicon Valley who is best known as the founder of LinkedIn. He founded PayPal and was one of the first people to write a check to Mark Zuckerberg. Essentially, he's very plugged into that world.

LinkedIn is an expression of a big vision of how the American economy is supposed to work. This vision consists of a nation in which entrepreneurs don't think of themselves as employees. Each individual person will self-manage their economic life and career through LinkedIn and other social networks. This is the vision embedded in Airbnb, Uber, Lyft, and so on. These economically oriented networks, essentially gig economies, allow individuals to sell products and build a life for themselves by piecing together periods of time or different parts of freelance work.

This is the idea that emerged from Silicon Valley in response to the problem of "What do we do now?" But it is not, at the moment, a reality for millions of Americans, as far as I can tell. I'm pretty skeptical that this system would provide a good life for middle class and working class Americans en masse.

My book is really about a mindset trend. A journalist at Fortune magazine named William White introduced the term "organization man" in his 1958 book called, "The Organization Man." The organization man was set primarily in a new, suburban Chicago called Park Forest, which was filled with corporate employees. They would put on their suits, grab their briefcases, put on their fedoras, get on the commuter train in the morning, go to work in whatever big corporation, and then come home at five o'clock. William White presented this as his kind of living hell that we had to escape from.

Now, the world he described doesn't look so bad because it's all about secure employment and manageable work hours. However, he complains vociferously about how there are too many community activities in Park Forest, etc. In that era, when Americans thought about how to solve a problem, they automatically thought of large organizations and institutions as the answer.

I think now there's a very strong tendency these days, which I hope is ebbing, that if you have a problem, you should break up the existing system and replace it with something much more fluid, transactional, and efficient. We've applied that not only to big corporations and the financial system, but also to social problems that aren't purely economic. For example, charter schools are an application of that kind of thinking to the problems in the public education system. The idea is to disrupt the industry.

Reid Hoffman was very generous in letting me spend a lot of time with him. At the time, he was working at this venture firm called Greylock in addition to running LinkedIn. His handler once said to me, "We're really excited to have you spend time with us at Greylock as we decide which industry to disrupt next."

Look, Tiger, as a junior at Princeton, you must be in a world where private equity, venture firms, hedge funds, and tech firms are occupying a lot of mindshare for you and your friends as you look for potential future roles. Forty to fifty years ago, Princeton undergrads would be thinking about firms like Proctor & Gamble or General Motors. There has been a cultural big shift in these elite institutions.

***Q:** I would love to quickly add on to your observation that a lot of students are not even thinking about going to the major financial institutions or the tech giants anymore. They're now talking about startups. It seems that there's been a minor mindset and cultural shift within elite institutions that startups are now somehow the epitome of the "network" economy, which ties back to your earlier point about fluidity and disruption.*

**A:** As an older person, I would say that looks a little less exciting as you get down the road of life. Silicon Valley has been wonderful about drawing very talented people into playing a game that has very few winners. There are many of these statistics: something like 75 percent of the startups that get funded by the elite venture firms on Sandhill Road in Menlo Park, California fold within 5 years. Of all the firms funded in a year, one will represent 50 percent of the value and 20 will represent 95 percent of the value. It's a highly risky and unequal game that produces a lot of innovation but, in my view, fails to answer the question of how will most Americans live?

***Q:** So you don't think some of those "tech innovations" really get to the bottom of today's social problems?*

**A:** The rhetoric is that they do. I think somebody like Reid Hoffman, who lives deep, deep, deep inside the world of Silicon Valley, truly believes they do. He's very rich, and he's very philanthropic. He doesn't spend a lot on himself, but everything he gives out is based on this model of "we should make everyone in Sub-Saharan African an entrepreneur" and such. He truly believes that a world of mass entrepreneurship, practiced by billions of individual people, is going to bring happiness and economic peace to the world. I don't think the evidence is there, but it's a deep belief in Silicon Valley.

***Q:** We are already seeing some growing disillusionment towards Silicon Valley, evidenced by the ongoing "techlash" and a push for antitrust regulations, for example. Would you say the Network Man model is already demonstrating how it will fail?*

**A:** Yes, definitely. The dream that big tech is going to save us all is really fading. There are many things unfolding at once. For example, in my field of journalism, digitally oriented companies are all facing unionization drives. It used to be an article of faith for tech that unions are no longer necessary because everybody is going to be entrepreneurial.

Then, you have the antitrust energy emerging from both in Europe and the U.S., coming from both Republicans and Democrats. Next, you have widespread skepticism about the gig economy, which is being deepened by the coronavirus. People in the gig economy, like Uber drivers, can't work remotely and are losing paychecks. We're getting a very clear example of the shortcomings of the gig economy idea.



*Q: While there seems to be no successful model so far, in the last chapter in your book, you say pluralism is the solution to creating the optimal economy and society. What does your idea of pluralism look like in today's world?*

**A:** One problem is thinking that there is one economic-political model that will fix everything and work forever. In general, I am for a messier, more complicated, and conceptually muddled world in which the interests of various people are attended to and many ideas are embedded in our system, not just one big idea.

Pluralism is a faded political tradition that claims it's more likely for a good society to emerge if you have a democratic society in which many organized groups struggle for primacy at all times. This is opposed to an elite-driven society in which one group with one set of ideas impose that ideology on everybody else.

Political scientist Arthur Bently was the founder of pluralism in the U.S. and was most prominent in the early 20th century. The whole pluralist tradition faded as the country fell in love with either market based solutions for conservatives, or elite liberalism where the upper class of liberal intellectuals decide what happens. Pluralism is more in love with politics and likes interest groups and social movements. It's less of an outcome and more of a process.

*Q: You say that in a pluralist system, the best way to fight unacceptable views would be to "out organize" the people promoting them. One of the biggest criticisms of pluralism is that powerful institutions can abuse this power to promote their interests over those of others. How do we organize society in order to promote pluralism and "out organize" those who are abusing their power?*

**A:** The argument against pluralism has always been that rich people will capture the system, meaning that ordinary people won't be represented. But that's already a problem. The way the U.S. handles money and politics is uniquely bad, and many other places in the world provide a model for how to handle those things better. It's also true that there are arguments that sound convincing claiming that only wealthy corporate interests can win in a pluralist system.

However, you can easily point to the Civil Rights Movement, which had no real establishment support in its early days but was stunningly successful without any money. Same with the feminist movement and the environmentalist movement. I'm skeptical of the idea that "good guys" in politics can never have influence and can never win in a system built around the competition of political interests.

I do think that the excessive influence of people with money is a real problem and can be addressed. But I don't think that means we need a model where we don't allow many different interest groups to compete as the way to work things out.

***Q:** You write in the book that some people start as optimists but become pessimistic as they age. Are you optimistic or pessimistic about the next steps for the U.S.?*

**A:** Yes, I'm optimistic by nature. I started working on this book because I was frustrated that these issues weren't being discussed. Now, they're being discussed, which is great. Many people have already stopped celebrating the transaction man mindset.

***Q:** Do you think the world will soon stop celebrating the network man mindset as well?*

**A:** Yes. A lot of the important intellectual allies of Silicon Valley have really shifted, including Tim Wu and others.

***Q:** Since you are optimistic in the long run that this vision of pluralism and that a different economic model will emerge, do you have specific thoughts on how this new economic model will shape up or what form it will take?*

**A:** I think you need to have government or governments in the picture as you build an economy. It is hard to leave it entirely up to market forces and institutions to build a good economy on their own because they have too much pressure in the other direction. I'm envisioning a political economy where state institutions, [which are] political institutions, and market institutions are cooperating to create a model of capitalism that works for most people.

***Q:** You're not just a journalist and a professor, but also a publisher. Would you mind just telling us a little bit more about Columbia Global Reports, which you help publish, and what you hope to achieve with that?*

**A:** Columbia Global Reports is about to celebrate its fifth anniversary in the fall of 2020. It's a publishing company at Columbia, that publishes five or six novella-length books a year about major topics that we think aren't being reported by the press because they're not part of the events that are happening right this second. We're up to around 25 books right now, and we've published books on many different topics.

We're part of the new ecosystem of nonprofit journalism. One of the reasons that I wrote *Transaction Man* and started the publishing company is the distress I've been feeling when watching the economic collapse in my own field of journalism, which is very disturbing. Many of my peers have started nonprofit journalism organizations to fill in some of the gaps that have been left by the enormous shrinkage of market sector journalism. We're trying to play our part in that.

*Q: Would you tell us a bit more about this economic collapse in journalism you briefly alluded to?*

**A:** Many fewer people work in journalism these days. The newspaper industry's employment has halved in the 21st century and revenues have plummeted. Readership may be up, depending on how it's measured, but revenues and employment are way down. A lot of news organizations have gone out of business and the ones that still exist do a lot less original reporting. The next Columbia Global Reports book will be on Saudi Arabia and religion, and the one after coming out in the summer of 2020 will be on the collapse of local journalism in the U.S. and internationally.

*Q: In our hyper-connected world, we're constantly bombarded by news stories. Do you think that most of that information is full of noise by construction, whereas a longer form of journalism can provide fundamental knowledge to readers?*

**A:** Well, there isn't one way out of the problem and I would frame it in a different way other than how long things are. At Columbia Global Reports, we found a niche that nobody else was in. We do long-form journalism, but I don't think that only long-form journalism has value.

Original reporting is going out and gathering information that people wouldn't have access to before. Freedom of speech means, at least in the internet era, that anyone can say what they want for a global audience. We're in a free speech explosion because of Twitter, Facebook, and so on, but there's a shrinkage in the part of journalism that does original interviewing and other forms of information gathering.

I'm not saying one has value and the other doesn't, but we really don't have a problem with free speech when you can find anybody saying anything somewhere in the online world. We are, however, in a shortage of what I would call news, or reporting, and that's a problem we really need to address.

*Q: The name of our show is Policy Punchline, so I have to ask you at the end—what is the punchline here?*

**A:** As you think about an economic society, we need to think about what kind of society would give most people a good life, a measure of security, and freedom. I think you need to have that question settled by a struggle between governments and market institutions rather than by saying market institutions can do it on their own. This will produce messy and disorganized solutions that don't look good in a lab or a classroom, but they will work better for most people and better attend to people's needs.

# 23

## Peer Pressuring Our Way to Progress on Inequality and Climate

Robert Frank  
July 16, 2020

“ *Everybody’s focused on the Covid-19 crisis. It’s the immediate threat, of course. But it’s a minor league threat when measured against the climate crisis. I hope that conversations like this will encourage people to appreciate the idea that we could enlist one another to solve this crisis quickly and seriously.* ”

— **policy punchline** by Robert Frank

Robert Frank is the Henrietta Johnson Louis Professor of Management and Professor of Economics Emeritus at Cornell and author of “Under the Influence: Putting Peer Pressure to Work.” In this new book, he discusses how social environments profoundly shape our behaviors and how to unlock the power of social influence. His ideas about everything from behavioral contagion to consumption taxation challenge traditional thinking.

***Q:** Would you give us a brief overview of your book and what you hope to accomplish with it?*

**A:** The starting premise of the book is quite simple and uncontroversial. It's the old social psychologist's maxim: "It's the situation, not the person." When we think about why someone acted in a certain way, we tend to look first to traits of character and personality. The psychologists would say, "No, that's not the right way to think about it." Traits of character and personality aren't the most important explanations for most behaviors. Instead, we should look to the social forces that were surrounding the actor at the moment she made her decision.

For example, if you're worried that your daughter will become a smoker, it doesn't help you at all to know that she's a science fiction fan, a fan of the New York Yankees, or good at math. None of that is predictive. The one thing that will really tell you most about her risk of becoming a smoker is to know the fraction of her close friends who smoke, and there's no other effect remotely close to it. If the percentage of her close friends who are smokers went from 20 to 30, she would become twenty-five percent more likely to take up smoking. It's unrivaled by any other influence. That's completely uncontroversial. The social environment shapes what we do for the ill, as in that example, or for the good. We follow good examples as well as bad ones.

What's also uncontroversial is that the social environment itself is a consequence of the choices we make. The causal arrows also go in the second direction. Nobody pays much attention to that second direction because our individual effect on the social environment is relatively small. It's negligible for all practical purposes. Nobody would worry, "Oh, I shouldn't become a smoker because that could make others more likely to smoke."

Yet, since the social environment influences us so profoundly, isn't it worth thinking about whether there are steps we could take to encourage people to act as if they cared about how their own choices would affect the social environment? The answer is: Yes, we ought to be thinking about that. Once you start investigating, there is a whole host of simple steps that we can take that will induce people to behave as if they cared about their effect on the social environment.

To return to the smoking example, it was very simple. We tax smoking. I focus on the smoking case because it's the clearest-cut example. We gave spurious reasons for why we did it, but the fact is that we taxed it more and more heavily. The tax itself has a very minor influence on smoking because smoking is one of the most highly addictive behaviors out there. I had a friend who was a heroin addict. He told me that it was much easier to give up heroin than it had been for him to give up smoking. Most smokers plow ahead despite the additional expense, but some either do not or cannot. They might not have enough money to buy cigarettes, so they don't start, or they quit.

When a few people didn't start or quit, that meant that their peer groups had fewer smokers. Others were less likely to start or more likely to quit. In many population groups, the smoking rate fell from more than 50 percent to about 12 or 13 percent today.

That's why none of my four adult sons is a smoker. I told a friend once that, if they'd grown up when I did, at least two of them would have been smokers.

I said that I was pretty sure that my oldest son and my younger son would have been smokers. My third-oldest son asked, "What about me?" He seemed offended that I didn't think he would have been a smoker, so I said, "Maybe you would have been a third smoker out of four." I'm pretty sure that my second son wouldn't have smoked no matter when he'd been born.

Taxation was just a simple step. At the time, it was justified by referencing new studies coming out of Japan showing that exposure to secondhand smoke increased the likelihood of various illnesses in people who didn't smoke. That allowed us to invoke the familiar harm principle from John Stuart Mill: We needed to protect innocent bystanders from the harm caused by secondhand smoke. That's valid. However, the main harm you cause by smoking is to make others more likely to smoke. Smoking is far worse for a person than inhaling secondhand smoke.

***Q:** When someone takes up smoking, it's not immediately obvious to the smoker that they will have such an impact on those around them. How do you define these types of unintended negative consequences?*

**A:** I call these behaviors "behavioral externalities." Economists have long understood that there's a very standard treatment for the ordinary externalities—like smoke, noise, or congestion—that we write about. It's misleadingly attractive for producers to emit smoke into the air because, while filtering out smoke costs money, we let producers emit smoke for free. The efficient, direct solution to that kind of problem is to tax emissions. Taxes on emissions have been hugely effective and very fast in getting emissions levels down. There's absolutely no principled way of distinguishing between those kinds of externalities and behavioral externalities.

Of course, people want to be able to behave as they please in any situation. But as John Stuart Mill emphasized, your right to do as you please stops when you cause undue harm to others. He didn't say "undue harm," just "harm." However, he must have meant undue harm because you can't do anything at all without causing some kind of harm, real or imagined, to somebody somewhere. You shouldn't have the right to cause undue harm to others.

In the case of smoking, most people who smoke wish they didn't. You could claim that it's the responsibility of others to decide which peers to emulate and which to avoid. I like the sentiment that motivates that objection, but what about the parents? They've done everything they could have to raise their kids to be non-smokers. If the environment has more smokers in it, millions of those parents are going to fail to achieve what was a perfectly laudable and legitimate goal. Why permit that harm?

*Q: How do behavioral externalities apply to discussions about wearing a mask?*

**A:** It would be so easy to get the fraction of the population wearing masks to shoot up to near 100 percent if the people in positions of responsibility were all wearing masks and encouraging others to do likewise. Then, everybody would wear a mask, and nobody would complain and feel put upon. Now it's this, "You're not the boss of me," silly objection. What gives someone the right to put you and your family members at greater risk of infection and death?

*Q: Would you please explain your research on why people do not always act rationally and how that relates to Adam Smith's concept of the invisible hand?*

**A:** We can probably date the renaissance of enthusiasm for the invisible hand back to the time of Reagan and Thatcher. The modern disciples of Adam Smith are much more enthusiastic about the invisible hand idea than Smith ever was. Smith's contribution was incredibly important. While it wasn't new even then, he showed that producers do not introduce cost-saving innovations and product-quality improvements for the good of society. Instead, cost-saving innovations and product-quality improvements were a good strategy to steal market share from rivals. That much had been known long before he wrote.

However, Adam Smith added that this is not the end of the story. Rival producers don't sit twiddling their thumbs. When that happens, they respond. They imitate the cost-saving innovations, the product-design improvements, and there's a competitive dogfight. When the dust settles, the consumers are often the ultimate beneficiaries of all that churning. They get better quality products at lower prices. The producers, in the end, earn just enough to cover their costs. It's a win-win story.

That's the beauty of the invisible hand narrative, but Smith knew perfectly well that a win-win situation wasn't something that you could count on happening in every circumstance. You can't always turn selfish people loose and get the best of all possible worlds. He didn't believe that. I think if he were alive and writing today, he would be regarded by many as a wishy-washy liberal. He'd want to intervene in a lot of ways that I think are ham-handed and ill-advised.

The behavioral economics movement has stressed that markets can fail because people are irrational. While that's a legitimate source of market failure, in my view, markets fail more commonly because what makes sense for the individual to do is often squarely at odds with what makes sense for us collectively to do. Maybe the simplest example is when you're at a concert, and somebody stands in front of you to see better, and you can't see. So, you stand up too, and, pretty soon, everybody's standing. Yet, in that situation, nobody sees any better than if everybody had remained comfortably seated. You're not irrational to have stood. You don't regret having stood. That was your best option, but taken from the collective vantage point, it was stupid. It was irrational collectively, not individually.

Collective irrationality appears in a whole host of behaviors that we engage in, including the military arms race. Each nation wants to be secure against aggression. It stockpiles arms to that end. It doesn't know how much its rival has stockpiled. To be sure it's safe, it stockpiles a little extra. The rival does that too. They both stockpile arms, but when they each have larger stocks of weaponry, the risk of catastrophe goes up, not down. That's why participants in military arms races are so keen, especially if they're evenly matched, to sign enforceable agreements that prohibit them from building as many bombs as they want to. To say that those agreements rob them of their freedom to build as many bombs as they want to is to miss the point entirely. If you're free to build as many bombs as you want to, you'll build far too many with money that would be better devoted to schools and hospitals and other things.

When we see situations like that, we instantly recognize that we cannot state categorically that if individuals want to do it, it's best we allow them to do it. No, we restrain ourselves in countless situations that have that incentive structure. And that's also true of how we spend our money. That's true of the toxins we admit into the environment. It's true of a whole host of things.

***Q:** Would you mind explaining a bit more about the concepts of positional good versus non-positional good?*

**A:** One of the clearest examples in everyday life that explains these terms is the notion that education has value in part for what it enables you to do in absolute terms. Education is also valuable for what it says about you in relative terms. Economist Fred Hirsch wrote, "The value of my education depends on how much the man ahead of me in the job line has." It's not how well educated I am in an absolute sense, but how well educated I am relative to the people I'm competing against in the job market.

In that sense, it's really just making use of Charles Darwin's fundamental insight, which was, in my view, the observation that life is graded on the curve. It's not how big you are. It's not how strong you are or how smart you are. What matters is how those qualities compare with the people you're competing against.

A parent must decide what to spend out of income on various goods. One of a parent's key goals is to get their kids into the best schools possible. In every country, the best public schools are the ones located in more expensive neighborhoods. In France, the schools all follow the same national curriculum. Every day of the year, every student of the same grade is on the same page. France also requires by law equal spending on all pupils. However, most French parents still want their kids to go to the schools in the wealthier neighborhoods, where other higher-income students are going. Students there are better prepared when they start school. The pace of learning will be inevitably higher in those schools.



As a parent what would you do? You would bid for a house in the most expensive neighborhood that you can afford. If you have access to your savings, you would withdraw money from those accounts in order to bid for a house in a better school district. You would take riskier jobs to earn a little bit of a pay premium to be able to bid more effectively for a house at a better school district. You would work two shifts if necessary. You would buy a house in a location farther from the center, where land is cheaper, and endure a punishing commute through hours of heavy traffic each way. You would work every margin in order to get into the best possible school district you can.

Yet, when everybody pursues steps like that, what happens? We merely bid up the prices of the houses in the better school districts. When the dust settles, half of all kids go to bottom half schools, exactly the same as before.

***Q:** How does realizing that standards are set by comparison support arguments for a heavily progressive tax?*

**A:** To explore that idea, an interesting thought experiment is to compare two countries: both with progressive taxes, but less-steep progressive taxes in one country than in the other. Of course, when people have more after-tax income, they spend more. In the low-tax country, they would be driving Ferraris, perhaps three-hundred-thousand-dollar cars. In the high tax country, they would be driving lowly Porsche 911 Turbos, one-hundred-fifty-thousand-dollar cars.

If all other conditions were the same in the two countries, where would wealthy drivers be happier? The almost certain answer would be that we would not be able to detect any measurable differences between the happiness levels of the wealthy drivers in the two countries. Why? By the time you've gotten to the Porsche 911 Turbo, you've got every design feature that has any material influence on handling and performance. In each case, the drivers in each country know they're driving the best car in that local environment. That's really what seems to matter most to them. They'd be equally happy if everything else were the same in the two countries.

The rub is that everything else wouldn't be the same. You can adopt however aggressive a view you want to about how wasteful government is: "It builds bridges to nowhere. It crowns welfare queens by the hundreds every day and wastes our tax money in countless other ways". Maybe it does, but look at actual government budgets, and, in every case, you'll see that a large fraction of the money is spent on things that voters seem to care about: building trains, repairing roads, maintaining bridges.

So the operative question in the end is, "Would you rather be driving your Ferrari on roads riddled with potholes or your Porsche on roads that are well maintained?" That's not even an interesting question. No serious driver would choose to drive the Ferrari on pothole-ridden roads.

The implication of that thought experiment is that if you're rich and you have higher taxes that go to pay for public goods, the sacrifice, if made by everyone, wouldn't

be painful at all. However, the gain you'd get from the extra public investment would be noticeably beneficial in the way you experience your life.

***Q:** Why do you think, in the eyes of many policymakers, regulation has been more attractive than taxation as a means to curb hurtful decisions?*

**A:** There's some very strange thinking about taxation, more so now than there was in 1980. There are large numbers of people in the U.S., not so much in other countries, who will say to you with a straight face, "All taxation is theft." They think taxation should be purely voluntary. But in that case, tax revenue would quickly plummet. At some point, there would no longer be enough to support a government or military. You'd be invaded by some other country that had paid for its military using mandatory taxes. And then you'd end up paying mandatory taxes to that government. So if you say that there shouldn't be mandatory taxes, you are not entitled to be a participant in a civilized conversation on this subject.

Whether we should tax is not an interesting question. The interesting questions are: What should we tax, and how much should we tax? My point has long been that we should not tax anything that is useful until we've run out of harmful things to tax. The idea of taxing negative externalities is an old one.

Regarding pollution, taxation is thought to be more efficient than regulating because the very reason we see pollution in the first place is that it's costly to filter the smoke out. We currently let people emit for free. If you charge them for doing it, then they become very creative at finding the cheapest possible ways to filter it out. A rational society would filter out the smoke until the marginal cost of filtering out a little more gets to be higher than the benefit you'd get from having a slightly cleaner environment.

No rational society should have a zero-emissions goal. If you don't believe that, then you need to think about why you aren't at home right now vacuuming up the dust from your apartment. There's more accumulating every moment, yet you don't spend 24 hours a day on house cleaning. If you think the optimal level of dirt in your apartment is zero, then you ought to be home cleaning it, nonstop. We don't do that because there are other things we care about, too.

Letting people pay for the right to pollute lets them pollute if they have no alternative to polluting. A pollution tax essentially respects the freedom of people who have limited opportunities to pay differently. The ones who can alter their behavior most easily are the ones who do the lion's share of the pollution cleanup. That means we reduce the overall cost of the cleanup to the lowest possible level. It's just the best way to go about this.

***Q:** How would you respond to criticism from some people that you're essentially giving large corporations a way to buy pollution as long as they pay a tax?*

**A:** One of the objections was, “You’re letting rich firms pollute to their heart’s content.” First, that was not what the policy allowed. A market for tradable SO<sub>2</sub> permits with a limited number of permits would not allow firms to pollute as much as they might want. The implicit model of behavior behind that objection suggests that firms pollute because they derive pleasure from polluting. How utterly mind-boggling that sentence is. Firms pollute because it’s cheaper to pollute than not to pollute. If you charge them to pollute, they’ll figure out ways not to pollute. A tradeable market for SO<sub>2</sub> permits is absolutely a sensible way to reduce emissions. It’s been studied—it works.

Cities have imposed congestion fees. They limit congestion very quickly. The people who pay the biggest congestion fees are very happy about the policy. We should have taxed carbon emissions long ago. People object: “Oh, the poor could never pay the fees.” But that objection can be parried easily by adopting what economists call a revenue-neutral design. Because the wealthy use much more energy than others (worldwide, the top 10 percent of earners account for almost half of all CO<sub>2</sub> emissions), they would contribute most of the revenue from a carbon tax. If the total revenue from the tax were then returned to taxpayers in equal per-capita amounts, most families would receive monthly rebate checks for more than they’d paid in carbon taxes. Revenues could of course be rebated more progressively, in which case it would be easy to design a version where more than 90 percent of families would be net financial beneficiaries. [We could even do it progressively and give all the money back to low- and middle-income families.]

[The energy-use curve is very skewed. The top 10 percent of income earners worldwide use half of all energy. If you had a carbon tax, almost all the revenue would come from high-income people. If we gave the revenue back to mostly low- and middle-income people, then low- and middle-income families would get rebate checks every month that were more than the amount they paid in carbon taxes.] Families would still have a very strong incentive to shift away from carbon-intensive goods to the ones that have lighter footprints. What’s not to like about that? Why couldn’t you sell 90 percent of the population on the wisdom of adopting a policy like that if you could get their attention long enough to explain it to them?

*Q: What are some inefficient taxes that we have in place?*

**A:** Payrolls are one of the clearest examples. We tax payrolls heavily, about 12.5 percent when you add the worker and the employer levies together. It’s a non-trivial tax on a firm’s decision to hire a worker. There are lots of workers whom firms would want to hire but that they don’t want to hire now that we have this tax. Why would we want to discourage firms from hiring workers? We want to encourage that, not discourage it.

The mantra guiding every tax policy discussion should be: tax harmful activities, don’t tax useful activities. Many people would have said, well, you can’t raise much revenue by taxing harmful activities. That’s because they were too blinded in their view of what constitutes harm. I mean, if you think of harm as only hitting somebody over the head with

a baseball bat, then there aren't that many things you can tax. However, if you think of the things we do that harm one another, more generally, there's just an enormous latitude for raising revenue by taxing harmful activities. Taxing harmful activities doesn't tell you that you can't do the thing you want to do. They just say you're causing harm and you do it, and that it's totally fair to ask that you pay recompense to the people you're hurting when you do that thing.

***Q:** I have a lot of vegetarian friends who have advocated for artificial meat products in the hope that they could replace factory farming. Having read your book, I think promoting artificial meat or vegetarianism, in general, could be a great experiment for “behavioral contagion.” But this is a tricky issue. Artificial meat products, unlike renewable energies, aren't cheaper than their authentic counterparts. If we simply raise the prices for the meats, people will probably have riots on the streets... Do you think there's a way we can still encourage people to do the right thing, even though there might not be a cheaper alternative readily available, and when directly imposing a tax might not be the best solution?*

**A:** I think the way forward is much easier than it seems. I was listening to an interview with Cory Booker, and he was asked why he didn't urge people to become vegan, as he has chosen to do. Instead, he urges people to consume a little less meat. And his answer, I thought, was instructive. He responded that if he urged people to go vegan, maybe one-tenth of one percent of his listeners would follow that exhortation. If he asked people to eat a little less meat, maybe meat consumption would go down by two or three percent, an order of magnitude difference.

Many people feel a very strong negative reaction to the prospect of becoming vegan. I'm not a vegetarian, but, like most people, I feel that I have eaten much more meat than good for me throughout my life. Why did I eat to the degree that I did? It is customary to eat in that fashion among my immediate family and friends. Today, we could tax meat in a revenue-neutral way so as not to burden low- and middle-income families. The rich spend much more on meat than people elsewhere in the income distribution. We could tax meat, take the revenue from that tax, redistribute it in lump-sum amounts to low- and middle-income families. Then, low- and middle-income families would have more money at the end of each month than they had before you tax meat. So the tax would actually make it easier for those families to make ends meet.

At the same time, it would confront each income group with a completely different set of incentives. In one scenario, everyone could eat the same amount of meat as before. In which case, they'll be spending a lot more money on food than they would spend if they shifted even slightly in favor of plant-based foods. If they and their friends shifted slightly in favor of plant-based foods, it would become the custom in their circle

to eat less meat, and that circle wouldn't find it burdensome to shift to a plant-based diet. We would see a path towards greatly reduced meat consumption that wouldn't involve any pain and suffering.

*Q: How do your ideas about comparative consumption and behavioral contagion apply to conversations and actions to mitigate climate change?*

**A:** To me, the climate conversation seems to have made some progress in recent years. My book shows a picture of Senator Jim Inhofe from Oklahoma who brought a snowball onto the Senate floor as proof that global warming is a hoax. He was ridiculed for doing that at the time, but he would be so roundly ridiculed for doing something like that today, that I don't think he would feel any inclination to make a gesture like that. The people who are saying climate change is a hoax are much less noisy now than they used to be.

That's progress, but we're not really seeing any effective action on climate change. We know it's a problem. We know we ought to do something about it, but I think the sense now is that perhaps there's nothing we can do about it. Maybe it's too late, or even if there were something we could do about it, the cost of doing it would be so vast that it would be unthinkable for voters to be willing to bear that cost unless they were faced with human extinction tomorrow. If it's 30 years from now or even 20 or 10, that's too far away for people to be willing to accept the current sacrifice.

I think two things need to happen to break out of that. One, I think more people need to know about the technical possibilities for solving the problem. I would recommend one of Ezra Klein's podcast conversations with Saul Griffith, an expert on energy production and consumption: where energy comes from, how people use it, where emissions go, and what options we have for change. It would be a monumental task to get emissions down to zero in 10 years, but if you'll listen to his accounting, the task is eminently doable. It would require a mobilization on the scale of what we did during World War II, but of course, we did a mobilization on that scale at that time. It didn't wreck society. It brought society closer together. It was very expensive. I think his prescription is that we need to make financing available so that everybody can adopt green energy innovations, not just wealthy families, who are mostly the only adopters today. We need to make this all available to people essentially for free.

The next hurdle: How do we pay for all this? That's where a clearer understanding of how behavioral contagion has shaped our spending patterns would reveal to us that we could actually pay for that expense without having to demand many painful sacrifices. In the last 50 years, all income gains have gone to people at the top of the income ladder. People at the top of the income ladder have been doing what's completely normal for everybody at every income level. They've been spending more. They've been building bigger mansions, buying more expensive cars. They've spent more on their daughters' wedding receptions.

The average wedding reception now is \$36,000. It was \$10,000 in inflation-adjusted terms in 1980. Nobody is happier today because they're spending more than three times as much on wedding receptions. It just raises the bar that defines what people think of as adequate. I had never heard of a destination wedding when I was my kids' age. My kids are going to destination bachelor parties now. They don't particularly like spending the money, but that's become the custom.

If people at the top were taxed more heavily, they would have less money to spend on things, and they would spend less. As a result, when we all spend less on those things, nobody would be any less happy. It would just be that the expectation would be that the new normal defines what we do here. People who earn a middle income don't look to the people who earn top income when they're taking cues about what to do. Our peers are the ones who influence us.

However, there is an income group just below the top income group that socializes with people in the top income group. If the top income group of people builds smaller mansions and has less expensive wedding receptions, so would the people just below the top. That would cascade down to the people making slightly less income than them. We would see reduced growth in private consumption expenditures all up and down the income ladder. Nobody would be any less happy if many forms of private consumption were significantly lower.

New lifestyles would free up many trillions of dollars over the next decade, money that's needed to battle climate change. But the people at the top resist higher taxes. They've spent enormous amounts of money lobbying to keep their tax rates lower, not higher. That behavior is a result of what I believe to be the greatest of all cognitive illusions because the damage it's caused is epic in scale.

I call it the mother of all cognitive illusions. Nobody's proposing a tax on the wealthy that would have any threat to their ability to buy what they need. What are they worried about? They're worried about their ability to buy life's special extras. What are those things? They're the things that are scarce in either a physical or social sense. There can only be one car that's best or fastest if that's what you want. To get those things, you have to outbid other people, and here's what people don't see: When their taxes go up, the taxes of other people like them go up too, and that means that their relative bidding power is completely unaffected by the move. The same penthouse apartments with sweeping views of Central Park end up in the hands of the same high bidders as before. If you're worried that a foreign oligarch is going to outbid you, put a foreign levy on the exchange of property.

When people think about how higher taxes would affect them, the natural cognitive algorithm would be to think about the effect of a similar event. How did I feel the last time that happened? That doesn't work in the current environment because taxes on the rich have been going down steadily. They were at 92 percent during World War II. At the top level, they were 70 percent when I graduated from college in 1966. In Reagan's first term, they had fallen to 50 percent. They're at 37 percent now. There have been tiny moves upwards occasionally during that spell, but they have been too small to notice or remember.

With taxes for the wealthy falling steadily, the most natural strategy for thinking about the effect of higher taxes doesn't work. So the wealthy switch to plan B. They know that if their taxes go up, they'll have less money to spend. That's true. Nobody would argue against that claim. You try to think back to the times when you had less money to spend. Even if you lead a charmed life, there have almost certainly been such times. You had a bad business year. You got a divorce. You had a home fire or health crisis. All those times, as you vividly remember, you were very, very unhappy. What you don't remember is that, in each one of those times, no one else had less money to spend. Everyone else had the same amount of money as before. Yes, you were less able to bid for what you wanted during those times, but that's not the way it would be if you paid higher taxes.

***Q:** How would your ideas about consumption taxes and progressive taxes address complaints that the rich continue to get richer at the expense of the poor?*

**A:** The rich think they've won this battle by getting lower tax rates. My claim is that they've actually shot themselves in the foot. They've spent more on absolute consumption to no useful end and have robbed themselves of climate mitigation measures, hospital surge capacity, and other essential public investments. If you focus on the logic of taxing harmful activities, earning income isn't harmful. A lot of people have argued that when societies get richer, nobody really gains. That's true for a lot of consumption activities, but it's not true generally for the wealth level of society.

Suppose you ask, "Would it be better to be in the top five percent today or in the top five percent in 1880?" Very few people would want to be in the top five percent in 1880. Why? Because if you were in the top five percent then and you had five kids, three of them would die before they reached 10 years old. That doesn't happen now because we're so much wealthier. Wealth is a good thing. We don't want to tax the things that bring us better lives.

Beyond a certain point, however, most forms of private consumption don't have a powerful beneficial effect on the quality of people's lives. That's one of the few robust findings that comes out of the literature on the determinants of human wellbeing. If all the mansions were to double in size, if all the wedding celebrations were to become twice as expensive, nobody would be any happier than they are now. Yet, when some consume more, it puts pressure on others to do likewise. If you're a billionaire and you stage a wedding reception for your daughter that is way less elaborate than what people in your circle do, then the guests leave saying, "Oh, what's the matter with Frank? He didn't understand what an important day this was for his daughter." If we all spent less, that would be fine. But if I spend less, I would not be as happy. That's the reason why a steeply progressive consumption tax would target inefficiency in the economy much more accurately than a tax on income.

***Q:** On taxation, I would be remiss not to ask you this question that Prof. Branko Milanovic of CUNY raised to me in our previous communications: John Rawls in “A Theory of Justice” argues for the replacement of income taxation by the taxation of expenditures, but we know that all consumption taxation is regressive. So is it possible to design an expenditure-based system that would be progressive, not just with respect to consumption, but also to income? Is your proposal for the progressive consumption tax in any way similar to what Prof. Milanovic has been hoping to address?*

**A:** The name for the proposal I’m pushing for is Progressive Consumption Tax, so I would find myself in a very awkward position if I can’t actually design a consumption tax that is progressive. Here’s the simple outline: You would report your income to the IRS the way you do now and document how much you’ve boosted your stock of savings, as many now do for 401ks and other tax-sheltered retirement accounts. The difference between those two numbers—your income minus your savings—is how much you spent during the year. If that’s a small number, we don’t tax it at all. If it’s a medium-sized number, we tax it lightly. If it’s a big number, like millions of dollars a year, we can tax the bejesus out of it, even at 100 percent on the next dollar spent. If we did, that means that if you added a wing onto your mansion, it would cost you twice as much to do that as it does now.

Some would say, “Well, the billionaires would do it anyway. What do they care?” What we know is that local standards influence what you do. In New York City, there are many billionaires. They could afford to live in one hundred thousand square feet if they wanted to. Most of them live in apartments that aren’t any more than 10,000 square feet. Why don’t they live in bigger units? Because real estate prices in New York are so high per square foot that the standard in New York is to live in more compact spaces. That standard affects billionaires as much as it affects people who are struggling to get by. In a Midwest city where real estate prices per square foot are much lower, that same billionaire would live in a unit that was four times that big. The price you pay for the next dollar you spend is going to influence how you spend your money.

***Q:** How do you foresee your proposal being translated into legislation or raising public awareness about consumption taxes and behavioral contagion, either on a state level or federal level?*

**A:** The Senate had a bill that it never actually got around to voting on because other crises pushed it off the agenda. The bill was called The Unlimited Savings Allowance Tax. That’s probably a better marketing name than mine. The bill was sponsored by a Democrat and a Republican. It had bipartisan support. It’s not going to get on the agenda during the current legislative session. However, we’re on track to have a major upheaval in this election cycle.

Winston Churchill said, “Never waste a good crisis.” Virginia is no radical hotbed, but last year, both Houses of the state legislature in Virginia flipped. Just two months ago, Virginia enacted the most progressive climate bill of any place. They’re going



to go carbon neutral before virtually any other state. These are legislators in a middle-of-the-road state who decided now's the time to act. I think we're in a position to chart a different course in the relatively short run. And we ought to seize that opportunity.

*Q: How do we encourage legislators to embrace more progressive and bold policy ideas when they suffer from a lack of intellectual diversity with the majority of them being JD lawyers rather than coming from a diverse academic background, as many have criticized?*

**A:** I don't think the case for these reforms is complicated. You don't need a Ph.D. to be able to understand the logic of the arguments in favor of the kinds of changes I advocate. As I said near the end of my conversation with Ezra Klein, I seldom have any regrets about not being a billionaire. But if I were a multi-billionaire, I would go to Pixar, straight away. I would offer their best animation team a salary twice what they now earn to produce a five-minute video explaining why a stiff carbon tax that was revenue neutral would give 90 percent of voters more money to spend at the end of each month than they have now, while at the same time giving everybody a very powerful incentive to adopt cleaner energy choices.

I think if I bought enough airtime to have everyone see the video six or eight times, it would be very hard for a legislator not to vote for a policy like that. It would be so fervently demanded from voters who would have no trouble understanding why it would be in everyone's interest to do that, that they wouldn't be able to resist. Is this a problem we can solve? I think it is.

*Q: How can we construct a better set of economic theories that do not just simply include more of behavioral economists' opinions but rather reconstruct the assumptions that found economics to promote those moral, ethical, or normative angles?*

**A:** I would say: don't dismiss the contribution of behavioral economics. I think that that's been a very influential movement in the profession. It used to be that many economists would get angry and react defensively at the mere suggestion that people aren't always the rational actors that they're assumed to be in textbooks. That's been an enormous source of progress within the profession. People make mistakes. People do have limited capacity to process information and mistakes are not random but systematic. We can often put information in front of people in ways that encourage them to make choices that are better for them and their neighbors. The "default option" literature is hugely influential. It's been a very good development.

I think the next wave will come from a fuller appreciation of Darwin's insight that life is graded on the curve. I think the basic economic models from the beginning have always assumed that it's just the absolute qualities of the things you buy that matter. The house generates utility according to how many bathrooms it has, or how many square feet it

has, and so on. Those things matter up to a point. We now know enough to say confidently that it's the relative aspects of things that matter as much or more than the absolute aspects.

The analytical and welfare implications of the view that life is graded on the curve is an order of magnitude greater than the welfare implications of the observation that people make mistakes when they make decisions. If you make mistakes, you can read a book. You can talk to a wise friend. You can figure out ways of avoiding your tendency to take sunk costs into account when you make decisions. When you have collective action problems, it's not something you can solve by yourself. We need policy measures with sharp teeth.

For example, the problem of insufficient savings was solved only when we taxed people and didn't give them the option of using that money to bid for houses and better school districts. No, [instead] we're going to put it aside and we're going to use those tax revenues to fund a Social Security check to you each month. If we hadn't done that, those dollars would have gone into a fruitless bidding war for houses and better school districts, and retirees would have been eating pet food in retirement at a much higher rate than they do now.

I don't think we've fully incorporated [into our thinking] the reasons for many of the policies that we've adopted. We don't regulate safety because people don't know what the risks are so much as we regulate safety because people have incentives to take risks that are misleadingly attractive. People take risks in the hope of gaining a relative advantage. You can get ahead in absolute terms if you take a risk, but when everybody moves forward in absolute terms, nobody makes any progress in relative terms.

***Q:** What would you say to claims that economics and moral philosophy sometimes seem disjointed?*

**A:** The discipline of economics originated in the discipline of moral philosophy. David Hume and Adam Smith were moral philosophers. Moral philosophy was really the bedrock of economics. The two are not disjointed in any fundamental way.

There are two competing schools in moral philosophy. There are the deontologists, who say, "There are certain principles you need to follow, no matter what the consequences might be." Against them are the so-called consequentialists. They say, "No, there aren't beautiful principles. The choice that leads to the best consequences overall is the right thing to do." The recommendations of the deontologists and the consequentialists agree 95 percent of the time.

I'm a consequentialist. I think economists have a natural tendency to be in the consequentialist camp. We weigh the costs and benefits of things quite routinely in talking about whether something ought to happen. Once you adopt that view, economics and moral philosophy aren't so disjointed as they seem. I think consequentialists have to embrace the idea that the things people care about are the things that have to go into the cost-benefit analysis that determines what we ought to do.

You can't remove feelings of sympathy for others who are in distress from an analysis. You can't pretend that the pain of others is completely disjoint from your own experience. It's not hard to integrate these things. I think we can embrace what most of us would regard as the normal dimensions of a moral life without straying too far from the essence of what the cost-benefit way of thinking demands of us.

# Op-Eds

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## Ten Moments of Truth in the Covid-19 Crisis

Jacques Bughin

The author is the CEO of MachaonAdvisory, an advisory boutique in economic policy matters, an affiliate of the Solvay Business School, Free University of Brussels, an advisor to the Portulans Institute and the G20-Y, and a board member of different ventures. He is retired from being a Director of the McKinsey Global Institute, and a senior partner at McKinsey & Company. This article represents his views and any errors are his own.

**Summary**

In this essay, Dr. Jacques Bughin outlines ten “moment of truth,” issues that must be prioritized in the global coronavirus response and recovery. With themes stretching from expanding healthcare research, promoting economic prosperity in the wake of the pandemic, and accelerating sustainable development, this essay highlights both the incredible urgency of these goals in the wake of a seismic event such as the coronavirus pandemic as well as the historic opportunity for global renewal, growth, and improvement that is at hand.

As Dr. Bughin notes, the pandemic arrived at a time when several negative trends were threatening humanity’s wellbeing and prospects. The specter of climate change, rising wealth inequality, and the corrosion of democracy in many countries around the globe were already challenging us in unprecedented ways. Now, through our response to Covid-19, we have the power to either surrender ourselves to these troubling patterns, or use this crisis as a means of understanding how they left us vulnerable, and as a catalyst for sustained, meaningful change. We can structure jobs and firms so that they are more resilient to shocks such as pandemics or automation, invest in greener technology, refine our tools for understanding social benefit and risk, and direct aid toward the most disadvantaged in our societies.

Through these ten “moments of truth,” Dr. Bughin aptly illustrates the gravity and momentousness of our current moment. As he writes, “the success or failure to handle these issues will define whether we have won or lost the war against the coronavirus crisis.” Beating the coronavirus cannot just mean returning to what we once defined as “normal.” Such an endeavor entails reaching beyond the accepted patterns and practices of the pre-coronavirus era and enacting a bold, far-reaching vision of what a more just, equitable, and prosperous future might look like.

**policy punchline** Editorial Staff

**Introduction**

The Covid-19 virus was officially recognized in late December when a Wuhan hospital admitted four individuals with respiratory coronavirus symptoms. Chinese authorities acknowledged human transmissions of the disease a few weeks later. Contamination cases climbed from 270 by January 2020 to about 50,000 in the Hubei province just three weeks later: a multiplier of 200. Covid-19 has now spread across all continents, affecting 215 countries. The virus is on track to claim 500,000 official deaths within the next week or so; as of early July, there are 10 million cases of infection.

Although viruses are part of everyday life, some have the potential to mutate into pandemics that attack the immune systems of individuals and disrupt the societies in which they live. In 430 BCE, the plague of Athens caused by typhus led to the fall of the Golden Age of Athens. In 180 CE, the Antonin Plague, caused by measles or smallpox, devastated the Roman Empire (Hurbin, 2011). In more recent history, the Spanish Influenza of 1918-1919 killed between 40-70 million people worldwide within just 10 months. Only regions with active measures to protect the population escaped the large recession that influenza generated (Correia et al, 2020).

In the 1980s, the HIV epidemic caused significant casualties. Even though antiretroviral drugs were eventually discovered, more than 20 million people out of 40 million HIV sufferers have passed away in 20 years (UNAIDS). HIV is still the main cause of active population death in some sub-Saharan countries such as Zimbabwe and South Africa; some scholars argue this epidemic has prevented impacted countries’ economic take-off (Mboup et al, 2006).

Covid-19 has joined the club of exceptionally lethal outbreaks. It is the seventh instance of a virus with an excess mortality rate that exceeds 0.1 percent mortality since the 17th century, according to the WHO (Table 1). Worryingly, it is already nearing the death toll of the 1957 H2N2 outbreak in the U.S. and may have boosted the world death rate by about 25 percent in the past six months.

Casualties aside, economic consequences are also evident. Stocks have recovered a large part of their fall by now, thanks to announcements of various stimulus plans by the

**Table 1. High-level influenza-related fatalities, estimates**

<i>Year</i>	<i>Virus</i>	<i>U.S.A</i>	<i>Worldwide</i>
1918	H1N1	500,000 to 1 million	40 to 70 million
1957	H2N2	150,000	over 2 million
1968	H3N2	70,000	over 2 million
2009	H1N1	15,000	300,000
2020	Covid-19	125,000	500,000 (by June)
Traditional flu	(as reference)	30,000 to 80,000	300,000 to 700,000

*Note: Numbers readjusted to current 2019 population, as per IMF data.*

*Source: Author’s own computation based on WHO, Lancet, Wikipedia, CDC.*

largest economies. However, the stock markets initial reaction was to lose U.S. 6 trillion of value by end of February 2020, just as markets came to realize that the Chinese outbreak was morphing into a global pandemic. The market dropped by about 10 percent in a matter of days, versus a matter of weeks for other pandemics; for instance, SRAS put S&P 500 down by 7 percent on more than 30 sessions. March 16, 2020 even saw the Dow Jones drop by close to 3000 points, the largest fall ever in history (Avalos and Zakrajsek, 2020).

Regarding the global economy, multiple estimates have been converging to a potential contraction of 5 percent of worldwide GDP for the year 2020. The “Great Lockdown” (as coined by the IMF) became the mainstream response of countries seeking to flatten the curve by means of imposing social distancing. It led to a shrinkage of more than 10 percent of worldwide output in first semester of the year, with some economists calling it the largest (yet voluntary) contraction of our economies since the 1929 Great Depression (Lipton and Prado, 2020).

Currently, the jury is still out on whether the battle is won and whether the virus is on the verge of global retreat. On the positive side, the health systems of most developed countries are now able to breathe and have enough capacity to support the severe cases of the disease. Major economies are slowly exiting the lockdown. The stock exchange seems to have exhibited a V-shaped rebound.

But, the uncomfortable truth is that the virus continues to spread. The virus is now hitting many developing countries with more fragile healthcare systems. Recent days have witnessed the largest absolute increase in the number of infected worldwide, on top of new clusters forming in regions otherwise under control such as in Beijing, in multiple regions in Germany, and in many counties in the U.S.

The odds of a second wave remain high, statistically speaking: the containment achieved by many countries has occurred at a level of contagion an order of magnitude lower than the level estimated to guarantee herd immunity. History also teaches us that the second wave comes often only a few months after the first, breaking the momentum of socio-economic recovery, and killing a multiple more (4 to 5 times as many) of the first wave: as if the virus was taking revenge (Helferty et al, 2010).

The reality is that the war against Covid-19 is far from over. We must keep our eyes on the ball in order to win the war against the worldwide spread of the disease. Moreover, we must go beyond protection strategies, and act against the more complex and longer term effects of Covid-19, to define a better “new normal.” In this brief, we propose a list of overlooked issues that could serve as a priorities on the Covid-19 recovery agenda. We think of them as moments of truth, as the success or failure to handle these issues will define whether we have won or lost the war against the coronavirus crisis.

The list is evidently not exhaustive. It is, for the most part, the result of many exchanges and discussions with academics, businesses, government officials around the world, regarding the uncomfortable truth that the Covid-19 crisis does not end when we exit the lockdown. We have reached a time when strong leadership is needed to shape our Covid-19 future.



TEN UNCOMFORTABLE TRUTHS

*Theme A: Reconciling health and wealth*

1. Crushing the Covid-19 curve after total lockdown

**Background.** A severe lockdown has been the rule in many countries since a series of radical actions were implemented in January of this year by China at the epicenter of the Covid-19 spread. (Wang, et al. 2020).<sup>1</sup>

Lockdowns have been rather effective (Alvarez et al, 2020). Countries that imposed the lockdown demonstrate a drastic reduction (up to 90 percent) of contacts and, thus, infections. Yet lockdowns have also exacted a significant toll upon citizens. As countries are now exiting, and bursts of infection re-emerge, re-imposing a full blanket lockdown strategy is likely to be challenging, with the risk of social unrest. One thus needs to enlarge the set of strategies that can manage the curve of the disease.

**Issue.** But how large is the potential diffusion of the pandemic in the first place, and what are the different alternative strategies to blanket lockdowns that can further control the virus? So far, the (adequate) focus has been on assessing the level of sustained transmission, the so-called:

$$R_0 = B_0 (N/Y)$$

In their seminal contribution, Kermack and McKendrick (1927) found that if all contacts have the same probability to infect third parties,  $B_0$  is known at the rate of effective transmission per contact between the infected and the susceptible,  $Y$  is the rate at which the infected individuals recover, and  $N$  is the number of contagious contacts.

The implied law of motion of infected through time  $t$ ,  $I_t - I_{t-1}$ , is guided by:

$$I_t - I_{t-1} = B_0 N I S - Y I.$$

When this becomes negative, the transmission is under control, and the epidemic reaches the point of dying out. In the case of Covid-19, the median of studies suggests that  $R_0 = 2.5$ , with  $B_0 = 0.3$  and  $Y = 0.12$  (Arroyo et al., 2020). The predicted Covid-19 peak will happen at  $1 - (1/R_0) = 60$  percent and the final portion of affected  $R(\infty) = (1/R_0) \ln[1 - R(\infty)]$  would then be 85 percent of the global population.

<sup>1</sup> On 1 January, the Hunan Seafood Wholesale Market was closed in the hope of eliminating zoonotic source of the virus. On 11 January, reverse transcription-polymerase chain reaction (RT-PCR) agents were developed to trace the infection. Ten days later, the Emergency Response System was activated and intensive surveillance and isolation of suspect cases started aggressively. School and work were suspended. Close ties to infected received medical observation and quarantine for 14 days. Travel from and to Wuhan City as well as other medium-sized cities in Hubei Province was restricted.

The above predictions regarding the spread of the disease are most likely extreme. One reason is that  $n$  is not constant (Eksin, 2019). People have been adapting their behaviors as a function of their perceived risk of the disease. For example, for work, we have witnessed the emergence of teleworking; or for daily activities, a large set of people have adopted practices of self-quarantine when being infected, (or wearing masks and washing hands as protective practices). In general, contact rates for uninfected individuals have decreased by 30 to 40 percent during periods of large influenza outbreaks (Caley, et al 2008).

The second reason the prediction is extreme is that the prediction assumes that everyone mixes with each other and that everyone is equally susceptible to transmit the disease. If the heterogeneity in the ability to infect is large, the outbreak may actually weaken, as the strength of the influence may be lower at some points of the diffusion. Measles infection, for example, behaves like a Pareto distribution (Lloyd Smith et al, 2005). Twenty percent of infected contributed 85 percent of the disease spread for SARS, while the figure is up to 95 percent for HIV. The distribution is more equal for smallpox (i.e. top 20%=60%) and for Ebola (i.e. top 20%=35%). A distribution such as the one observed for measles will thus have half the number of infected cases of one pandemic, which behaves more like Ebola.

There is yet to be a consensus on the actual distribution of Covid-19 contagion. "Superspreading" events, such as the outbreak in a dormitory for migrant workers in Singapore, which resulted in 800 cases due to after-ski parties in restaurants at Ischgl in the Austrian province of Tyrol, may suggest that Covid-19's ability to spread is rather skewed. If true, an effective strategy already followed by many governments is to limit superspreading events. If not true, the cancellation of superspreading events is not sufficient.

**Solution.** The good news is that comparing the history of model predictions and actual pandemic cases appears as if models might be painting a picture that is 5 to 10 times bleaker than what happens in reality.<sup>2</sup> Still, for Covid-19, this boils down to tens of millions infected, and up to five million fatalities.

One must find ways to incentivize citizens toward a culture of systematic reduction of their contacts and a culture of protection. Positive incentive programs for social distancing are opportunities that have rarely been done in practice so far. Programs may include protection training in exchange for days worked or tax incentives for self-isolating. It is also important to segment the population in terms of their social behavior and risk, in order to refine models of protection that are not as drastic of a full lockdown. In practice, a model that uses self-quarantines of the most at-risk segments, rather than full-blanket lockdowns, may be much more powerful to reconcile health and wealth, and a fortiori in developing countries where the population is demographically young and financially fragile.

<sup>2</sup> As an example, assume Covid-19 hits the benchmarks of 40 percent intentional reduction in infectious contacts, and the distribution is skewed like SARS, then herd immunity falls down to about 10-15 percent, or five times lower than anticipated by original model.

**Theme B: How do we build more comprehensive Covid-19 health research?**

**Background.** Despite thousands of research studies and comprehensive data collection, the epidemiology of the Covid-19 virus has yet to be fully understood.

One crucial question is how fast the virus mutates. If it mutates slowly, this is good news for getting an effective vaccine. But if the mutation is fast, finding a vaccine will be challenging. Another crucial question is whether immunity builds up and for how long. One possibility could be that Covid-19 behaves like the common cold (HCov-0C43), with immunity disappearing in just four to six months. This might increase the occurrence of a second wave in the very close future. One might imagine the other extreme: that the virus behaves more like the SarS-Cov-1, with a range of immunity of 1.5 to 3 years, in which case, time may be on our side.

Beyond those unknowns, it is also crucial to have the right statistics to adequately fight the disease. Relying on current official statistics to derive recommendations for health purposes may be biased at best and inaccurate at worst.

As an example, focusing on hospitalizations—the channel by which the most severe cases of pandemics would be concentrated—has been a wise strategy in the absence of pervasive data. However, focusing on hospitalizations has led many countries to overlook elderlies in-homecare. Fatality rates were close to 50 percent of the residents in homes where the virus managed to enter. Other important issues are as follows:

**2. Managing by knowing how many are infected**

**Issue.** Without pervasive testing, it is rather impossible to know how many people have been contaminated. In the last three months, the scale of testing moved from just above one percent of the population to roughly nine percent (by the end of June). This is great progress, but insufficient, and scaling is costly and takes time.

Yet we need to know more. Contrary to SARS, for example, infection by Covid-19 has five days latency before symptoms are visible, which favors significant contamination. Further, symptoms may remain mild, thus limiting quick responses. Possibly more than 50 percent of cases may be asymptomatic.<sup>3</sup>

The emerging understanding is that possibly five to ten times more people are infected and not officially reported (Li et al, 2020). This understatement of cases also implies that the official peak of the disease is likely to be earlier than the real peak. The risk faced by governments is thus to be caught off-guard, which would exacerbate a second (possibly, more lethal) wave.

The emerging understanding is that possibly five to ten times more people are infected and not officially reported

<sup>3</sup> As a case in point, the village of Vo Eugeno in Italy, where patient zero has been assumed to live, has decided to test its 3000 inhabitants after full lockdown- with more than 50 percent of cases asymptomatic, or two times more than in the case of a typical flu. This matches the 52 percent of asymptomatic cases found out of the 94 percent tested on board of the Princess Cruise ship.

**Solution.** The solution to this problem is to trace and test people as quickly and as effectively as possible. Scaling can be circumvented by group testing. This idea amounts to pooling samples into groups and evaluating those pools for the coronavirus rather than individuals, with fewer tests required. Such a strategy is not new, and in previous years has proved effective to detect HIV and malaria (Gollier and Gosner, 2020).<sup>4</sup> Tracing is another route, as test specificity has improved significantly since the start of the pandemic. If the drawback is privacy, this can be circumvented. First, the virus is highly contagious, so that the country may impose the sharing of data to some extent to citizens. Second, data can be anonymized and a civil society governance model can be imposed by which the state has no access and right to the data per se.

### 3. Managing the journey of infection

**Issue.** Currently, a large focus has been on severe Covid-19 cases. The rough picture is one in which 50 percent of cases are asymptomatic (with virtually zero risk of fatality), with 40 percent showing mild symptoms (who can heal after a few weeks at home), and 10 percent of more severe cases requiring hospitalization.<sup>5</sup>

This funnel implies that the fatality distribution is rather skewed. However, this distribution raises two questions. Why do some people's symptoms start to worsen from mild to severe? The number of cases to this end is overlooked today, but it is a significant number: 10-15 percent of mild cases can turn bad, according to recent research by the WHO (Heymann and Shindo, 2020). The second question is whether recovered people are de facto all "fit and proper." What if among the five million recovered people (possibly 50 million people), if we account for the unreported cases, recovery is not complete? These are real risks.

History provides some clear evidence of short- and long-term damages. Regarding short-term damages, more than one-third of people who were hospitalized for the 2003 SARS outbreak had anxiety and depression disorders one year after the infection (Lee et al, 2007).

Long-term effects may be present, too. Studies looking the in-utero reaction of fetuses to parents who suffered from the 1918 pandemic suggest large morbidity effects that remain for 25 to 40 years after the initial exposure, affecting the lungs, kidneys, and other organs, with a further negative impact on productive and social life (Almond, 2005 and 2006, and Mazumder et al., 2010).

<sup>4</sup> <https://www.webmd.com/lung/news/20200514/group-screening-could-help-covid-19-test-shortages>

<sup>5</sup> *With hospitalizations, a dominant part (> 50 percent), must be placed in ICU and on respirators.*

**Solution.** The issue explained above calls for a much deeper look at the funnel of contagion. Best practices include examples from Germany, where authorities called upon mildly symptomatic people to monitor the evolution of their symptoms during the quarantine. This allowed authorities to spot worrying trends of health degradation and send people to the hospital much faster in order to preempt late handling.

Regarding recovery, it is advisable to build a care protocol for symptom persistence. Those protocols may take a holistic approach incorporating respiratory rehabilitation, physiotherapy, and nutritional advice, as well as mental health as the best bet to avoid lasting health issues.

#### 4. Preventing overlooking other health needs

**Issue.** The Covid-19 pandemic and its associated lockdowns have likely pushed people not to seek support for other major health problems.

In France, for instance, the number of newly diagnosed cases of cancer has fallen by 50 percent. There were twice as many cardiac accidents per inhabitant outside hospitals during the lockdown, and twice more with deadly outcomes. The consequences of this are significant: for instance, the above suggests that for cancer alone, 30,000 cases were not spotted for three months in France. As any month of delay in diagnosis leads to a 5-20 percent decline in survival, this may mean 10,000 deaths in the making, versus 30,000 deaths from the coronavirus.

**Solution.** The solution includes a strategy of reducing the risk of seeking consultations about potentially fatal pathologies. Israel realized this early and sent Covid-19 patients to secure, high-quality hotels, as rooms were empty during the crisis and high-end hotels could be easily repurposed. The aim was to separate the infected population from other hospital patients and reduce the stress on the healthcare system.

#### Theme C: Wealth Matters

**Background.** The importance of wealth matters has been very apparent since the containment debate. In the U.S. alone, over 30 million people have registered unemployment amid the largest fall in economic activity since the Great Depression. In China, for instance, industrial output fell in the first two months of 2020 by more than 13.5 percent, while investment fell 25 percent year-on-year (and 30 percent when it concerns infrastructure); consumer retail sales collapsed by 20 percent. Lockdown exit is an opportunity to reboot economies, but the damages done due to lockdown can be irreversible. Let us be reminded that even ten years after the sub-prime 2008 crisis and the Lehman Brothers bankruptcy, about 60 percent of countries still have an output trajectory below precises levels, according to robust research by the IMF.

In addition, when Covid-19 began its invasion of our economies, our economies were not as strong as they could have been. For years, developed countries have faced declines in active populations. R&D returns are also on the decline. Inequality has increased within both developed and developing economies. Interest rates have decreased, and most of the boosts in the stock market can be traced to a few superstar sectors and firms, in addition to share buybacks.<sup>6</sup> Productive investments and capital deepening have also been weak.

Those weaknesses are today “hidden” or “embedded” within the Covid crisis—but will resurface when the health issue of the pandemics is controlled and will add additional pressure on how we rebuild inclusive growth in the coming years. For example, low R&D returns are correlated with a declining number of startups in Europe and U.S., and lower employment; low capital intensity means that the asset base of the economies is not growing as quickly as needed to rebuild jobs for example. Moreover, low R&D may mean lower ability to fight inventive ways to control the pandemic.

## 5. Building Enough Pandemic Resilient Jobs

**Issue.** An important issue faced by our economies is job creation. Pre-pandemic, job creation was relatively poor in many countries, and the emergence of automation and artificial intelligence technologies has led to fear of a “worker-less future.” Many jobs created were low paid. Now, Covid-19 has added new complexity to the picture and has been a brutal shock to the economy and the labor market.

Three critical elements stand out from this picture. The first is that many jobs have appeared nonessential. The second is that many jobs cannot be done remotely. The third is that jobs at risk of Covid-19 may be disproportionately, positively correlated with the jobs at risk of automation.

Depending on the method used, up to 40-50 percent of jobs could be labeled nonessential: that is, jobs that we do not necessarily need to survive. Essential jobs, such as those fulfilled by healthcare professionals, or those related to logistic delivery and food supply chains have appeared to be not that well paid. However, this also implies that, for the same labor share, nonessential jobs may appear to be paid nicely, and may be “too high.” Will this argument prevail that might then lead to a pressure on wages going forward?

The second observation is the rise of teleworking during the lockdown. While productivity is solid, teleworking might become more of a baseline: limiting unnecessary travel, pollution, and office costs. Yet teleworking is not pervasive, and is only economically possible for about 40 percent of workers (Dingel and Neiman, 2020). Telework is especially less of a profitable strategy for low paid jobs, and jobs with a lower level of education, which raises the question of further job polarization in post-pandemic economies.

<sup>6</sup> *In the U.S. at least*

The last observation is that job resilience has been diminished: 40 percent of jobs in Europe and the U.S. will be facing replacement threats. Many at-risk jobs, rendered difficult to fulfill due to social distancing requirements, are likely those that risk substitution by automation and artificial intelligence tools. . As the automation risk rises in the next ten years, this raises the question of whether jobs at risk of being more exposed to the Covid-19 pandemic may trigger speedier job destruction than planned.

Putting all this together, the high-level picture of the future of work that seems to emerge is one of increased bifurcation. On one extreme, there is the happy few, less than 20 percent of workers who are in essential industries, where telework is possible and with enough good education and digital skills to operate in this new normal. On the other extreme, a segment of roughly the same size exists with limited teleworking ability, high risk of automation, and nonessential jobs (people with lower education and less secure jobs already today).

**Solution.** This acceleration is the bifurcation of jobs that, in the future and indeed even today, leads to rising inequality, risk of populism, and in any case, will depress aggregate demand in economies. This picture calls for a much deeper analysis of the intersection of those new trends of future of work and the development of models that support the incomes of the most affected, as well as new models of accelerated training.

## 6. Promoting Covid-19 Safe Firms and Countries

**Background.** On the other side of good jobs are good firms. Ultimately, more than eight out of ten jobs are provided by companies or public agencies. Thus, it is critical to consider the effects of the pandemic on firms.

The effects are not equally distributed. For instance, the Covid-19 shock is placing significant strain on corporates, with 50 percent of firms likely to possess insufficient cash to cover total debt servicing costs over the coming year, according to the BIS (Banerjee et al., 2020). Credit lines could provide additional liquidity, but access is uneven against high-levered firms. The public sector and healthcare services have been less affected than, say, the hospitality, entertainment, and restaurant sectors, which had 80 percent of their demand knocked down by the pandemic. In the same vein, the pandemic leads to supply chain disruption, which disproportionately affects companies exposed to globalization. As an example, Dun and Bradstreet reported that millions of companies around the world have a first or second-tier supplier in the Hubei region, the center of the Covid-19 outbreak.

The institutional context plays a role in the curse of the pandemic. For instance, Brazil's exposure is bigger than, say, Colombia's. U.S. cases are growing faster than in Canada. In Europe, Norway's cases are growing slower than Italy's.

**Issue.** How to make countries and firms more resilient to Covid-19 is thus a very high priority. Structural factors will ultimately affect how countries will emerge from the Covid-19 crisis, across three domains: their ability to control social contagion, exposure to fatality rate, and adequate management of the Covid-19 outbreak. Regarding social contagion, Asian countries do very well compared to the rest of the world, with 82 percent of Chinese people wearing masks during the Covid-19 outbreaks; Europe has been much less disciplined, and only in part because of lower availability of equipment.<sup>7</sup> Regarding outbreak management, governments with a culture of coercive measures and technology tracing are to be found again in Asia; in contrast, the Anglo-Saxon and Calvinistic cultures, such as the UK, U.S., or the Netherlands, have been much looser in imposing social distancing restrictions. Regarding the fatality rate, Europe has an aging and old population, while Italy and Spain combine old populations with relatively high co-morbidities and a lower quality of their hospital systems versus the rest of the EU.

Mixing all those criteria, we have found that Brazil, as the most exposed, is twice more at risk of large fatalities, than Israel, in our study (Bughin, 2020). Asia is only ok-ish, with Singapore taking the lead. However, South Korea has an elderly population. The key message here is that not all people have equal susceptibility to catching Covid-19. East Asia is a case in point: countries' effective management of the crisis has compensated for the dangers of a more elderly population. This is an example of learning from past pandemics.

Zooming into the micro-view of companies, one obvious fact is that, on average, the adverse effects of severe pandemics such as the coronavirus will be felt into corporate performance. For example, the return on assets and employment has been systematically lower for firms affected by pandemics than for firms insulated from the shocks of pandemics this year alone (Ma et al, 2020). However, as a mirror to countries, the spread of performance following Covid-19 seems to be larger within firms than within sectors or between countries. This mostly reflects differences in the resilience ability of those firms, extensively using business model innovations to rebound. One example is how some restaurants shifted their business models from dining in place to home delivery as a way to rebuild their revenue. Another example is how many new entrants have been aggressively entering the competition for innovative drugs (Byan et al., 2020).

**Solution.** The above suggests that countries, with limited abilities in their health systems, must take the step to aggressively upgrade them, including the way to finance access to them. It shows as well the necessity to build a comprehensive masterplan for handling disease outbreak, to avoid deficiencies in supply chains, medical provisions, and for sharing best practices across countries. Regarding firms, this also requires us to identify fragile

<sup>7</sup> On the other hand, the culture of protection is not only about wearing masks ; more Asian people tend to wash hands in their daily life than in Europe, for example. Gall up data and Eurostat surveys in Europe had shown that Italy have much more social contacts in daily life than say, in Finland, but also that only 57 percent of Italians wash their hands after going to toilets, for 76 percent in Finland.



versus more-resilient firms, first, to anticipate the risk of major layoffs and bankruptcies, and second, to anticipate best practice resilience as well as to design policies to facilitate a smooth transition from the crisis.

## 7. Building a Bold, Demand-Led Recovery Multiplier

**Background.** The burden of the current crisis is not small. Only counting for lockdown in the U.S., average income and wealth loss are more than US\$5,000 and US\$33,000 respectively (Coibion et al, 2020).

The burden may come to 5-10 percent of welfare loss, suggesting that a V-shaped recovery may be optimistic. A U-shape may be a better representation, as seen from the early data of China, where economic recovery has been slow pace. Worse, an L-shape is possibly not to be neglected, both because of the risk of a second wave this year, and because crises of that size may lead to major distortions, affecting investments and ultimately growth path in the future.

**Issue.** Plans have been announced by a large set of countries to stimulate growth and prevent the worst case of an L-shaped recovery. The key question remaining is this: are they spending fast, big, and smart enough?

**Solution space.** To date, at a time of low interest rates, most countries have rightfully launched a major fiscal stimulus. This amounts to a range of 2.5 percent of GDP, on top of facilities of re-payment.<sup>8</sup> This amount of direct fiscal spent concerns money at work today, but commitment is higher. Further, the figure is already higher than during the crisis 2008 (for instance, the G-20 spent roughly 1.4 percent of GDP in stimulus package).

Some surprises are nevertheless visible.<sup>9</sup> Germany intends to spend more than 13 percent of its GDP, while some countries have opted for much less than 2 percent, such as Belgium and Hungary.

Further, there is a question of whether 2 percent is bold enough. Estimating the multiplier effect of the additional spent of 2 percent, the push to GDP will be for 5 years at about 3.6 percent, (or a multiplier of 1.5), an impetus that is likely to be below the average risk of output contraction for Covid-19 during 2020. Finally, many spending-related policies, like CARES, are of the rescue, versus recovery type. Solutions must not only focus on rescue but also favor the reallocation of resources toward fast and appropriate recovery. As an example, the EU Recovery plan initially proposed by the Franco-German team of €500 billion of spending could be jointly spent on key forward-looking infrastructures in sustainability, new investment in frontier technologies, among others.

<sup>8</sup> The latter is *de facto* crucial as the OECD, leveraging Orbis data, finds that 1/3 of firms may run out of liquidity after three months of lockdown. This liquidity crunch is thus massive and must be sorted out clearly (OECD, 2020).

<sup>9</sup> Data collection on extent of commitment is done by Bruegel, see <https://www.bruegel.org/publications/datasets/covid-national-dataset/>

## Theme D: Other Sustainable Development Goal Matters

**Background.** The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, has provided a blueprint composed of 17 Sustainable Development Goals (SDGs), aiming to build prosperity and wellbeing, of which health and wealth are core, but not unique components.

The blueprint is an essential framework by which one may check if we are sufficiently comprehensive in actions related to Covid-19 and recovery. In this chapter, we cover the interactions between Covid-19 and three SDGs. We look at SDG9 on innovation, as Covid-19 is possibly an important catalyst for digitization and sustainability, at SDG16 regarding strong institutions, as Covid-19 may be the time for good or bad political and social change, and finally, SDG10 on inclusive growth, as one important lesson we have gained from the pandemic is that inclusivity is often weakened during a crisis, which bears negatively on the potential of prosperous recovery in the future.

### 8. Scaling (Both Digital and Green) Frontier Technologies

**Background.** Leveraging frontier technology for digital transformations has been notoriously complex, and slow to deliver the expected returns for many companies (Bughin et al, 2019). The joke, “Question: Who has led your digital transformation? Answer: Not my CEO, not my CDO, but Covid-19,” alludes to the reality that the Covid-19 crisis has pushed companies to double down on digitization as a means to replace physical with digital interactions.

Figures in this matter can be striking, especially when lockdown has been strict and prolonged. In France, for example, essential goods and services purchased online doubled its share during lockdown (from 3 to 6 percent of supermarket sales). For nonessential goods, the online share of expenditures has skyrocketed; for instance, in beauty products and personal care, less than 5 percent were purchased online before containment, whereas during the lockdown this skyrocketed to 75 percent (Bounie, et al, 2020).

Other benefits of digital include the means to timely and accurately trace the disease, as mostly done in some Asian countries rather successfully for the Covid-19 and leveraging their own fruitful experience of tracing previous virus attacks (Akhtar, et al. 2019).<sup>10,11</sup> Or, the buildup of predictive tools of treatment against the Covid-19. As an example, digital machine learning tools have identified by February 2020 multiple rheumatoid arthritis treatments as being powerfully repurposed for treating the virus. These types of drugs have been recently confirmed as effective in random health trials by end of April, or two months later.

<sup>10</sup> See <https://www.linkedin.com/pulse/europe-should-play-asian-smart-route-control-covid-19-jacques-bughin/>

<sup>11</sup> This is not exclusive to Covid-19, as nowcasting was successfully used during the 2015 Zika virus, or even for the flu.

**Issue.** If digital technologies can indeed handle the Covid-19 crisis, the key issue remains regarding whether one can truly scale its use, and reach the minimum mass to make these technologies highly effective. A case in point is the digital testing and tracking tool, which is especially useful when more than 50 percent of citizens are using the tools. Such penetration is, in practice, not easy to achieve, particularly if its use is left to the discretion of the user. Even in countries promoting digital tracking, the adoption rate was just 40 percent in Iceland and just above 20 percent in Singapore and Israel. Another example is the use of teleworking technology. While used as a de facto platform of workers' interactions, before Covid struck, teleworking was barely used by less than 30 percent of employees in countries such as the U.S. or Japan, and half of them only had done it for one day a workweek.

**Solution.** There is possibly no way back to use digital tools, as many consumers or workers have now passed the hurdle to be familiar with the technologies. However, the power of digital tools lies in more complex use cases, like tracing. One way to make this reach critical mass is to ensure usability and apply behavioral economics to induce broader reach and usage.

One complaint has been that tracing may not be that effective. To mitigate against this, South Korea has been combining multiple sources of data such as mobile geolocation, credit card data, video facial recognition, to better predict the risk of transmission for each person. For even more tracing underground and in offices, Google and Apple have been proposing a Bluetooth proximity detection system. Another complaint has been that of data privacy: however, technology can limit this risk itself, by proposing decentralized general-ledger based data repositories, and by encouraging the fulfillment of service outside of the hands of governments, for instance through a civil society group.

As participation must be significant, simple active opt-in seems to be ineffective. Mandatory use (as done in South Korea) may be a solution, but there are other ways to lure people into becoming traceable. Behavioral economists will tell you that a system where opt-out is the default answer can double to triple the cases of opt-in. Another solution is to make sure that choices have consequences; for instance, opting out may mean that people may not have priority access to healthcare. By making an explicit and valuable tradeoff, people may be more inclined to share their data. We thus need to prioritize research into how to boost the mass acceptance of health and wealth saving applications.

**Green Sustainability (Background).** Regarding green sustainable tech, there is hope that these technologies will help alleviate ecological risks, such as the speed of natural resource depletion and the growth of carbon emissions.

Over the past ten years, global warming has boosted the global average temperature by about 0.9 degrees Celsius compared with preindustrial temperatures. By rule of thumb, one extra degree of warming would lead to a 0.2 percentage point decrease in GDP growth, as long as the world does not hit the threshold of overheating. This threshold, alas, could be reached by as soon as 2030, much earlier than commitments to the Paris Agreement anticipating a reduction 80 to 95 percent of current emissions by 2050 (Jacob et al, 2018,

or Robinson et al, 2018). If this implies that we need faster actions, Covid-19 has led to some rather powerful experiments. The lockdown, for example, reduced significantly energy demand and pollution. China's shutdown in February resulted in a 25 percent decline in CO2 emissions.<sup>12</sup>

**The issue.** On a global scale, the total of emissions might fall globally 8 percent by 2020, or twice as much relative to the GDP of the Second World War. But with exits from lockdown, emissions might rebuild, and possibly go back to the same historical growth path. As a case in point, the 2009 prime crisis led to a drop of 1 percent in emissions, which rebounded to 4.5 percent in 2010, catching up on the secular trends. Covid-19 may also have distorted investment in clean technologies (Hepburn et al, 2020). Falling energy demand and social distancing have cut by half the growth of wind, solar, and battery capacity for this year, while the collapse in oil prices has made the substitution to alternative energy less evident. Finally, research by Helburn et al. (2020) also emphasizes that only 4 percent of government policies to be relaunched after Covid-19 have some potential to reduce long-term GHG emissions.

**Solution.** In the end, policy success will depend on generating impact fast and delivering the largest multiplier. As mentioned, this includes favoring the use of digital and green technologies and shifting many more policy actions to a green agenda. Europe may be a promising example, as it remains on track to present a new plan to raise the EU's 2030 ambitions and cut greenhouse gas emissions by 50-55 percent. But this plan should encompass aggressive decentralization of energy production, new regulatory tools that make the Emissions Trading Scheme much more effective, and environment standards in compliance with the post-pandemic world, regarding travel, circular economy, and other industries.

## 9. Retooling Politics Towards Safer Democracy

**Background.** Democracies have been the foundations of balanced growth and wellbeing in the last century, but lately, democracy has been under siege. From France to Hungary, from Austria to Brazil, populism is on the rise, with major consequences, including a marked decrease in the quality selection and the moral hazard of civil servants (Sasso and Morelli (2020), and a sharp rise into disengagement policies which risks conflict (Mattozzi et al., 2020).

As forcefully demonstrated by Algan et al. (2019), the development of populism results from two forces. On one side, the increase in the economic hardships felt by the middle class in most of Europe and the U.S. On the other side, the increase in personal insecurity because of the deterioration of many social institutions like the family, the religion, or the metaphoric "café where friends used to meet in the middle of the village."

<sup>12</sup> See <https://www.carbonbrief.org/analysis-coronavirus-has-temporarily-reduced-chinas-co2-emissions-by-a-quarter>

**Issue.** Given this reality, the Covid-19 outbreak may have a large impetus effect on populism. One perspective is that Covid-19 has re-centered local society, at a time where density was popularly thought to be guided by global developments. This may reinforce a sense of altruism and belonging, which may mitigate the rise of populism. But another view is that Covid-19 is more of a threat to the foundations of democratic institutions. The first symptom of this erosion of democratic institutions is that many governments have opted to centralize decision-making power in the executive under the guise of retooling governance to better deal with the emerging crisis. But it is crucial to consider these powers are temporary and exceptional, and not as their own new rule. Some governments are already tempted to take advantage of extra power granted by Covid-19.

Second, the crisis has had a marked effect on citizens' economic and social perceptions about their future. The effect is often depressive. Eurofound research in April 2020 shows that a minority of EU citizens remain optimistic about their own future and the pessimism increases with the amount of Covid-19 fatalities. The level of trust in each other, national governments, and the EU went down, too. For once, levels of trust in the EU went below national government levels in the wake of Covid-19, against the usual findings that trust is often higher towards the EU than towards respondents' own national institutions. This is particularly observed in rather pro-EU member states such as France, Italy, and Spain, where the Covid-19 health crisis was, and still remains, significant.

Another subtler issue is elections. While France is going for the second round of voting for municipalities, the realities of Covid-19 may undermine the representation of these elections. A recent study conducted in the U.S. identified that counties that voted after Super Tuesday and which were then exposed to the Covid-19 outbreak were less likely to support Bernie Sanders, leading to 4 percentage points less support compared to Sanders' 2016 vote (Bisbee and Honing, 2020). This effect means elections may be greatly influenced by the hazard of another pandemic wave of Covid-19.

**Solution.** Covid-19 may be an important catalyst for major social changes and politics, for the good, or the bad. There is yet to be convincing studies that highlight how the effect of Covid-19 will play out in politics, from policies adopted to voting, and so forth.

Three elements are worth highlighting here. The first is that the effect of Covid-19 must be understood rather holistically—the notion of risk, in particular, should be decomposed into economic, health, family, social networks, and political constructs such as a region or a country. The second is that the effect should be looked at different stages: during containment, after exit, and again in a few months, so that the dynamics are better understood. The third is to use a larger framework than just pure economics, or pure wellbeing. A clever approach adopted by Stanford economists such as Hall et al (2020), and ourselves (Bughin, 2020) is to use a more general citizen utility welfare framework that encompasses not only work income but also a healthy life span, uncertainty in those utility drivers, among other considerations. Such a framework is a step to better understand how Covid-19 may play out. With such a framework, the welfare changes linked to Covid-19 is an order of magnitude larger than simply looking at one

single component. This change may become drastic for some segments or individuals (e.g. a divorced person above 55 years old, with low education, working in an over-exposed, nonessential sector and suffering from cardiac comorbidity, has a much higher risk of Covid contagion and fatality, on top of socio-economic risk linked to employment loss). This level of granularity is needed if one wishes to anticipate any form of evolution (backlash, or in contrary, rise) of social risks and populism.<sup>13</sup>

## 10. Including Inclusivity

**Background.** The notion of inclusivity reflects the idea of the provision of equal opportunities for everyone. Disproportionately large gains accruing to a few against others falling behind is a clear symptom that inclusivity is not achieved. In recent years and decades, so-called ‘superstar’ effects have been emerging. One out of ten of large publicly quoted companies belongs to superstardom and in aggregate, captures 80 percent of the world economy’s profit. This concentration has increased by 50 percent in the last 20 years. Regarding income, real market incomes were flat or fell for between 65 and 70 percent of households in advanced economies, but increased rather significantly for the top 10 percent.<sup>14</sup>

**Issue.** Covid-19 has built more inequality in the system, as the pandemic has added fragility to already fragile groups. The probability of death from Covid-19 consistently increases with increasing poverty, driven by the interaction of factors such as healthcare accessibility, social distancing ability, or still higher stock of comorbidity per age group.<sup>15</sup> The effect is not only about health. It is also about wealth: Extensive research on the top five epidemics of this century (e.g. SARS, H1N1 to Zika in 2016) has demonstrated the increase in inequality, building up structurally even after five years from the end of the pandemic (Furceri et al. 2020). One main channel is the impact on employment, as people with only basic education have been significantly impacted in recent pandemics. This is a factor that we anticipate as playing in full force during and after the Covid-19 crisis because of new disruptions from automation and teleworking, on top of the traditional recession risk effects.

<sup>13</sup> There is also scope for redefining roles of international institutions, even if not covered in this article. The WHO for instance may need to improve on its agility during crisis, and may build up foresight analysis for pathogens and vaccines. The UNESCO has an essential role in maintaining the spread and delivery of education and humans learning programs. The IMF and work plan may build up new programs of financing virus proof health infrastructure, etc.

<sup>14</sup> Disparity is especially detrimental after a certain point, as for example, some inequality may be needed for strong incentives for innovation and entrepreneurship. However, in practice, inequality reduces growth when inequality is above a net Gini coefficient of 0.30, which is for example a fact of life in Europe, see Grigoli, et al, 2016

<sup>15</sup> For factualization, see among others Imperial College London work available at <https://www.imperial.ac.uk/media/imperial-college/medicine/mrc-gida/2020-05-12-COVID19-Report-22.pdf>

**Solution.** The essential message is that beyond the bulk of committed fiscal policy by governments, the allocation of those resources must be prioritized towards the more at-risk segments of society. This includes, at the economic level, those with informal work and self-employment, and those without comprehensive social protection. This includes, at the demographic level, the older population, as they are more at risk of infection, or at risk of reducing active economic participation as a self-protective behavior (Bughin and Cincera, 2020 demonstrate how this behavior is rational and depends on a very large asymmetric health risk above 60 years).

### **Going Forward**

Covid-19 has been a major adverse shock, affecting all dimensions of wellbeing. While actions have been undertaken to control the pandemic, and masterplans have been built for exiting blanket lockdowns prevailing in a large array of countries worldwide, the mistake should be that the war is won. It is not.

We must restart and retool health and economic systems. We should not think the world is in standstill: the virus continues to spread worldwide and shows signs of (albeit concentrated) outbreaks in regions exiting containment. A vaccine has not been found yet. Even when a vaccine is discovered, its effectiveness and inclusive distribution are two more obstacles to overcome.

More fundamentally, many questions remain. The way we answer these questions will determine if Covid-19 has indeed catalyzed efforts to rebuild a better world. The post-Covid era has the potential to return to normal, or at worst, the potential to amplify negative trends such as rising inequality, increased GHG emissions, and dislocating labor markets.

In this paper, we have explained ten critical domains that must be further explored as actions to “tilt the war against Covid-19 towards a better world.” Now is the time to lead and the time to act.

# 25

## The Coronavirus as Policy Opportunity?

Ben Gelman '22

Even before the coronavirus pandemic, there was an ongoing debate between some Americans about whether current levels of inequality and lack of opportunity are adjustable quirks and flaws in an otherwise sound economic and social system, or whether America needs transformational change in order to focus more on the needs of the poorest Americans. Contention between the “incrementalists” and the “revolutionaries” divided the Democratic Party during both the 2015-16 and the 2019-20 primary seasons and has now spilled into the debate over how the U.S. ought to respond to the outbreak.

Instead of an intra-party debate within the Democrats, however, the latest iteration of the conversation is manifested in the divergent Democratic and Republican responses to the pandemic. The Democrats' have supported social distancing measures to slow the spread of the disease and progressive government spending programs--reduced student loan payments and increased unemployment insurance payments--to mitigate the damage to businesses and employees. Progressive stalwart Senator Elizabeth Warren even laid out eight demands for companies seeking a government bailout, including a \$15 per hour minimum wage for all employees, a ban on stock buybacks, and a requirement to get shareholder approval for political spending.<sup>1</sup>

The Republicans' response to the pandemic was a historic 2.2 trillion dollar relief package to forestall corporate bankruptcies and keep the economy flush with cash. Progressives criticized the GOP plan for prioritizing corporate bailouts with little oversight and not doing enough to protect workers, limit stock buybacks, and prevent layoffs. Republicans countered that Democrats viewed the emergency as a political opportunity to expand voting rights and pass a raft of pro-union and pro-environment measures, with

<sup>1</sup> Elizabeth Warren just laid out 8 conditions that companies should accept for government bailout money during the coronavirus crisis (March 18, 2020) Joseph Zeballos-Roig, Business Insider. <https://markets.businessinsider.com/news/stocks/warren-laid-out-conditions-companies-accept-bailouts-coronavirus-crisis-2020-3-1029006340>



Senate Majority Leader Mitch McConnell saying “This is not a juicy political opportunity. This is a national emergency.”<sup>2,3</sup> McConnell also assailed House Majority Whip James Clyburn for noting the pandemic “is a tremendous opportunity to restructure things to fit our vision.”

Republicans argue that Democrats are not playing fair in using the pandemic to advance a grandiose progressive policy agenda. This prompts interesting political and philosophical questions about the line between a legitimate response to the situation that has the best interests of the American people in mind and cynical attempts to use the crisis to advance unrelated policy proposals. The Republican perception, or at least their accusation, is that Democrats are looking to solidify long term changes to the U.S. economy and healthcare system through their coronavirus response.

However, this tactic is not without precedent in American history. Many entitlement programs that we now take for granted, such as the New Deal, were originally born out of economic crises such as the Great Depression. That crisis both necessitated massive spending programs in order to resuscitate the economy and taught the U.S. valuable lessons about how government action can reduce economic damage. Now essential programs such as Social Security helped end the Depression and protected workers in later economic downturns.<sup>4</sup> In contrast, the incrementalist, business-as-usual attitude that Republicans seem to expect from Democrats today would not have cured the Great Depression. In fact, President Hoover’s preference for small government and his unwillingness to provide relief exacerbated and elongated the misery of the 1930s.<sup>5</sup> Incrementalism was not helpful then, nor will it help us now.

What’s more, the Republican attitude toward the outbreak has given the American people plenty of reason to doubt their ability to take the crisis seriously and respond effectively. President Trump’s repeated dismissals of the severity of the threat slowed the U.S. response time and enabled the early spread of the virus. Additionally, in insisting that the U.S. economy reopen within a few weeks and insinuating that older Americans might sacrifice themselves for the sake of the U.S. economy, Trump and some other Republicans have clearly demonstrated both their ignorance of the gravity of the situation and a shocking disregard for the potentially catastrophic death toll that might emerge if Americans followed

<sup>2</sup> *What’s in Democrats’ coronavirus bill? Arts funding, union help and more* (March 24, 2020) Tyler Olson, *Fox News Website*. <https://www.foxnews.com/politics/whats-in-democrats-coronavirus-bill-arts-funding-union-help-and-more>

<sup>3</sup> *Dems demanding new union bargaining powers, solar tax credits in new coronavirus aid package* (March 23, 2020) Dave Boyer, *The Washington Times*. <https://www.washingtontimes.com/news/2020/mar/23/dems-demanding-new-union-bargaining-powers-solar-t/>

<sup>4</sup> *Did the New Deal Programs Help End the Depression?* Brian Dunleavy, *www.history.com*. <https://www.history.com/news/new-deal-effects-great-depression>

<sup>5</sup> *Herbert Hoover*. *www.history.com*. <https://www.history.com/topics/us-presidents/herbert-hoover>

their suggestions.<sup>6</sup> If Democratic proposals cross the line into political opportunism, at least their strategy recognizes the severity of the pandemic and may lead to some actual relief.

This is not to say that one should not be critical of Democrats' ideas. But, the fact that their proposals aim to address large-scale, structural problems is not the flaw, it's the entire point, and it stands in sharp contrast to the Republicans' suggestion that this public health crisis will disappear on its own. Coronavirus exposed the cracks in American society: our lack of universal health coverage has prevented many from seeking treatment;<sup>7</sup> our weak social safety net has shifted the brunt of this economic slowdown to the poorest working Americans;<sup>8</sup> and, our lack of a functional federal bureaucracy and presidential leadership has slowed our response time and encouraged the virus to spread.<sup>9</sup> These desperate times call for a re-thinking of America's economic and healthcare priorities, to both soften the blow of our current crisis and prevent the next one. There has perhaps never been a better time for radical action than now.

<sup>6</sup> *Old People Would Rather Die than Let Covid-19 Harm US Economy* (March 24, 2020) Lois Beckett, *The Guardian*. <https://www.theguardian.com/world/2020/mar/24/older-people-would-rather-die-than-let-covid-19-lockdown-harm-us-economy-texas-official-dan-patrick>

<sup>7</sup> *Coronavirus May Disproportionately Hurt the Poor—And That's Bad for Everyone* (March 11, 2020) Abby Vesoulis, *Time Magazine Website*. <https://time.com/5800930/how-coronavirus-will-hurt-the-poor/>

<sup>8</sup> *As Coronavirus Deepens Inequality, Inequality Worsens Its Spread* (March 15, 2020) Max Fisher and Emma Bubola, *The New York Times*. <https://www.nytimes.com/2020/03/15/world/europe/coronavirus-inequality.html>

<sup>9</sup> *Why Coronavirus Testing in the US is So Delayed* (March 13, 2020) Olga Khazan, *The Atlantic*. <https://www.theatlantic.com/health/archive/2020/03/why-coronavirus-testing-us-so-delayed/607954/>

# 26

## Covid-19: Lessons Learned Should Not be Lessons Lost

Rohan Shah '20

Gripped in the throes of the coronavirus pandemic, our world has been upended as we have faced an enormous loss of life, prolonged social isolation, rampant racial tensions, and economic despair. Unlike several other countries, however, the United States has continued to struggle to contain, trace, and treat the novel coronavirus. At the time of writing this essay, the United States has been besieged by nearly 7 million confirmed cases and 200,000 deaths—an incalculable and bewildering loss. As a result, the pandemic has left many Americans distrustful of the government's ability to safeguard public health, and rightly so.

Beyond the headlines, however, the coronavirus pandemic is rewriting and reshaping American healthcare broadly. In the pursuit of universal treatment, we are experiencing a rare moment of mutual aid, assistance, and collaboration across the entire healthcare continuum. Big pharmaceutical giants like Eli Lilly, Pfizer, and GlaxoSmithKline have established partnerships with exciting biotechnology start-ups like AbCellera, BioNTech, and Vir Bio to accelerate the search for effective disease interventions. Likewise, payers, providers, and drug companies have forged alliances to share medical data to improve care for coronavirus patients across the healthcare continuum. We should be energized by the extent of private sector collaboration, but any keen observer knows that this sort of partnership has long been the cornerstone of American healthcare.<sup>1,2</sup> A more surprising phenomenon is the extent to which the federal government is collaborating with the private sector. This is a true embodiment of public-private partnerships and, importantly, a model that should not evaporate once the coronavirus passes.

<sup>1</sup> "Pharma-Payer Partnerships Seek to Prove Effectiveness of Care" <https://www.ajmc.com/view/pharma-payer-partnerships-seek-to-prove-effectiveness-of-care>

<sup>2</sup> "Collaboration Among Health Care Organizations: A Review of Outcomes and Best Practices for Effective Performance" <https://www.ncbi.nlm.nih.gov/books/NBK241297/>

The most paramount and surveilled collaboration centers around Operation Warp Speed—a government effort to accelerate the discovery, development, and distribution of Covid-19 vaccines, therapeutics, and diagnostics. According to the U.S. Department of Health and Human Services (HHS)<sup>3</sup>, Warp Speed’s official charge is to have “300 million doses of a safe, effective vaccine by January 2021, as part of a broader strategy to accelerate the development, manufacturing, and distribution of Covid-19 countermeasures.” Launched in April, the \$10 billion effort is led by Moncef Slaoui, the former chair of vaccines at GlaxoSmithKline, and involves federal agencies ranging from the CDC to the Department of Defense. Importantly, the effort aspires to unite the vast resources of the government with the ingenuity and agility of the private sector. In doing so, the government has, for perhaps one of the first times, opted to fund solutions that are “ready for primetime” as opposed to basic research to have a more immediate impact on patients—a model that could be applied long after the pandemic to neglected but highly prevalent diseases.

Operation Warp Speed has not only plowed capital into novel solutions but has also provided strategic support for companies. Highlighting the scale of the effort, the operation invested \$204 million for Corning glass vials, \$1 billion to support manufacturing of Johnson & Johnson’s vaccine candidate utilizing a tried-and-true technology, and an eye-popping \$2 billion for Pfizer/BioNTech’s experimental vaccine leveraging novel RNA technology, to name just a few partnerships. According to Helen Branswell and Matthew Herper of STAT News, Operation Warp Speed has “spent about \$10 billion to help vaccine makers develop their candidates and build out production capacity to make vaccines at commercial scale.” By investing in a variety of technologies and companies, the effort has “taken more shots on goal” to diversify and increase the probability of achieving successful COVID-19 countermeasures. Though not a guarantee, the strategy seems poised to blunt the second wave and eventually end the pandemic. At this moment, it feels overly pessimistic to believe that you and your loved ones will not be immunized by or before this time next year.

Assuming Operation Warp Speed will be successful, the American healthcare system should adopt and integrate, not forget and neglect, this model of accelerating solutions for unmet medical needs. What exactly is this model? Through Operation Warp Speed, the government has demonstrated the ability to effectively triage, support, and invest in late-stage clinical assets (those considered to be nearing regulatory approval pivotal clinical trials) emerging from the private sector. Although Covid-19 immediately perils the United States, other prevalent but under-resourced conditions such as Alzheimer’s disease, Hepatitis B, antibiotic resistance, among many others present an equal, if not greater, threat to the American future.

As an example, consider Alzheimer’s disease, the greatest unmet medical need in human history. In addition to over five million suffering from the condition, there is no way to prevent, cure, or even slow the course of its progression. Astonishingly, Alzheimer’s will

<sup>3</sup> “Fact Sheet: Explaining Operation Warp Speed”  
<https://www.hhs.gov/about/news/2020/06/16/fact-sheet-explaining-operation-warp-speed.html>

cost the American public \$305 billion in 2020 and that number will skyrocket to \$777 billion by 2050 as the populace ages, bankrupting Medicare and Medicaid.<sup>4</sup> Moreover, most of the life sciences industry has retreated from tackling the disease, citing failures and setbacks, and leaving evident gaps in not just research but also clinical development. Advancing promising clinical candidates for Alzheimer's through direct investment and support would be a meaningful, transformative, and commonsense enterprise for the federal government.

Some may question whether the private sector is not already supporting biomedical innovation. The answer is complicated. Since American capitalism rewards investment in innovation with a chance to profit, companies and investors likewise have an incentive to discover, develop, and fund the most profitable biomedical advances. While there is a deluge of funding for promising, late-stage assets in profitable diseases like cancer, that funding well dries up for conditions like Alzheimer's abandoned by industry, leaving even sufficiently de-risked clinical candidates waiting in the wings.

Why? The principal reason remains the cost of capital. Drug development is an expensive and risky business, to say the least. 95% of drugs fail and, on average, a successful medicine requires \$1.3 billion and upwards of a decade to make it to market. Life sciences companies have to either continually raise capital via equity offerings or issue debt amid evident business uncertainties. On the other side, investors have to absorb significant risk over long periods. In fact, these uncertainties are intensified given that chronic conditions like Alzheimer's develop over decades. Very few companies are game to fund a preventative, prophylactic trial in healthy adults thirty years before the onset of Alzheimer's. Taken together, the myriad of scientific and market risks exacerbates the funding chasm for diseases like Alzheimer's or antibiotic resistance.

Recognizing this chasm, investors, consortia, and philanthropists have recently tried to cobble together the scale and resources needed to concentrate on converting late-stage, clinical assets into commercial products. In July, Blackstone Life Sciences, an institutionalized private equity firm, raised \$4.6 billion, the largest life science fund ever, to explicitly, "invest in products with a high probability of [both] approval and of changing clinical outcomes." Big Pharma banded together and poured \$1 billion into the AMR Action Fund in August to prevent the collapse of antibiotic resistance research. Though these efforts attempt to bridge the aforementioned chasm, they remain beholden to short-term investment returns, commit far too little inflection capital, or play only in a small slice of the overall healthcare environment.

Long underappreciated, the federal government is uniquely positioned to supersede such limitations to effectively support late-stage, clinical assets for neglected diseases. Operation Warp Speed has demonstrated, importantly, that the government has vast financial resources, the strategic "know-how", and the incentives to reduce healthcare spend and accelerate promising healthcare "products" to patients. Of the \$45 billion the

<sup>4</sup> *"Costs of Alzheimer's to Medicare and Medicaid"*

[https://act.alz.org/site/DocServer/2012\\_Costs\\_Fact\\_Sheet\\_version\\_2.pdf?docID=7161](https://act.alz.org/site/DocServer/2012_Costs_Fact_Sheet_version_2.pdf?docID=7161)

government spends on healthcare research and development alone, a small proportion, such as \$2 billion, could be allocated—alongside private investment—to accelerate treatments for prevalent yet underfunded diseases, like Alzheimer’s. Experts in HHS, FDA, NIH, and other organizations could be reshuffled to help execute late-phase clinical development, commercialization, and broad distribution. Instead of assuming debt or equity, the coordinating government organization could negotiate for a lower price on the product for Medicare and Medicaid if approved by regulators, ultimately reducing healthcare expenditure across the board. By participating directly in drug development, the government, unlike private industry, could serve a utilitarian end: bringing more and better drugs to patients for a lower cost.

Lessons learned should not be lessons lost. The coronavirus pandemic has spurred the United States government into action that few of us (or our parents) have seen in our lifetimes. Although it is a difficult pill to swallow for proponents of limited government, urgency and immediacy should not be the sole criteria for action. Diseases like Alzheimer’s, Hepatitis, and antibiotic resistance threaten America today and will cause an immeasurable loss in the near future. Even if the eventual damage of such diseases is protracted, we should not fall into myopic amnesia over the long-term consequences. We may not be able to rewrite the narrative for the coronavirus pandemic but it’s not too late for leaders in industry and government to right the ship for diseases that continue to jeopardize the American future.

## Palliative Care in India: Challenges and Opportunities

Varun Devraj '23

According to the World Health Organization (WHO), an estimated 40 million people around the globe require palliative care, yet only 14 percent of them receive the care they need. Additionally, out of these 40 million people, 78 percent of them are living in low- and middle-income countries. The WHO estimates that India alone has 6 million people who require palliative care services.<sup>1</sup> Dr. M.R. Rajagopal, the founder of a palliative-care NGO based in the southern Indian state of Kerala, says that only 1-2 percent of patients in India who need palliative care actually get it.<sup>2</sup> Against the backdrop of the current Covid-19 pandemic, however, the specialty of palliative care is receiving more global attention, creating opportunities for the Indian medical profession to improve access to this care.

Palliative care, as defined by the WHO, seeks to improve “the quality of life of patients and their families facing ... life-threatening illness,” through the “treatment of pain and other problems, physical, psychosocial and spiritual.”<sup>3</sup> Caregiver involvement in this process ensures a holistic approach to the treatment of suffering. Several models for palliative care exist. The most well-known is hospice or “end-of-life” care, where special clinics provide around-the-clock services to dying patients.<sup>4</sup> The increasingly popular home-based care model emphasizes treatment directly into the homes of patients. This gives health providers the entire picture of a patient’s life and how illness impacts not only the physical body but also the lives and livelihoods of family members.

<sup>1</sup> World Health Organization. *Palliative care fact sheet*. February 19, 2018. Available from: <https://www.who.int/news-room/fact-sheets/detail/palliative-care>. Accessed June 17, 2020.

<sup>2</sup> *The Hindu*. *Just 2 percent have access to palliative care in India, says the 'father' of palliative care in India*. June 16, 2018. Available from: <https://www.thehindu.com/news/cities/mumbai/just-2-have-access-to-palliative-care-in-india/article24176073.ece>. Accessed June 17, 2020.

<sup>3</sup> World Health Organization. *WHO definition of palliative care*. 2020. Available from: <https://www.who.int/cancer/palliative/definition/en/>. Accessed June 17, 2020.

<sup>4</sup> Khanna I, Lal A. *Palliative care - an Indian perspective*. *ARC J Public Health Community Med*. 2016;1(4):27-34.

A key component of palliative care is pain relief for patients, but India's stringent government regulations have prevented doctors from being able to prescribe these medications. Passed in 1985, the Narcotic Drugs and Psychotropic Substances Act (NDPS) implemented complex and often confusing guidelines for obtaining a supply of opioids.<sup>5</sup> Even with amendments that relaxed these stringent rules in the past few years, many Indian healthcare professionals have not been trained in prescribing or even obtaining these medications, meaning that they will be less likely to supply patients with them when needed.

Unfortunately, Indian doctors and nurses have not been given adequate training or awareness about palliative care. The Medical Council of India only recognized palliative care as a specialty and gave the distinction of an M.D. in Palliative Care in 2012. As a result, a majority of Indian doctors wishing to further their education in palliative medicine have to travel abroad for fellowships.<sup>6</sup> While this formal education is necessary to train healthcare professionals, palliative care will never be highly regarded in India unless the general population also has a greater awareness of its importance. And although recent years have seen the introduction of formal courses and information sessions that work towards educating people about palliative care in India, much more widespread education work is still needed.

Both preconceived notions of palliative care being tied to the end-of-life setting as well as local cultural stigmas also limit its use in India. Most people associate palliative care only with treatment received in hospice settings during the final stages of a terminal illness, not with pain relief in a more expanded context. Cultural considerations in India, such as ayurvedic practices and beliefs around karma and suffering, play an additional role in stigmatizing palliative care services, leading many patients to refuse palliative care services that could relieve their pain. In fact, many Indian medical professionals even believe that palliative care is an admission of defeat in the face of their failure to cure patients.

Additionally, in a country where many cannot access even basic health care, the intrusive and expensive nature of hospice and hospital palliative care means palliative care is simply not an option for many less well-off patients, who cannot afford the high cost of treatment.

While workers in various health fields have faced enormous difficulties due to the Covid-19 pandemic, palliative care changed radically in these past few months. A key component of palliative care is physical contact between care providers and patients. However, Covid-19 has made it difficult for providers to extend this essential and comforting physical presence. Additionally, hospitals and hospices are no longer safe for many terminally ill and immunocompromised patients, such as those with advanced cancer. This is one reason why home-based palliative care services are so beneficial, as patients do

<sup>5</sup> Rajagopal MR. *Access to palliative care: insights into ground realities post-2014 amendment to NDPS Act.* *Indian J Med Ethics.* 2016 Jan-Mar;NS1(1):25-30.

<sup>6</sup> Khosla D, Patel FD, Sharma SC. *Palliative care in India: current progress and future needs.* *Indian J Palliative Care.* 2012 Sep-Dec;18(3):149–154.



not have to leave the safety of their homes. However, the Covid-19 lockdown restrictions also mean that home-care teams are carrying out more procedures inside patients' homes. Unfortunately, access to medical equipment and supplies for these procedures is still at pre-pandemic levels and is increasingly being stretched thin.

The best way to improve access to palliative care is to educate more healthcare professionals about the benefits of palliative care, while also giving them the possibility to be trained in palliative care services. Unfortunately, the Covid-19 pandemic has upended existing palliative care training programs, stressing the need for virtual forms of palliative care education.

Another key step in expanding access to palliative care services is for the Indian federal government to make a more concerted effort to relax the confusing opioid regulations stipulated in the 1985 NDPS Act and ensure that Indian doctors are sufficiently trained to prescribe painkillers without overprescribing. The combination of opioid availability and better palliative medicine education will lay the groundwork for further efforts to expand palliative care services across India.

However, for palliative care to be widely accessible, organizations and hospitals require more funds to scale up services. With no national healthcare system and little private sector funding, the only long-term solution is for the government to take an active role in supporting palliative care. Whether this is done through expanding health insurance access or simply through direct financing for palliative care, the government, at both the state and federal levels must build a strong foundation for palliative care.

While home-care is ideal for most patients in India, providers must also adapt their approach in the face of the Covid-19 pandemic. Greater focus on telemedicine services will expand access to treatment while maintaining a high quality of care. Although virtual palliative care addresses the concerns of patients without increasing coronavirus-related risks to both patients and providers, the lack of contact and physical presence of doctors, nurses, and counselors make it much more difficult to establish trust. Since this trust is an essential aspect of quality palliative care, it will be important to explore alternative models for developing close relationships between patients and palliative care teams in the future.

Ultimately, India presents an important study of the challenges and promises of palliative care in a modernizing, more virtual world. Despite its unique cultural context and the continued structural challenges to effective implementation of healthcare services such as palliative care, current developments in the field show promise for expanding access to these pain-relieving resources across the country. With a greater focus on funding and opioid availability as well as more widespread education efforts, the Indian government truly has the ability to become an innovator in palliative care on a global scale.

# 28

## Is Systemic Healthcare Inequality Finally Getting (a Fraction of) the Attention it Deserves?

Bailey Ransom '22

*This op-ed was originally written on April 18, 2020. Since then, all states and D.C. have provided information on COVID-19 testing and deaths by race.*

***Coronavirus Exposing Health Inequality.  
Coronavirus Disproportionately Killing Black Americans.  
The Science of Why Coronavirus Exposes Racism.  
Coronavirus Makes Inequality a Public Health Issue.***

These are just a few of the headlines I've seen in the last few weeks about the coronavirus pandemic in the United States. Those paying attention to who has been most severely affected by Covid-19 in the U.S. know that Black people are dying from the virus far more than white people in the U.S. In fact, Black Americans are dying at a rate 2.7 times greater than white Americans.<sup>1</sup> These observations are finally leading many journalists and laypeople alike to the conclusion that social policies in the U.S. are unequal at their roots. But for most people of color in the United States, the coronavirus did not “expose” this truth, or make “inequality” an issue. For many American people of color, inequality has been the reality for their entire life, and the lives of their ancestors. Yet much of white, wealthy America, who can afford to be shocked at current outcomes of the Covid-19 pandemic, is demonstrating both a lack of grounding in reality and their privilege in access to social services and protection from the government.

A topic dominating much of the news media as of late is how and when to “reopen the economy.” Much of this discussion over how long Americans should self-

<sup>1</sup> COVID-19 deaths analyzed by race and ethnicity, APM Research Lab, American Public Media.  
<https://www.apmresearchlab.org/covid/deaths-by-race>

quarantine, and what actions federal and state governments should be taking at this time, has centered around the idea of a “tradeoff.” On one side of the tradeoff is the damage the economy sustains while being more-or-less frozen, and on the other side are the lives lost to Covid-19 if the stay-at-home orders were to be lifted and hospitals overwhelmed. What I notice is that the voices publicly participating in this debate, frequently making statements on television, on social media, in the newspaper, are voices that have the privilege of being disconnected from this “tradeoff.” The lives of these public voices will most likely be relatively secure whether they are in quarantine or not. The people behind these voices have a reliable source of income, they have sufficient savings, they have a home in which to isolate, and they have access to healthcare. The people discussing the “tradeoff” are not the ones who will, ultimately, be most affected by the decision to reopen now or not. The Americans with the lowest incomes, who are disproportionately people of color, will have to bear the consequences of the decisions made without power or agency to take part in the public debate influencing the decision-making process.

In most states, the only people being asked to work are “essential workers.” This term is inherently racialized, and cannot be used in the objective way many politicians seem to think they are using it. “Essential workers” in the United States are disproportionately people of color. Seventeen percent of these frontline workers are Black, whereas Black Americans only make up about twelve percent of the entire workforce.<sup>2</sup> By requiring that “essential workers” continue with life as normal, whether that includes the dangers of working in close quarters with others, taking public transportation, long hours at minimum wage, potentially exposing loved ones to the virus, and more, the government is telling these workers that their lives are valued less than those working comfortably from their homes.

I also fear that a key analysis of pandemic metrics is being missed. There is a stunning lack of racial data on coronavirus effects. In fact, at this moment, over a month into this state of crisis in the U.S., only two states have released racial testing data. Only 26 states have released death data by race, and only 34 states have released confirmed cases data by race. This lack of transparency and attention and resources directed towards racial injustice is shocking. Any public health issue in the United States is inherently an issue of race and racism. Yet, it appears that many policymakers are acting as if the virus threatens every demographic equally. The absence of data means that areas that need immediate assistance and resources are not being effectively identified and aided. It also means that a portion of the general public remains blissfully ignorant about the inequalities causing Black Americans to die at greater rates than white Americans.

While there is some collective benefit to an “awakening of consciousness” for Americans previously unaware of the glaring inequality and racism in their country, privileged white Americans should not further distance themselves from reality by insisting that COVID-19 exposed healthcare inequality for the very first time.

<sup>2</sup> *A Basic Demographic Profile of Workers in Frontline Industries* (April 7, 2020) Hye Jin Rho, Hayley Brown, Shawn Fremstad. Center for Economic Policy Research.  
<https://cepr.net/a-basic-demographic-profile-of-workers-in-frontline-industries/>

# 29

## Inequality in the Time of Quarantine: Why Cost Analyses of Covid-19 Quarantine Measures Should Incorporate Inequality

Maggie Baughman '21

The sudden outbreak of a global pandemic draws calculations of societal wellbeing into sharp focus, as governments across the world are pressed to weigh the costs and benefits of disease control measures under conditions of heightened risk and uncertainty. While economists have produced rough estimates of the cost of quarantine measures, stemming both from post-epidemic analyses of the SARS outbreak and preliminary estimates under the current Covid-19 crisis, they fail to account for the nuances of calculating social wellbeing in a highly stratified and socioeconomically unequal society. Combining literature on the unequal costs of epidemics for different socioeconomic groups with cost-benefit analyses of various quarantine measures, it is abundantly clear that the current models of the costs of quarantine fail to take into account the unequal costs placed on low-income and working-class individuals.

As the Covid-19 quarantine restrictions were first implemented in March of 2020, three economists, Martin Eichenbaum, Sergio Rebelo, and Mathias Trabandt (ERT), took the step of translating quarantine cost functions into utility functions, integrating non-monetary aspects of utility into quarantine calculations.<sup>1</sup> Using a SIRD model of disease transmission (where S is susceptible, I is infected, R is recovered, and D is deceased), they calculate the lifetime utility of an individual in each of these four classes based on their consumption, production, and likelihood to transition to a different class (for example, the likelihood of infection for a susceptible individual). To calculate the expected utility of different containment rates, they define social welfare, as a function of the weighted sum of these utilities. To maximize, the authors argue, containment rates must increase in parallel with disease transmission, minimizing the costs of the behavior of infected people as that

<sup>1</sup> Martin S Eichenbaum, Sergio Rebelo, and Mathias Trabandt, "The Macroeconomics of Epidemics," Working Paper (National Bureau of Economic Research, March 2020), <https://doi.org/10.3386/w26882>.

number grows.

The drawback of ERT's model is that, in measuring an individual's lifetime utility in terms of consumption and production, it inherently deprioritizes the lives of low-income individuals. The social welfare function defined above uses a utilitarian measure of social welfare (maximizing the total amount of welfare in society without considering distribution) and is therefore not inequality averse. Associating an individual's utility solely with their consumption and production abilities prioritizes the lives of those who consume and produce more (i.e., higher income individuals). Similarly, the cost models developed above assume homogeneity in the population and base their calculations of parameters on averages. They fail to account for the underlying factors of inequality that cause different members of the population to be more susceptible to disease, face greater medical costs, and earn less income. These gaps in existing models necessitate the development of a quarantine calculation that incorporates heterogeneity in the population, accounting specifically for socioeconomic inequality.

In creating a fairer model for the economic impacts of quarantine measures, we should consider two factors. First, we should consider how the utility of quarantine changes at different socioeconomic levels, considering how model parameters are likely to differ. Second, in calculating social welfare under different quarantine measures, we should use an inequality averse social welfare function that accounts for the distribution of utility of quarantine across different income levels.

Breaking down the value of quarantine into the individual cost of quarantine and the individual value of averted infection, we can consider how both factors are dependent on socioeconomic status. The individual cost of quarantine will not take into account the administrative costs but will consider lost wages. Here, we should consider conflicting wage possibilities for low-income workers. Low-income individuals are more likely to be working "essential" jobs that are not covered by stay-at-home orders, making them less likely to face lost wages in that respect. However, workers at essential jobs who are required to continue to work are more likely to be exposed to the virus, which would then force them to quarantine. Therefore working in an essential job is not a guarantee of continued wages. Further, they are less likely to have paid sick leave or work from home alternatives.<sup>2</sup> They are also more likely to be subject to the layoffs that have been hitting smaller businesses and sectors that are dominated by low-income workers, as business owners lay off workers to remain afloat until government aid is released.<sup>3</sup> Overall, we can estimate that low-income

<sup>2</sup> Sarah Jones, "There's No Such Thing As Unskilled Labor," *Intelligencer*, March 21, 2020, <https://nymag.com/intelligencer/2020/03/low-wage-work-is-essential-work.html>; Drew Desilver, "As Coronavirus Spreads, Which U.S. Workers Have Paid Sick Leave—and Which Don't?," *Pew Research Center (blog)*, March 12, 2020, <https://www.pewresearch.org/fact-tank/2020/03/12/as-coronavirus-spreads-which-u-s-workers-have-paid-sick-leave-and-which-dont/>.

<sup>3</sup> Gaines Patrice, "NAACP's Virtual Town Hall Addresses Impact of Coronavirus on Communities of Color," *NBC News*, March 17, 2020, <https://www.nbcnews.com/news/nbcblk/naacp-s-virtual-town-hall-confronts-impact-coronavirus-people-color-n1160861>.

workers are more likely to face lost wages due to universal quarantine than their wealthier counterparts, even though they are more likely to work jobs that are “essential.”

If we consider contact-based quarantine models (as used during the SARS epidemic), we see that low-income workers are even more vulnerable due to their contact patterns. The 1918 influenza epidemic demonstrated the increased vulnerability of low-income workers due to crowded living.<sup>4</sup> This trend continues to this day, with income inversely related to crowding.<sup>5</sup> Wage data indicates that the workers with the highest exposure risks are largely low-income, with a median wage of less than \$35,000 a year.<sup>6</sup> Building from a University of Michigan model of lost wages as a consequence of contact rate, we can see that workers with higher contact rates are more likely to face isolation or quarantine as a result of interacting with infected individuals, and therefore suffer from lost wages.<sup>7</sup> As a result, regardless of the type of quarantine implemented, contact or universal, low-income workers face a higher likelihood of lost wages and a higher cost of quarantine.

The value of averted infections is based on the total cost of SARS per person. This cost is broken down into the likelihood of hospitalization multiplied by the length of stay and the cost per day. As established above, low-income individuals are more likely to come into contact with the virus. They are also more likely to have pre-existing health conditions, meaning that they have a higher probability of hospitalization should they contract the virus and a higher likelihood of needing intensive care.<sup>8</sup> Low-income individuals are less likely to have healthcare coverage than their wealthier counterparts by a significant margin, making the per diem costs of healthcare for the individual higher.<sup>9</sup> As a result of the higher risk of complications, low-income individuals also have a higher risk of death. This all suggests that the value of averting infection for lower-income individuals is greater than for high-income individuals because the costs of infection are higher. However, recalling the facts

<sup>4</sup> Derek Thompson, “The Coronavirus Will Be a Catastrophe for the Poor,” *The Atlantic*, March 20, 2020, <https://www.theatlantic.com/ideas/archive/2020/03/coronavirus-will-supercharge-american-inequality/608419/>.

<sup>5</sup> Claudia D. Solari and Robert D. Mare, “Housing Crowding Effects on Children’s Wellbeing,” *Social Science Research* 41, no. 2 (March 2012): 464–76, <https://doi.org/10.1016/j.ssresearch.2011.09.012>.

<sup>6</sup> Beatrice Jin and Andrew McGill, “Who Is Most at Risk in the Coronavirus Crisis: 24 Million of the Lowest-Income Workers,” *Politico*, March 21, 2020, <https://politico.com/interactives/2020/coronavirus-impact-on-low-income-jobs-by-occupation-chart/>.

<sup>7</sup> Anu G. Gupta, Cheryl A. Moyer, and David T. Stern, “The Economic Impact of Quarantine: SARS in Toronto as a Case Study,” *The Journal of Infection* 50, no. 5 (June 2005): 386–93, <https://doi.org/10.1016/j.jinf.2004.08.006>.

<sup>8</sup> Max Fisher and Emma Bubola, “As Coronavirus Deepens Inequality, Inequality Worsens Its Spread,” *The New York Times*, March 15, 2020, sec. World, <https://www.nytimes.com/2020/03/15/world/europe/coronavirus-inequality.html>.

<sup>9</sup> Beth Levin Crimmel, “Health Insurance Coverage and Income Levels for the U.S. Noninstitutionalized Population under Age 65, 2001,” *Medical Expenditure Panel Survey (Agency for Healthcare Research and Quality, May 2004)*, [https://meps.abrq.gov/data\\_files/publications/st40/stat40.pdf](https://meps.abrq.gov/data_files/publications/st40/stat40.pdf).

that lower-income workers are both more likely to work essential jobs that require continued work during the epidemic and bring higher risks of contracting the disease and that they are more likely to live in crowded spaces with other low-income individuals (increasing the amount of contact both with co-residents and outside influences), the likelihood of averting the infection is smaller. While these factors have opposing influences on the value of averting infection, the clear takeaway is that low-income individuals face different risks than high-income individuals, demonstrating the necessity of incorporating heterogeneous income levels into the model.

Calculating individual utility under quarantine using different parameters, rather than using averaged parameters across the population to generate a mean utility, allows for a more nuanced measure of social welfare. Rather than using ERT's method of summing total utilities for each class (SIRD) of the population at different time increments, a utilitarian measure of social welfare that prioritizes total utility in the society, we have the necessary information to consider the distribution of welfare for different socioeconomic subsets of the population. A social welfare model of quarantine in a highly stratified society should inevitably incorporate "inequality aversion," a parameter that penalizes systems for high degrees of welfare inequality.

Doctors, politicians, and reporters have made eloquent claims that the novel coronavirus does not discriminate and that an epidemic cannot see social status. Indeed, the second wave of the 1918 influenza demonstrated just that—with high casualty rates of every social class.<sup>10</sup> However, the cost of contracting a disease and the cost of disease control measures both vary significantly by income level. As public health officials make incredibly difficult decisions that affect millions of Americans, they turn to the reassurances of economic and epidemic calculations for guidance. The decision to incorporate inequality into these tools should not be a nuance to the academic conversation, but a vital piece of policymaking practice.

<sup>10</sup> Thompson, Derek. "The Coronavirus Will Be a Catastrophe for the Poor." *The Atlantic*, March 20, 2020. <https://www.theatlantic.com/ideas/archive/2020/03/coronavirus-will-supercharge-american-inequality/608419/>.

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# Team Profile

**Tiger Gao**, Host & Co-Founder

*Princeton University, Class of 2021*

Tiger majors in Economics with minors in German; Finance; Statistics and Machine Learning; and the Values and Public Life program. He founded Policy Punchline in the hope to make high-quality policy discussions accessible to more people and create a platform where diverse ideas and talents can come together.

**Roopa Venkatraman**, President

*Princeton University, Class of 2022*

Roopa majors in Politics and pursues certificates in French; Statistics & Machine Learning; and Contemporary European Politics. She oversees the team and leads organizational efforts. She also serves as the Co-Chair of Undergraduate Associates at Princeton's Julis-Rabinowitz Center for Public Policy and Finance and is a coxswain on the Women's Open Weight Crew team.

**Ben Gelman**, Co-Head of Research and Editor of Op-Eds

*Princeton University, Class of 2023*

Ben is a prospective Politics concentrator and is primarily interested in international relations, technology policy, and U.S. politics. Ben is active in Envision, a group at Princeton that organizes an annual conference highlighting how technology affects society and politics. He is also the Managing Editor for the Middle East at the Princeton Diplomat.

**Sam Lee**, Co-Head of Research

*Princeton University, Class of 2022*

Sam is majoring in Economics with a minor in Creative Writing. He is interested in politics, particularly in social and economic policies. He joined Policy Punchline to help lead the research efforts and foster engaging discussions with leaders in the fields of policy and economics.

**Kenneth Gonzalez Santibanez**, Co-Head of Research

*Princeton University, Class of 2022*

Kenneth majors in History. He's particularly interested in the often-neglected historical underpinnings of today's current events. He now helps lead the research efforts at Policy Punchline and hopes to further expand discussions on seldom-explored policy ideas.

**River Reynolds**, Chief of Staff*Princeton University, Class of 2023*

River is a prospective major in the Princeton School of Public and International Affairs. She believes in Policy Punchline's mission of connecting curious minds to expert knowledge.

**Richard Wang**, Co-Founder*New York University, Class of 2021*

Richard studies Finance and Philosophy at the Stern Business School and College of Art and Science at NYU. It was in Richard's room that he and Tiger came up with the name for this podcast and made a series of strategic decisions going forward. Especially interested in global economic issues and current affairs, Richard hopes to generate more insightful discussions that inform the young peers of Policy Punchline's creators.

**Luc Anderson***Princeton University, Class of 2022*

Luc is a Politics major pursuing a certificate in French. He has a passion for renewable energy in the 21st century and wants to study environmental policies that push for renewable and resourceful energy – especially solar and low carbon emission projects. In his free time, he is passionate about photography, plays lacrosse at Princeton, and is enthusiastic about music.

**Harsh Babla***Princeton University, Class of 2021*

Harsh is a senior at Princeton University, majoring in Electrical Engineering with a focus in Quantum Information. He co-hosted, along with Tiger, an interview with Prof. Steven Girvin on the future of quantum computing and the "Second Quantum Revolution." He's generally interested in technology for public good and is working on developing low-cost ventilators for the Covid-19 crisis.

**Arman Badrei***Princeton University, Class of 2022*

Arman is a Politics major with certificates in Journalism and Spanish. He covers politics and journalism topics for the podcast. At Princeton, he also works as an editor in the Opinion Section of The Daily Princetonian, as a tutor for ESL El Centro, and plays in Wawa United Football Club.

**Abhimanyu Banerjee***Princeton University, Class of 2023*

Abhimanyu is a prospective major in the Economics Department. His interests in economics primarily lie in the field of public policy and its multifaceted uses such as alleviating recessions, reducing inequality, and promoting sustainability. At Policy Punchline, he works as a researcher on the various guests that appear on the podcast and hopes that his work leads to insightful and thought-provoking discussions on public policy.

**George Baughan***Princeton University, Class of 2021*

George studies in the Princeton School of Public and International Affairs with an intended focus in Trade and Financial Policy. Through Policy Punchline, he hopes to find ways to better connect students with industry professionals and opportunities to engage in meaningful dialogue across a wide range of relevant political and social issues.

**Malcolm Blinder***Princeton University, Class of 2022*

Malcolm is a prospective major in Civil Engineering and with a certificate in Visual Arts focusing on audio and video productions. Both of his parents are political scientists, so he grew up with politics being standard dinner table conversations. He leads audio and video production on the podcast.

**Peyton Brown***Princeton University, Class of 2021*

Peyton is a senior in the Civil and Environmental Engineering Department also pursuing certificates in Finance and in Sustainable Energy. She is interested in the intersection of policy, technology, and business, with a focus on renewable energy development and integration. She helped expand Policy Punchline into having a segment on energy policy and led the research and interview efforts for it.

**Will Carpenter***Princeton University, Class of 2021*

Will Carpenter is a senior at Princeton, majoring in Economics with minors in Finance and Visual Arts. He is also a member of Princeton's College Fed Challenge team. A dedicated and curious researcher, Will wrote his junior year independent research paper on the implications of negative interest rates for banks, specifically how they could impact the banking industry in Denmark.

**Vivian Chen**

*ArtCenter College of Design, Class of 2021*

Vivian majors in product design and leads the design team at Policy Punchline. Aside from Vivian's talents in art and design, she dabbles in economics and technology-related issues during her free time and is very excited to be learning from all her peers at Policy Punchline.

**Owen Engel**

*Princeton University, Class of 2021*

Owen is a Princeton School of Public and International Affairs major with certificates in History and the Practice of Diplomacy and Neuroscience. Owen's research interests have been wide and unorganized, but he has managed to write on the topics of Middle Eastern Terrorism, U.S. electoral politics, and Gerrymandering, and open-credit institutions across different European nations. He helped expand Policy Punchline's segments on energy policy, leading research and interview efforts.

**Kanishkh Kanodia**

*Princeton University, Class of 2023*

Kanishkh is a prospective major in the Princeton School of Public and International Affairs with a certificate in South Asian studies. His interest in politics and the world of diplomacy arose from reading books, stories, and articles about the geopolitical world. At Princeton, he is a contributor for the Princetonian, the Diplomat, and a member of the South Asian Theatrics.

**Zhonghao Li**

*Boston College, Class of 2021*

Zhonghao studies Mathematics and Philosophy. He currently helps with editing work at Policy Punchline. He is especially interested in the relationship between China and the U.S. among other social, economic, and political topics.

**Arjun Mani**

*Princeton University, Class of 2021*

Arjun is a junior majoring in Computer Science. He has co-hosted several interviews for Policy Punchline, including with Peter Singer, Austan Goolsbee, Ge Wang, and more. He conducts computer vision research in Princeton's Visual AI Lab and also leads Princeton Data Science, which promotes data science on campus through speaker events, workshops, and more.

**Theodor Marcu***Princeton University, Class of 2020*

Theodor is a recent graduate who studied Computer Science at Princeton University and one of the founders of Representable.org, a tool that helps nonprofits fight gerrymandering by helping them map communities affected by badly drawn district lines across the country. Besides using technology for public good, he's also interested in neuroscience, human-computer interfaces, and online privacy and security.

**Morgan Mills***Princeton University, Class of 2021*

Morgan studies at the Princeton School of Public and International Affairs with a certificate in East Asian Studies. She is interested in the functioning of international governing bodies and the way in which public policy and law are implemented at a global scale. She hopes to attend law school one day and now helps with marketing and communications work on the team.

**Michael Psenka***Princeton University, Class of 2021*

Michael is a mathematics major with a certificate in Applications of Computing. He co-hosted alongside in an interview with Gregory Zuckerman on his groundbreaking book, "The Man Who Solved The Market." While his research lies in the mathematical side of AI, he also hopes to use math as a tool in helping advance other fields, such as finance and energy conservation.

**Bailey Ransom***Princeton University, Class of 2022*

Bailey is a student at the Princeton School of Public and International Affairs with interests in international and European politics. She joined Policy Punchline to help with research and hopes to incorporate more international aspects into the program. At Princeton, she volunteers weekly teaching English classes and is also a member of Princeton for North Korean Human Rights.

**Gregory T. Seabrooks***Princeton University, Class of 2021*

Gregory is a senior in the Princeton School of Public and International Affairs with a focus on legal studies. He believes that "policy decisions impact everyone, and as such, the conversations surrounding those decisions should be heard by everyone." He now helps with research at Policy Punchline and hopes to raise the level of discourse about the critical issues confronting our society.

**Ayushi Sinha**

*Princeton University, Class of 2020*

Ayushi Sinha is a recent graduate who studied Computer Science. She has worked at the intersection of ML, geospatial, IoT, and cloud as a Software Engineer & PM at Microsoft and as a Quality Assurance Engineer at Kik in Tel Aviv, where she first developed an interest in cryptocurrency and blockchain. Having co-founded her own startup, WellPower, a vertically integrated Uber for water filtration and distribution in East Africa, she is particularly interested in social entrepreneurship.

**Francesca Walton**

*Princeton University, Class of 2021*

Francesca is a Princeton School of Public and International Affairs concentrator pursuing a certificate in Journalism. Passionate about the media and its effect on democracy, she is working as a research assistant, studying the impact of news coverage on developing countries, specifically countries within Africa. Francesca is a member of the Policy Punchline Communications Team and a representative for News Corporation, as well as a writer for The Daily Princetonian and Tiger Report, Princeton's sports network.

**Michelle Wang**

*The Nueva School, California, Class of 2021*

Michelle is a member of the design team at Policy Punchline and is now in charge of designing episode covers, posters, and various other imageries for the show. Michelle has interests in world history and politics, particularly the relationship between the U.S. and China. She hopes to broaden her view and gain more insights on policy through working for the podcast.

**Mingji Wang**

*The University of Chicago, Class of 2021*

Mingji studies Music Composition and Business and currently works in the editing team for Policy Punchline. He helps with audio processing and composes the intro and ending tunes from scratch for all of our episodes. Mingji is highly interested in studying market trends and the behavioral patterns of consumers, as well as their impacts on public policies.

**Sean Ichiro Wang**

*Princeton University, Class of 2024*

Sean is a prospective pre-med student. He has always been interested in understanding how humans and societies function, and he helps research and write interview questions at Policy Punchline, an exciting part of his Princeton experience as it exposes him to insightful talks by great professors and professionals.

**Alexandra Wilson**

*Princeton University, Class of 2020*

Alexandra is a recent graduate who majored in Molecular Biology, and her postgraduate goals include studying the history of science in grad school with a focus on reproductive health. She helped expand Policy Punchline into having a segment on health policy and led the research efforts for those interviews.

**Daniel Yao**

*Zhejiang University, China, Class of 2021*

Daniel majors in Psychology, and as someone who studies in China, Daniel perceives public issues and policies from a much different perspective than his American peers. At Policy Punchline, Daniel helps with research and transcript edits. He is always there to share his point of view to help make the discussions more diverse.

**Nicole You**

*Peking University, Class of 2020*

Nicole majors in International Economy and Trade and currently works in the design team for Policy Punchline. Although her major isn't art-related, she manages to find opportunities for graphic design in her spare time to fulfill her love of art. At Policy Punchline, she's able to combine both of her passions and learn about world issues from more perspectives.

**Chloris Zhao**

*Emerson College, Class of 2020*

Chloris majors in Visual and Media Arts and minors in Marketing. She leads the editing team for Policy Punchline and provides critical support for the show's technical aspects. As a founding member, Chloris joined the podcast to learn more about policy issues and expand her horizon while fulfilling her passion for the arts.

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