

Welcome to What Happens Next – 11.22.2020
COVID, Entertainment Disruption, and the Race for the Senate

My name is Larry Bernstein.

What Happens Next offers listeners an in-depth analysis of the most pressing issues of the day. Our experts are given only SIX minutes to present. This is followed by a Q&A period for deeper engagement.

I think you will find this discussion to be informative and provocative.

My Co-Host Rick Banks is taking the week off. Today we have a special co-host Mitch Feinman who will lead us in the entertainment segment.

Mitch and I were fraternity brothers at Penn, and since graduation Mitch has worked at the intersection of media and technology. Some of Mitch's projects include the original web initiatives for ABCNews.com and *The Oprah Winfrey Show*. And for Fox, Mitch managed the *American Idol* text message voting initiative. Mitch currently works for an artificial intelligence startup to improve ad placement.

This week's topics include entertainment production during COVID, the Georgia Senate Runoffs, Testing and Tracing, and greater reliance on Oximeters.

Our leadoff speaker today is another college buddy and fraternity brother of mine. Sam Hoffman is a director, producer and a writer of TV and films. He directed *Old Jews Telling Jokes*, Produced *Madame Secretary*, and wrote the screenplay for the film *Humor Me*. Sam is going to tell us about the challenges he faces in producing TV today.

Our second speaker is Phil Abraham who directed such TV shows as *Ozark*. Phil will take us back stage as he describes how he directed a TV show remotely with the actors placing the cameras and props.

Our third speaker is James Gray who is a choreographer working from his dance studio in NYC on a theater production of *The Producers* located across the world in Tokyo. James will explain how he used more than 300 instructional videos to choreograph the performance.

Our fourth speaker in this segment is Josh Goldstine who previously ran marketing for Sony and Universal Studios. Josh will discuss how COVID has accelerated the disruption in the marketing of movies.

The show then pivots to the Georgia Senate Runoff. Tom Cotton is a US Senator representing Arkansas, and he will tell us about the high stakes for both sides in the Georgia Runoffs and how the result will determine the upcoming legislative agenda. What Happens Next is moderated to be politically neutral. That said, Tom Cotton is obviously not neutral. He is a strong advocate for the Republican party.

Our final segment today is on the latest scientific COVID research. Our first speaker is Ramanan Laxminarayan who recently completed the world's largest study on testing and tracing in India with 85,000 cases and 550,000 traces. His conclusions were surprising as it emphasized the important role of children in the transmission of the virus.

Our final speaker is Dr. Richard Levitan. You may recall meeting Richard during our tenth week of What Happens Next on May 24th. Richard had just returned from working 24 hours days in the Bellevue Emergency Room at the height of NYC's epidemic. Back in the Spring, ER doctors were using ventilators to help oxygen deprived COVID patients, but the results were catastrophic. Richard recommended the use of a cannula oxygen mask in combination with placing the patient in a prone position to help patients' breath.

Today, Richard will be discussing the aggressive use of oximeters to determine when and if patients should be heading to the ER to treat their COVID infections.

Ok, that is our lineup for today.

There will be NO What Happens Next November 29th in observance of the Thanksgiving holiday weekend. We will be back in full force on Sunday December 6th, so we hope to see you then.

I am now going to hand the call over to my co-host Mitch Feinman.

Mitch Feinman ([00:04:10](#)):

The topics for What Happens Next often follows Larry's eclectic taste - Business of course, politics and policy, technology and a wide range of esoteric topics ranging from the demise of ancient cities to causes for the great Chicago fire.

But what I found notably absent in these discussions is entertainment - my adopted industry for the past 15 years. I was eager to cover COVID's impact on Hollywood and secondarily prove to Larry that Los Angeles is not an intellectual wasteland. And I don't think most of us would have survived this past year without the TV and film libraries available from Netflix, iTunes, and Hulu.

The next four speakers today will talk about the challenges of content creation, and finding alternatives to live-performances and movie theaters.

COVID has accelerated technology disruptions and other norms of behavior. The best example of change in the entertainment industry is with "windowing," where a film would move on a prescribed timeline from movie theaters to other distribution channels, such as streaming services or airplanes. For years, studios have tried to shorten the timeline between venues, but this accelerated cadence met with strong resistance and even threats from AMC and Regal Cinemas.

My long-time friend Josh Goldstine, who headed marketing at Sony and Universal Studios, will talk about distribution release strategies. For example, *Borat 2* was released directly on Amazon

Prime and, incredibly, there are rumored bids of \$600 million by Netflix or Apple for the new James Bond movie, aptly-named *No Time to Die*.

Over the July 4th weekend, Disney Plus streamed a stage adaptation of *Hamilton*, which previously had only been available to those wealthy enough to secure hard-to-get theater tickets.

It's likely some of these distribution methods may continue post pandemic.

Now to start us off, I'm excited to introduce college fraternity brother and a talented writer, producer and director, Sam Hoffman, to discuss challenges of filming during a pandemic.

Sam Hoffman ([00:06:38](#)):

Okay, thank you, Mitch. So filmmaking, whether it be feature films or television or even reality shows is by nature a very intimate, professional endeavor. Think about it, what we do when we make films and television is we gather a large group of people for long hours into small spaces to film other people pretending to do all sorts of things, including, but not limited to, fighting, kissing, hugging, singing, very few of these activities are what we would call COVID compliant. And as a result, almost all of the film and television production in this country stopped in the middle of March due to the COVID-19 crisis.

Sam Hoffman ([00:07:19](#)):

The film and television industry has contributed about \$41 billion to the economy each year and employed about 2 million people, and this spigot completely shut down in mid-March. And of course the fixed costs of the studios didn't stop, the rentals on their soundstages, and salaries to their executives, the payments on the development deals, all of those continued. And so they immediately were facing a crisis of not being able to create a product, or in this case film entertainment, of course the lifeblood of the industry, even though the revenue streams have changed over the last decade from movie theater box offices to streaming service subscriptions, as Mitch was sort of talking about, the marketing concept hasn't really changed. I'm sure you'll hear more about this in depth from Mr. Goldstine later, but the basic marketing concept is we have something really cool and new and everybody's talking about it and you really need to see it. And that's the idea, and when you run out of new cool things to show, people do lose interest.

Sam Hoffman ([00:08:13](#)):

The other thing is studios don't have a lot of inventory of filmed entertainment on purpose, because zeitgeist changes and material can get stale. And so ironically, during this lockdown, when people were needing media content more than ever, we couldn't make any. So the imperative became, how could we get back to work in this perilous intimate workplace when this pandemic was showing no signs of. So for people who don't know much about the film industry, the first thing you need to understand is that we are a highly unionized business. We're all in unions, so any solution to get back to work had to be negotiated between the studios and the unions as part of a collective bargaining agreement.

Sam Hoffman ([00:08:54](#)):

So it started with basically two papers coming out in June, one by the management side, which is the AMPTP, and one from the union side led by a whole collaboration of unions. And they both came out in June, and these two documents formed the backbone of the agreement that would eventually be signed between the industries management and labor representatives. The industry whitepaper addressed issues which had become in the intervening months commonplace in dealing with COVID-19. Testing, PPE, hand hygiene, vehicle cleansing, physical distancing, remote working if and when possible, and it introduced a new position of COVID compliance officer, which is a person added to the crew who would run a department that would be responsible for not only testing, but also administration of the new guidelines.

Sam Hoffman ([00:09:38](#)):

Unfortunately, the whitepaper didn't delve into the specifics of actually trying to create a practical protocol for shooting, and that's where The Safe Way Forward, the union document, sort of took it a step forward. This document basically created the idea of a zone system. And the zone system was the idea of trying to protect the most vulnerable people in the company, specifically, the people who have to work without social distancing and/or PPE, this is primarily the performers. Most shows are filming stories that are not taking place during the pandemic so they can't be wearing masks, they can't be social distanced and they have to behave like we used to behave. So they become very vulnerable because they're in a room with a bunch of people, including themselves and members of the film crew, the director, the cinematographer, camera, boom, et cetera.

Sam Hoffman ([00:10:26](#)):

So these people became zone A, zone A was the bubble that we were trying to keep and protect people the most. Zone B is everything else where the film production has a footprint that isn't zone A. So the zone A people would be tested a minimum of three times a week, a lot of shows are testing five times a week. Zone B would be tested a minimum of one time a week, but a lot of shows are doing extra and testing three times a week. And the idea is that zone A would mostly be coming in contact only with other zone A people, but if they had to come into contact with zone B people, those zone B people would be much less of a risk or hazard than the people in the world at general. So that's basically how it's been done in a nutshell, and those are the measures that have been adopted by the production.

Sam Hoffman ([00:11:16](#)):

How's it going? Well, the simple answer is that the industry is shooting again. I personally am prepping a pilot with Phil Abraham, who you'll hear from next, who's directing of a CBS show called Ways and Means. I personally, as the producer, am creating a long form application to ViacomCBS to be allowed to shoot. This has added a good, solid 50% to my labor in terms of what I have to do work-wise and in addition to actually producing the show, which brings me to the cost of these COVID protocols.

Sam Hoffman ([00:11:48](#)):

What does it cost a show to comply? I'll know better once I finished budgeting the show, but anecdotally I'm hearing between 15 and 30% more. There's a whole new department to pay for, a lot of testing, a lot of PPE, but that's only the beginning, we also can't shoot as fast. So all the

labor costs increase. It's very difficult to break for a meal, for example, in a crowded city, finding a place to feed a crew that has enough space to allow for social distancing is very difficult. Before COVID, if we needed to move the crew for lunch, we did what we called roundies, which was we had 15 passenger vans going round and round from one place to another. Well, now the allowable number of people in a 15 passenger van is not 15 passengers, but rather three passengers and the driver. So you need to do roundies these all day, or have a lot of vans with a lot of extra Teamsters in order to make that lunch possible.

Sam Hoffman ([00:12:35](#)):

There's also the issue of shutdowns. Shutdowns are incredibly expensive because the production is paying to carry all the tasks that's human and otherwise and not shooting anything. I'm told that 59 shows have suffered shutdowns from a day to a full two week quarantine. Many of these were caused by false positives, some due to reliance on rapid testing machines that could easily be affected by environmental issues, others were caused by true positives.

Sam Hoffman ([00:12:57](#)):

And finally there's the question of quality, are you making the show that you want to make, that you would've made? A perfect example is crowd scenes. How do you make a crowd scene look real if you can only have 25 extras in a room meant for 150? It's a challenge and that's just one example of the challenges that we face. But yet we mush onwards, what choice do we have? The industry needs us to make some entertainment, for those of us who do it, it's not only our job but our craft. We think of ourselves as artisans, some of the last Americans to make our product by hand, piece by piece like an Amish Oak dining set.

Sam Hoffman ([00:13:31](#)):

But I'm not lying to you when I say I look forward to the end of these protocols, not because they're a pain in the ass, which they are, but because the fun, the real true fun of filmmaking is being in it together. To being a band of Outlaws, to being the circus that rolls into your town. And right now there's no in it together, there's only in it mask, tested and six feet apart. Thank you.

Larry Bernstein ([00:13:56](#)):

Thanks Sam. We're going to have our question and answer period after the four speakers in this segment finish. So we're going to go directly to our next speaker, who is Phil Abraham. Phil is a director of the TV series Ozark among others. Go ahead, Phil.

Phil Abraham ([00:14:13](#)):

Thank you, Larry. So yes, I am a TV director. And as you all probably know my job is to say action and cut. But before filming starts, I have a lot of decisions to make collaboratively with the production team. I have to visualize the script, figure out how I'm going to shoot the script, where the cameras will go, I have to cast some actors and sit in a ton of meetings. We'll have a tone meeting to make sure we're all on the same page about the tone and the themes of the script. I look at wardrobe options, sets and locations that are specific to the story and try to match all of that with the tone of the story I am charged with telling. And our efforts all come together as the cameras roll and I finally get to say action and cut.

Phil Abraham ([00:14:53](#)):

But when the COVID pandemic hit and stay-at-home orders were issued, all forms of movie and television production shut down nationwide and really globally as well. Suddenly we were all out of work and many showrunners and creators pivoted to the idea of producing shows remotely. But how do you actually produce a show during a nationwide stay-at-home pandemic? Well, back in late April of this year I was called by my friends over at Orange Is the New Black, where I've been a director over there, a seven season run, to direct an episode of the new Netflix series they came up with and called, appropriately Social Distance, which is an eight part anthology series exploring and dramatizing the experiences that we were all living in real time. The show was to be shot while adhering to all the mandates and safety protocols of the lockdown.

Phil Abraham ([00:15:41](#)):

And it was decided that to better reflect that experience of the stay-at-home orders, the form of the show and how you experienced it on Netflix would be completely subjective and that all imagery would be displayed to the various modes of communicating with others, that our characters were using, iPhone, FaceTime calls, Zoom, classroom meetings, Nest or Wyze cameras checking in on each other, sending video messages over the Marco Polo app, and so on.

Phil Abraham ([00:16:08](#)):

The concept of the show was to explore the human condition that we were all experiencing during this stay-at-home moment of time. This was truly our art mimics the next life moment, and as production progressed and racial justice became a rallying cry the writers adapted and pivoted with the time to incorporate as much of that experience as they could.

Phil Abraham ([00:16:28](#)):

So our challenge was set, how do you direct and produce a scripted television show completely remotely? Well, the first step is always casting, finding the appropriate actor or actor pairings who could inhabit the characters as written and be willing to set up cameras and lighting in their own homes. In my particular episode, we needed to find two mother/daughter pairings that lived in the same quarantine pod. And of course the actors who interacted physically with each other has to be living together. Our Orange Is The New Black ties helped us when we reached out to Danielle Brooks who was quarantining with her mom, Larita and Marsha Stephanie Blake, and her six-year-old daughter Rocco. The scripted mother daughter relationships were jumbled, but that worked for the stories advantage.

Phil Abraham ([00:17:11](#)):

Once we settled on our actors, we would scout our actors living spaces by having them give us a guided tour through their homes via a Zoom on their laptop. On our side the call was myself and all our department heads looking and assessing on how we were going to make this work. Once we had our actors on board, we adopted what the production called the Blue Apron approach to film it. We would have delivered to each pod of actors all the things necessary to film the scenes. Cameras and sound equipment, iPhones, lighting, prop, set deck, any necessary wardrobe or accessories, WiFi boosters, and everything else needed.

Phil Abraham ([00:17:48](#)):

A day or two before shooting and their giant Blue Apron box arrived we'd have our equipment tutorials. We'd walk everyone through the unpacking, to the setting up of the cameras and linking them to our network whereby we could remotely control the focus, exposure settings, and even the panning and tilting of the camera, where we employed a WiFi enabled remote head. Creating an almost Truman Show like world where we can fold the cameras inside the actors real home, as they inhabit a character of the show's creation. Not sure I would ever have guessed I'd be the Ed Harris' character in this analogy, but there I was glued to my screen.

Phil Abraham ([00:18:24](#)):

This was insanely time consuming and a very heavy lift for our actors who all did it with a smile, but you could see it was something they hadn't fully internalized the enormity of. Typically of course, on the day of shooting in before times, our crew arrives and loads in their equipment, and we rehearsed and began to set up. In this case, the only people at the location were the actors and whatever family members they had, all of them were enlisted to help out and essentially be the hands-on crew, very different for them and very different for us.

Phil Abraham ([00:18:56](#)):

On our end, it weirdly felt like a version of NASA Mission Control, where we've launched our actors out in space with the essential items for a successful mission, talking them through all the procedures one step at a time. If the space capsule has a problem, there's a tremendous amount of support back at mission control. And just like Apollo 13, once a decision on how to proceed was made, the actual fixing of any issue would have to be carried out by the actors themselves. One big difference of course, was that instead of all of us gathered together, back at Houston problem solving, we were all buried with our heads in our screens at home, needless to say, we all quickly developed amazing Zoom skills.

Phil Abraham ([00:19:37](#)):

One thing that was important to me and that I wanted to implement was a direct line to the actors where I could talk to them privately, as I would typically do on set. I've never been the kind of director who shouts a direction out from the back of the room by the monitors. I always felt I needed a closer, more intimate space for that. So we had a Zoom DJ working with us who could easily and quickly open up breakout rooms, where we could have private conversations without the whole crew involved, and this was an incredibly useful tool, both for me and the actors. I felt it was important to shelter them whenever I could, from the stagehand aspect of this job and care for them as actors and give them that discussion and direction time.

Phil Abraham ([00:20:18](#)):

Typically on a set during filming we spent 12 hours a day working. On this show, being shot from the comfort of my own home we never had a longer day than seven hours. And I have to tell you, I have never been more exhausted at work before. The strain of communicating all your intentions over a Zoom call just wears you down. Not to mention working with a six-year-old who had flashes of brilliance, but whose attention span rightfully wandered. I also am really more of a shotmaker director and finding camera setups remotely was a huge challenge, and one that I don't think I could ever fully get used to. What I did find, and this experience reinforced, is

that when the actors were shooting themselves in selfie mode, our young Rocco created the greatest and most unexpected moments in her playfulness. She was so camera or iPhone savvy and was far more visual than she was even aware of, and that is something to always be open to. Sometimes the best thing a director can do is just let it happen.

Phil Abraham ([00:21:18](#)):

Going forward, now that production is open back and we no longer have to stay at home, I'm back at work at the very show I was prepping when we shut down, as Sam had said, we're doing this thing together. But since this is a very different world we're reentering, there's a whole host of new challenges that we'll be encountering. How to film actors when trying to maintain an appropriate social distance, how to shoot group scenes, let alone scenes with actual crowds, all these new safety mandates and protocols while necessary will present their own challenges that we'll just hunker down and figure out. And that, I suppose it's really what the job is all about. As they say, the glamor of show business just never stops.

Larry Bernstein ([00:22:01](#)):

Phil, thank you very much. All right, our next speaker is James Gray. James is a choreographer. He is working currently at a performance in Tokyo that he has created instructional videos from his dance studio in New York City. James, go ahead, tell us what's going on.

James Gray ([00:22:19](#)):

Thank you, Larry. Hi, so I was scheduled to go to Tokyo to recreate the choreography of the hit Mel Brooks musical the Producers by my boss, five times Tony award-winning director, choreographer, Susan Stroman. I have worked with her for about 16 years and I performed and worked on the Broadway London West End on the movie musical versions of the show. I would travel to Tokyo, rehearse for four or five weeks with a company of over 40 musical theater actors. With my interpreter by my side, I would teach them all the steps, the positions in the rehearsal room, running the full show. Then moving the polished product to the Theater to add the technical elements, doing many dress runs and culminating with the opening night.

James Gray ([00:23:10](#)):

Then March 12th happened, COVID and Broadway shut down. I expected this production to be canceled as the protocol in America was full shutdown of all theater and I lost all my US work. However, my Japanese producer had other ideas. The Japanese government was allowing 50% capacity in theaters and they wanted to keep all their theaters running. I was delighted to hear this and he was open to finding a new way of working in this situation. The old way of me rehearsing live in a studio in Tokyo was not going to work, but what could we do? Aha, Zoom.

James Gray ([00:23:52](#)):

So we came up with a scenario of myself, staying in NYC, gathering a socially distanced pod of Broadway dancers and Zooming the steps and the numbers to Tokyo. There's a 14 hour time difference, so I filmed videos with all the information needed to set the production. Because of the Broadway shutdown many of my colleagues from the original production were available and they couldn't wait to get back into a studio and dance with me. So myself, my assistant and accompanist and six dancers headed to Open Jar Rehearsal Studios in Times Square. This was

the beginning of September, so we followed every COVID protocol. Temperatures were taken, we stayed in our pod, we wore our masks throughout all rehearsals and bathed ourselves in hand sanitizer. None of us had performed or even stepped foot in a rehearsal studio since March 12th, so as we gathered on that first day of a two week rehearsal period, we all got really emotional. Before we started we just had to express what we were feeling and how we were missing what we do.

James Gray ([00:25:07](#)):

So many people see theater folk and what we do as just a hobby, but for us it's a way of life. Many start training from a young age, I was six. So after the tears and no hugging, of course, we began this huge task of documenting every step in two weeks. Painstakingly, we filmed every actors individual choreography and staging one section, one number at a time which led to over 420 videos being downloaded into Dropbox. My assistants and dance team in Tokyo would then learn the choreography and teach the Japanese company, sending me back videos so I could notate and perfect the work. Though it was all very time consuming, I felt it rewarding that this information was being sent across the world via video and being recreated perfectly, no approximations, no own interpretations were happening. Could this be the future of a hybrid without me being present?

James Gray ([00:26:14](#)):

Normally when a producer wants to mount a Broadway production they acquire the rights from MTI, Music Theatre International, and then they are given a show Bible with all the information to create the work. When a Broadway show is preserved, every piece of blocking and choreography is handwritten down in what we call a Bible. These Bibles are very heavy to carry, and there are individual ones for blocking, choreography, et cetera. This is how other productions mounted from handwritten information, unless they hire the choreographer or the associate to come to mount the work so it saves them a lot of time.

James Gray ([00:26:53](#)):

As I was always making these videos I thought, if I was never able to travel to set these shows this new way via video was more exact than any handwritten notes. Here we have videos shot from the front and the back, so there was no question on where or how the steps they're on should be executed. This original choreography was captured forever in its true style and intention and future generations of musical theater performers anywhere in the world could have it at the touch of a button.

James Gray ([00:27:27](#)):

Because of the COVID situation I was forced to work in a different way I had never imagined. I did many meetings via Zoom with the costumer, lighting and set designers. I watched the full dress rehearsal in the theater from 3:00 AM to 6:00 AM Eastern time, and then gave my notes to the company. The Japanese production worked because I was surrounded by people that were true collaborators who thought outside the box on both sides of the world.

James Gray ([00:27:54](#)):

By the time of the opening, just now on November 9th, the Japanese government was allowing 100% capacity in their theaters as they were controlling the virus. Opening night went well and the production is fabulous, we are sold out. It is a miracle that any show gets mounted in normal rehearsal period and conditions, let alone doing it via Zoom and videos, but we managed to pull it off. Thank you.

Larry Bernstein ([00:28:24](#)):

Thank you so much. All right, our next speaker is Josh Goldstine. Josh is the former worldwide marketing chief for Universal Studios. He's going to discuss marketing films during COVID. Go ahead, Josh.

Josh Goldstine ([00:28:39](#)):

To me, movie theaters are hallowed ground. On the big screen, reality takes on mythic dimensions. Our laughter, gasps and tears are cathartic when strangers share our emotions.

That said, the movie business faces an existential crisis because a new generation has come of age consuming content in a new way.

COVID-19 is accelerating the change in movie-watching habits. Netflix, with its \$230 billion market valuation, rises above its peers. Disney+ owned the last Fourth of July with its culture-capturing coup with *Hamilton*. Traditional studios are experimenting with Premium Video On Demand (PVID) releases—something they wanted to do for years. Warner Media's HBO Max and NBCU's Peacock are making their debuts with direct-to-consumer digital platforms, and the dwindling number of vertically integrated media behemoths are rethinking their capital allocations with one eye on COVID and another on the future.

The press frame this as an epic Darwinian battle between Old vs New, Studios vs Streamers, Hollywood vs Silicon Valley, Art vs Technology. But we don't have to choose sides. Hollywood and Silicon Valley are going to work symbiotically more than either side realizes.

I want to shift gears and highlight the four major changes to content distribution.

(1) Give consumers what they want, when they want it, and where they want it.

This is the lesson of the decade and we all know it. Theaters are going to close, despite consumers desire for a communal experience. New norms will likely accelerate pre-pandemic declines in theater use. Some industry analysts speculate that 80% of customers will need to be vaccinated for theaters to return to normal.

But movies are not going away. People have been telling stories in a three-act structure for thousands of years, and they are not going to stop now.

(2) The Rise of direct to consumer content apps: how tech is making entertainment ever more personalized

Where movie theaters take us to shared public arenas, direct-to-consumer content apps personalize home entertainment. Cable costs are uncompetitive at \$70/month and cords will be cut because linear cable is pre-historic and awful.

Digital is our future because the massive content libraries are instantly available.

Digital platforms will also play a pivotal role in the pipeline of mid-tier movie product. Studios with the direct-to-consumer advantage, will happily trade low margin rental fees on iTunes for higher value subscriptions on their own platform.

Streaming customers inhabit a *time* of their own creation; they get to watch what they want, when they want, independent of the rest of us. Binge-watching is the ultimate revenge against linear time.

And it is all about data: these platforms provide media companies with unprecedented access to consumer behavior and that data that will drive future content production. Consumer interests went unrecorded when attending a movie theater.

(3) Cultural Relevance Matters

Despite the trend toward greater personalization, broad cultural events steer behavior—we are a herd specie. Even with COVID, virtual water-cooler chatter is extraordinarily effective. I recently worked with Sasha Baron Cohen and Amazon on the Borat 2 movie launch, and our decision to time the movie's release for the week before the presidential election exponentially increased the movie's cultural relevance. We used a Beyoncé-inspired shock approach by dropping material in a highly compressed window just before release. Our greatest triumph was the strategic decision to hold back the movie's juiciest scene with Rudy Giuliani, timed perfectly with frenzy of the final presidential debate. The resulting firestorm led to a heated exchange between Borat and Trump that generated untold value in free advertising and made the movie a global sensation. Borat 2 surpassed Amazon's predicted viewer model by so much that Amazon is reportedly rethinking its entire film acquisition strategy.

(4) This leads into the 4th and final point: Algorithms are fabulous but will not replace creative marketing

Netflix's model is based on data science. Algorithms analyze consumer behavior and make recommendations. The algorithm uses past viewing behavior to predict future eye balls. But as Kierkegaard observed "life can only be understood backwards but it must be lived forwards." Algorithms are incredibly powerful, but it is essential, especially in entertainment, to appreciate their limitations. Algorithms will always miss the new thing like ET or Star Wars or Borat 2.

Creativity plays an essential role. Recognizing a pattern is different from understanding *why* the pattern occurs. Following a recipe does not make you a chef. Understanding the properties and appeal of mixing novel ingredients creates surprise and delight.

The future of entertainment is a dance between the auteur and the algorithm.

A shortcoming of algorithms is its efficiency focus, who will be most interested, repeating successful cliched themes fails to maximize the potential audience. A talented marketing team can *create* new audiences. As advertising guru George Lois put it: "Great advertising can make food taste better, can make your car run smoother. It can change your perception of something."

There is a gap between prediction and what is possible. What Art can teach Tech is not how to *efficiently* get the likeliest audience, but rather how to *effectively* persuade the least likely spectator to watch and enjoy.

Data alone makes you a thermometer; creativity makes you a thermostat

Larry Bernstein ([00:35:43](#)):

Thanks Josh. This is Larry Bernstein, I'm going to start the Q and A for our four speakers. I'll start with Josh. Josh, you discussed the importance of data and how it wasn't available previously. It was sort of uncaptured by the movie theaters themselves. What and how are people going to be using this data to do? Are they going to choose what kind of content to create? Is it that it can be more efficient to market to those individuals who already saw Borat 2 to market to them for Borat 3? How do you see the role of data in improving value in this whole process?

Josh Goldstine ([00:36:19](#)):

I think that's a great question, Larry. I think the answer is they're going to use data for everything, but primarily for both the marketing side of it and the production side of it. Because if you think about it, it's that in the movie and entertainment business, we really often don't have a direct relationship with our consumer. We sort of hand off our product to the theaters. And the theaters can gather their own data, but on some level that becomes their data, not the studio's data. There's been some recent efforts to sort of sharing some of that, but what you'll see is you get just much more granular understanding. If you're watching something on a platform, it's when did someone stop watching? Where did they get bored? They can build a much more elaborate picture of the kinds of interests that different subgroups have.

Josh Goldstine ([00:37:07](#)):

Hopefully it kind of starts to unlock potentials of new opportunities for, oh, we didn't expect that maybe new genres can kind of can begin to emerge. And so I think there's both a marketing and a production side of it. And what you also will get with the marketing is it's very hard in the marketing world to even know how effective each particular marketing activity is. And when you start to have a direct relationship with the consumer, you kind of have... you have a much more closed loop attribution system, and you are able to actually understand the value of those marketing endeavors and really make your money go much further and much more effective.

Mitch Feinman ([00:37:42](#)):

So Josh, I think both you and I are really interested in this topic of Silicon Valley and Hollywood, as you talked about. And I worked in both and then got tired of hearing people at Google say things like, "Oh, the guys in Hollywood just don't get it." How much do you think some of what you're talking about in resolving the tension between what algorithms can do and

what marketers can do, entertainment marketers, is based on let's call it cultural and personality differences between Silicon Valley and Hollywood executives and how they view and manage businesses. And if you agree with that, how... and I don't know if you can answer this part, and when do you think those kinds of tensions might get resolved?

Josh Goldstine ([00:38:46](#)):

I do think that a lot of it does come down to just a basic lack of understanding and a lack of appreciation of the other. I mean, I think we're seeing throughout our culture on many, many, many issues, the degree to which parts of our society look at each other and don't connect. And so I think that part of that is to be expected because these are new relationships. But I think what has to start to happen is that there has to be this willingness that we're in it together, that whether we have to send everyone off to summer camp to get to learn and understand who the other one is. But I think it really comes down to, again, sort of putting yourself into the other person's shoes and find to really ask and say, "What is it that you think that we're not capturing from this perspective?" And really trying to create a kind of a dialogue around it.

Josh Goldstine ([00:39:35](#)):

And I think right now we're in that early sort of distressful state of the relationship and there is this sort of jockeying for position. And the answer is I just think that in fact, you have these two great companies that have done incredibly well in the last 10 years, you have Disney and you have Netflix. And they sort of have done... and if you sort of see where they are now, Disney sort of built itself up building these extraordinary brands through Pixar and Star Wars and how it's done that in Marvel. And Netflix did such extraordinary work with this direct to consumer understanding the power of the internet. And I think what's sort of starting to happen right now is that you see Disney is actually starting to embrace a much more Netflix approach with Disney + and trying to harness the power of the internet.

Josh Goldstine ([00:40:25](#)):

And I think to some degree, maybe not quite as much, you sort of have Netflix beginning to think about, hey, should we be building brands? What is the relationship that a brand can create? Which is really a Hollywood thing. And I think you're starting to see these sort of two great companies wanting to learn what the other one does. And I think that becomes the sort of initial steps for how these cultural differences start to break down and better dialogue. And frankly, just more successful ultimately coming. I do think that the economic imperative will be the thing that of pulls everyone together ultimately.

Larry Bernstein ([00:40:58](#)):

I want to bring Sam and Phil into this conversation. You mentioned that you're going to have all of this data that will determine when the audience is getting bored, where they're mostly interested in. Sam or Phil, or both of you, when you start getting this data about your previous productions and how you can improve upon them potentially, how do you think you're going to use that data in your next production? Is it something that could be helpful or is it still something that you think is so much representative of the art form itself?

Phil Abraham ([00:41:44](#)):

I mean, listen, honestly I don't really see what I do being influenced by the cultural demand for certain things, truthfully. I mean, I think when I'm engaged in a project, I sort of dig into it on a script level and I sort of embrace it for what I think it could be. I am not trying to pull this kind of auteurist kind of notion to it, but I'm not marketing what I'm doing to a broad spectrum of audience. I think that's what the marketers do and that's what the people who... the studios who sort of buy the project and who commissioned the script and then hire me to make that script. I don't know if I'm pivoting in such a way saying, "Oh, gee, there's a group of people here who may not like this." I'm not internalizing that as a decision making-

Larry Bernstein ([00:42:41](#)):

So maybe just to rephrase it, maybe what the data will say is, just making something up, "Oh, we love comic book movies and we like comic book movies that have this sort of violence or this sort of sex appeal", et cetera. And then once that production company says, "You know what? You're right, we should make something like that." And then they build a script around that concept and then it shows up on your doorstep. So where in your mind is the data or new understanding of consumer desires fit into the production process?

Phil Abraham ([00:43:13](#)):

Well, I think you've just said it. I don't know if it fits into the production process, but it fits certainly into the decision processes of what projects go forward. But in terms of the nuts and bolts production of it, I think, I mean, it's simply we get the script, we figure out how to make it, and we make it. But I don't know if all the sort of data that went into figuring out that this is the script that we want then sort of trickles down and percolates into the production process. I don't know. Sam, do you sort of see a version where that could sort of be applicable?

Sam Hoffman ([00:43:54](#)):

Not on the production side. I agree with you. I think it's applicable on the development side, which generally happens at companies in LA, and they're making their decisions based on where they think the zeitgeist is going. And basically, probably also based on data that they may be getting from these streaming services. They're discussing that with the writers that they're hiring who are pitching them and who are pitching them things that they think fit in with the model that they're seeing being successful in the future. And they're packaging that, and then they're coming to people like us to execute it. And we're going to execute it in the way that we feel is the best storytelling that we know how, which is basically the same way we would execute it without the data.

Phil Abraham ([00:44:39](#)):

Yeah. I mean, like this data thing, it's like I've had people, agents or other people sort of approach me saying, "Hey, listen, on your next project could you look for a role for this YouTube influencer or Instagram influencer?" And I'm like, "Are they actors?" I mean, I'd be happy to sort of audition them, but to sort of give someone a role in a project because they have 2 million followers? I don't think I've gone there yet. I mean, but that is a way where people do that. And all of a sudden that is an influence onto the production and physical production process of it.

Josh Goldstine ([00:45:23](#)):

And if I could interject maybe one thought is I think one of the points that I was really trying to make as well is that the data can only take you so far. And it really is this balance between the way the data looks backwards, but the way an auteur and the creative mind can really look forward and bring new things to the equation. And that really, what's sort of dynamic is the tension between the two or at least the dialogue between the two as these companies think about how to connect with people. Because I don't think that data alone can answer these questions.

Sam Hoffman ([00:46:03](#)):

Josh, you said an interesting thing about you don't think movies are going anywhere because of the sort of the lasting power of the three-act structure, et cetera. But I wonder, I mean, besides tentpoles, besides things that have established brand name because they're Marvel or because they're Borat, is there going to be a place for drama in movies in the marketing and financing world that you see coming? How is a movie, a little drama going to compete with say *The Queen's Gambit*, which is an exquisitely made, expensive, beautiful seven episode drama. I mean, how is there going to be a place for the little drama in feature? That's the part I don't get.

Josh Goldstine ([00:46:54](#)):

I think the answer that you're really asking about is, is there a place for that small drama in a movie theater when you have *The Queen's Gambit* on Netflix?

Sam Hoffman ([00:47:06](#)):

Well, and if it doesn't open in the movie theater, how does it get enough attention to make it into the Netflix algorithm to get anybody to see it? Because in the last few years, at least, and this is probably over, little movies were getting a little... buying themselves a little theater opening just to drive some publicity so that they'd get noticed on. And if they didn't get any awards, the opportunity to get noticed online is very, very limited if you're a little movie.

Josh Goldstine ([00:47:38](#)):

I think the answer is that dramas, frankly, since the seventies have sort of taken a little bit of a backseat to larger mass entertainment experiences in theaters. However, I think that it does come down to if movies can this storytelling technique and if those dramas can connect with people, can we start to build audience around them? And one of the things that because of marketing costs and because of the challenge of opening something on 2000 screens, the question then becomes what are the outlets for these? And sometimes I think that you see some extraordinary dramas finding their way onto other platforms. And the real question is can they build audience in a sort of smaller way still in theaters?

Josh Goldstine ([00:48:27](#)):

And I think that's kind of remains to be seen and I think it's been a struggle, but I think that again, that's where the awards and the festival circuits have played such a kind of valuable role in giving some oxygen to these extraordinary stories. And I think it really does ultimately come down to the ability to sort of, to elicit emotion and to drive emotional engagement. And I think that when you can have that element, you then find that you have to then maximize that and that

becomes the opportunity for marketing. Now, whether that finds itself into 2000 theaters is probably going to be less likely in the future than it has been.

Larry Bernstein ([00:49:07](#)):

All right. Let me bring James Gray into the conversation. James, you're in the theater world, Broadway theater. And I'd like you to comment on two things. First, obviously we just talked about the difference between dramas and the Marvel big blockbuster, but in your world it's the drama versus the musical and large productions and how you think about that difference. And then my second question for you is you talked about the role of these 420 videos to instruct a team of dancers halfway across the world. If in the future you have to do a new production in Dubai, just some other place, how will you do it? Will you do it in this hybrid approach, send the 420 videos and do it from New York City? Or will you abandon this approach and just get on a plane and go to Dubai for the four weeks? And if you do choose the 420 videos, are you the right person to do that choreography or has your creative genius already been utilized and they could have maybe a cheaper person manage learning from those videos and you move on to the next creative project?

James Gray ([00:50:23](#)):

Oh, that's interesting. Well, if, let's take what I've just done, the Producers, if they want the original choreography, no matter where in the world, they pay for the rights to use that. But if they don't want to use that, they can have the rights to the show and they can do their own direction and their own choreography. They can pull on anything that's original. So if say there's a production in Dubai and they want to use... and I can't go because of COVID, I could send those videos because those are the step-by-step count by count original choreography, and they can copy that and replicate that. They don't need someone cheaper because they wouldn't be able to do... unless they know the original choreography perfectly and it's sanctioned by MTI, they wouldn't be able to do that. They could either pay and have the original or do their own version.

James Gray ([00:51:34](#)):

But it was interesting for me just to see, I mean, I Zoomed with a company and we spoke with them all, but it worked very well. Dancers, we're very visual anyway. And so the medium of video, videoing stuff... I'm about to do a big workshop here in New York to celebrate the 20th year of Center Stage, the movie. Now I wasn't working with Stroman then and so I learned the choreography from the video, from the movie, and then I got in a studio with Stroman and we finessed it so I can teach the original choreography. And now we have videos of that. So I think I'm directing, choreographing myself. And other creators, I think this is the next way to fully capture your style and your original work without it being handwritten and people can make their own assumptions of how it should be. When it's on video, it's there.

Larry Bernstein ([00:52:44](#)):

James, this is a follow-up. In Sam Hoffman's opening remarks, he mentioned that the creatives don't have a very large inventory because stuff gets stale. And I'm just wondering how fresh does the choreography have to be? If you were going to do another My Fair Lady, would you want a copy of the choreography and the video set that may have been made 50 or 70 years earlier? Or

would you want to create something new and lively that takes advantage of all the learning since then?

James Gray ([00:53:15](#)):

Well, that's always down to the director. What is the vision? What is the vision of the show? Are you going to do an homage to the original, say *My Fair Lady* from 50, 60 years ago? Or are you going to do your version, which is what they did at Lincoln Center. But I have been part of original shows and then I have put many famous actors and singers and dancers into shows and I personally don't do it in a cookie cutter way. Yes, they have to stand on this mark. Yes, they have to be there for the light to hit them. Yes, they're saying the same lines.

James Gray ([00:53:55](#)):

But it's my job to whoever you have cast in that role to bring themselves to the character and to the dance steps that makes it fresh and real, even though they're doing something that was created maybe 60 years ago. But if you speak to a performer and say, "No, it's like this, it's like this", you stop the creative process and they don't feel they can bring themselves to it. And that's when you see replications of old work that are not good. It's just not organic, it's just boring. And that's a fine line to be able to pay homage to the original, yet bringing something new from whoever's working on the piece with you.

Larry Bernstein ([00:54:42](#)):

I've got a question now for Phil Abraham, it's Larry Bernstein again. One of the major themes of *What Happens Next* is how technology has disrupted during COVID the way we do business. And after COVID it's likely that we will be disrupted going forward. Now you've just described some very radical changes in the production methods for your television program, how cameras are run, how sound is done, how the props are used and the role of actors as part of that process. But you've also mentioned that you were completely exhausted after only a few hours of work. What do you think that you've been doing lately that will continue on after COVID? What has been more efficient, more constructive, better? And James was just explaining how his work is going to be a hybrid of what today and before was like, is yours going to be a hybrid?

Phil Abraham ([00:55:42](#)):

I hope not. I mean, because honestly, yes. I mean, could it be? I mean, look, Sam and I are prepping a show now where essentially, the idea of even under these sort of COVID protocols and whatnot, the idea of going into an office and congregating around the boardroom table and sort of discussing things, we find that we can actually accomplish this on a Zoom call truthfully. And hopefully people are engaged enough, and you have to be, that you're giving it all your undivided attention. So in the prep aspect of it, I think a lot of things will happen and can happen successfully remotely. In the physical production and making of the show, I don't think so. I mean,

Phil Abraham ([00:56:36](#)):

I think the show I did with remote production was very specific and they were doing other... Now, there are other shows that were shooting during COVID that weren't doing it remotely. They would isolate and quarantine a pod of actors and crew. And the story was very small or it's

two people in a house and you're in that house and everyone is quarantined together. And I know Fargo did a version of that. And there are a couple of small movies that did versions of that and they did it very successfully. So that was one way of doing it. But really the only thing that was different was that they sort of quarantined, but their physical production sort of protocols were the same. So I don't know-

Sam Hoffman ([00:57:23](#)):

So I can think of one technology that I think we're going to use and that will continue on afterwards, which is that, Larry, we have a thing called video assist which allows people to see, to sit and see what the camera is seeing. And typically we sit on set and watch a TV which allows us to see what the camera is seeing. And what's developed now is a technology to sort of beam that almost live to anywhere. And so you're going to have people who used to come in from LA to sit on the set and watch what we were shooting, now we're not going to have to do that anymore. They can sit right in their office and watch it.

Larry Bernstein ([00:58:04](#)):

Yeah, that's interesting.

Phil Abraham ([00:58:05](#)):

Well, that's true. That's true. They're on Zoom and they look at their sort of... They open up a link and they have like, oh, this is what's going on in New York. And that's what they're shooting. I mean, that to me is a nightmare scenario.

Sam Hoffman ([00:58:18](#)):

A little bit.

Phil Abraham ([00:58:22](#)):

That probably will happen.

Josh Goldstine ([00:58:25](#)):

You're inviting too many chefs into the kitchen, so to speak.

Phil Abraham ([00:58:29](#)):

Way too many. Way too many. And then you have these sort of voices from a box coming, "Phil, can you please come and have a conversation with all these people on the Zoom?" And it's like, oh my God. So yeah. I mean, there are shows that that sort of manipulate you that way. But I think Sam's right. I think there is that technology. Which existed before, but now since people are so completely used to sitting at home and clicking a link and opening something up and it's all being there, I think they'll probably insist on it in the future.

Larry Bernstein ([00:59:04](#)):

We have a question from the audience, this question is from Rajeev Nerang. Rajeev wants to know if the concentration of content and distribution is in fewer, large hands. What does this mean for the role of smaller non-global studios and how it will affect content creation?

Josh Goldstine ([00:59:24](#)):

This is Josh Goldstine. I'll take one version and then I will let the creative people on the phone actually answer it in a different way. Listen, I think it is a challenge that there is sort of power consolidating, but I also think... the distribution is actually getting more democratized. And the hope is, is that as more distribution channels and more digital distribution channels become accessible and the internet becomes the sort of the hub in which those distribution channels can be operated around, that hopefully it'll create greater potential for more niche movies to find niche audiences around the world.

Josh Goldstine ([01:00:07](#)):

I think the other thing that you're also seeing is that as these companies also try to expand, they're expanding internationally. And one thing that I think is a very positive trend that you see is that in expanding internationally, you're seeing a lot more international production. You're seeing a lot more sort of people, countries telling their own stories and telling stories for their own cultures. And I think that hopefully in this process that yes, there is some consolidation that is happening, but hopefully there's also some democratization and some opening up of the aperture so that there's greater opportunities for storytellers to connect with audiences in new and exciting ways.

Phil Abraham ([01:00:50](#)):

Yeah. Hi, this is Phil. I mean, Josh, I certainly hope you're right. I mean, because that's an ideal scenario. I mean, I am concerned that that actually isn't the case and that the companies with the really deep pockets who can afford to take essentially major losses like Amazon and Netflix, like buying hundreds of million dollar movies or producing giant movies just to put on their streaming channel like they would anything sort of narrows the field of new players. Now, possibly, and I hope that you were right that smaller little streaming people can get into the business of sort of doing these global pickups and things like that. But I worry that the behemoths are becoming just what they are, almost monopolizing it.

Larry Bernstein ([01:01:44](#)):

Phil, just as a follow-up, you worked on Ozark, how expensive is that show? Is it something that someone small can't do or is it really so expensive it can only be done by a large institution?

Phil Abraham ([01:01:55](#)):

No, I mean Ozark and... I mean, these shows are expensive. I mean, shows are expensive now. There used to be a time 10 years ago when you would spend two and a half, \$3 million on an hour of television and that was considered sort of up there. And then of course it's slowly migrated to 5 million. And now for a show like Ozark, I mean it's upwards of six, seven, 8 million an episode for an hour of television. I'm only surmising. If it's not Ozark we're spending 8 million an episode, it's shows like Ozark that's spending 8 million an episode. So those are giant shows. Queen's Gambit has to be in that range. Every bit of it, if not more.

Phil Abraham ([01:02:43](#)):

And a lot of these shows are producing their series overseas, like Queen's Gambit, sort of a mandate for that show is it's not going to be shot in the US. So they shot everything in Berlin with the exteriors of Kentucky and Toronto. And that's because of all the differences and fringe benefits for actors and crews and all those things and residuals and all those things that add up to what the after expense of the show really is. And things like that happen all the time. So, yes, it's very expensive, very expensive.

Larry Bernstein ([01:03:20](#)):

I wanted to end this segment on a note of optimism from each speaker. Why don't we start with Sam. Sam, what are you optimistic about that came out of this COVID experience?

Sam Hoffman ([01:03:35](#)):

Well, I'm optimistic that we're going to be doing this again. It made me realize how much personally, I enjoy the experience of making stuff with my colleagues and how much satisfaction that that gives me. And I realized that a group of people that make a TV show or a movie are in some ways the most sort of-

PART 2 OF 4 ENDS [01:04:04]

Sam Hoffman ([01:04:03](#)):

Like a TV show or a movie are in some ways the most involved group to take on anything. You have people who can do makeup. You have people who can do hair. You have special effects guys who can solder iron, you have grips who can rig giant construction. You have carpenters, you have drivers, you have everything you need, and I think that if there's any group that's able to take on something like keeping a group safe, then I think we're the guys to do it.

Larry Bernstein ([01:04:32](#)):

Thanks, Sam. Phil?

Phil Abraham ([01:04:34](#)):

Yeah, yeah. I mean, I'm with Sam. I mean, I'm optimistic that as we continue with production with these protocols, I think by and large film crews are really good citizens, and I think they're going to adhere to keeping a safe set and adhering to the strict mandates of all of these things, because our jobs depend on it and they want to be working.

Phil Abraham ([01:05:05](#)):

I think there are a lot of industries that don't do that currently right now. I think of all of the industries out there, the film industry is taking this very seriously. There's a lot of money at stake. So I'm optimistic that we'll get through this really well. Even during production, during the pandemic, that show that I did, look, these are people who found themselves out of work and they sort of said, "Hey, come on, we're filmmakers, let's do something." And they figured out something to do. They kept the gears greased and they were rolling and turning. This was happening across the board. I feel like it's a very can-do sort of industry. We did.

Larry Bernstein ([01:05:51](#)):

Thank you. James Gray?

James Gray ([01:05:56](#)):

I'm optimistic by the resilience of our industry. You know, we're all film, television, where everything is shut down, but we are still working. We're finding different ways. I mean, myself personally, I hate the computer. I don't understand the computer. I loathe the computer. Now I love it because I've learned different ways of using it artistically, and it's helped me. I don't think it will change, and hopefully we can go back to live theater, but I now have an enhanced version of rehearsing and getting things done.

James Gray ([01:06:40](#)):

I could now send videos to an assistant across the world who's going to come and join me and they would know everything before we started. I think it's opened my eyes to a new way of working. I do think we'll keep some elements of that. But all of us here have spoken about how we're resilient and how we've changed and we've adapted. But at the end of the day, if our theaters are closed, if our movie theaters are closed because the government aren't doing enough to make us all wear masks and control this, Tokyo, Japan is a huge country and they have theater. It can be done. We're just not doing it in this country, unfortunately at the moment. But I'm optimistic by our resilience.

Larry Bernstein ([01:07:33](#)):

Josh?

Josh Goldstine ([01:07:35](#)):

I certainly second that in terms of the theme of resilience, I mean, I think that's one of the wonderful things that has come about all of this. In terms of my side of the business, the movie business that I've known has really been sort of awfully resistant to change. I do think that the pandemic has forced I believe this combo of art and science that I spoke about. It's going to lead to some exciting things in the future, and if Hollywood and Silicon Valley can kind of get over their cultural differences and distrust of one another, I do think some amazing things can be accomplished. I see the pitfalls, I see the challenges, but I do think some amazing things can be accomplished. I really hope, and I guess this is the optimistic side of me, is that more different stories are going to be told. We will have more diversity and inclusion and more voices will be added to the mix.

Josh Goldstine ([01:08:23](#)):

I'm hopeful that maybe, just maybe if we listened to each other's stories, we can develop some much needed empathy and possibly begin to heal some of the deep divides in our country. If we can laugh and cry together, maybe we can just stop hating each other just a little bit less. I'm optimistic that maybe movies and storytelling can play some sort of positive role in that, in the future.

Larry Bernstein ([01:08:46](#)):

Good luck on that. Mitch?

Mitch Feinman ([01:08:48](#)):

Yeah. So Larry, I'm optimistic that in most other industries, for the entertainment industry, the pandemic has accelerated changes that were already happening. Talked about windowing in particular, is really one of those things that was just not keeping pace with consumer choice and demand. I think that along with what Josh just said about some of these cultural differences between Silicon Valley and Hollywood, it seems that it will just dissipate more quickly born out of necessity from the pandemic.

Speaker 1 ([01:09:34](#)):

All right. That will end this question and answer period.

Larry Bernstein ([01:09:41](#)):

All right. Our next speaker is a US Senator from the state of Arkansas, Tom Cotton. Tom will be discussing the race for the Senate in Georgia and a potential legislative agenda. Please go ahead, Tom.

Tom Cotton ([01:09:55](#)):

Thank you, Larry. Yeah, I thought I'd discuss because it's on everyone's mind, on the first two points in my opinion there really are only two outcomes. I think the Republicans will either win both races or lose both races. It's hard to imagine the kind of voter that'll show up and split their ticket on January 5th. So that means it'll either be 50/50 with Chuck Schumer in charge of the Senate agenda, or 52/48 with Mitch McConnell and the Republicans in charge. First let's look at the 50/50 Senate with Chuck Schumer in charge, which I consider the dystopian poor.

Tom Cotton ([01:10:25](#)):

If the Democrats take both of those seats, they are going to advance their radical agenda, which they've been perfectly clear about. They will eliminate the filibuster, and once that filibuster is eliminated, they can pass any law on a mere 50 vote threshold with the vice-president breaking the tie. So what are some of the things they've said they want to do?

Tom Cotton ([01:10:47](#)):

They want to pack the Supreme Court and the lower courts because they're dissatisfied that those now have center right majorities, they want to make Washington DC a state because they would rather pack the Senate with more Democratic senators in perpetuity than slightly modify their agenda to appeal to a broader based coalition. They want to pass Nancy Pelosi's crazy voting law that would override the voting laws of all 50 states and require universal mail-out balloting with ballot harvesting with not so much as signature verification.

Tom Cotton ([01:11:17](#)):

They want to grant amnesty to illegal immigrants and immediate voting rights in 2024, if not 2022. They want to raise taxes. They want to pass the Green New Deal with its radical economic restrictions. They want to give massive bailouts to long mismanaged states and municipalities.

They want to confiscate guns. This is the agenda that they want to foist upon the American people if they have a 50/50 Senate.

Tom Cotton ([01:11:44](#)):

That's one reason why I've been to Georgia multiple times in the past. I just went back this past week to campaign and I'll be going back again because the stakes for this race are so high. Many people don't appreciate that even in a 50/50 Senate, Chuck Schumer being the majority leader and then ending the filibuster will mean truly radical change for America.

Tom Cotton ([01:12:07](#)):

However, you have the alternative scenario, which I call the bright, sunny uplands of a 52/48 Senate when we reelect David Purdue and we reelect Kelly Loeffler and Mitch McConnell, and the Republicans are in charge of the Senate. In that case, we will have the clear mandate, along with a much expanded House of Representatives, to act as a break on the radical Democratic agenda. In fact, that agenda will be better than dead when it comes to the United States Senate. Just as it has been for the last two years when Nancy Pelosi passed her crazy voting law, when they tried to pass amnesty for illegal immigrants. When they took other radical actions, not only were we able to stop it, we didn't even address it simply.

Tom Cotton ([01:12:56](#)):

Now, if Joe Biden wins the presidential race, he also is going to have to stock his administration. In a 52/48 Senate, he will not be able to get confirmed radicals to critical positions like treasury, like justice, like state, like a lot of the regulatory agencies that oftentimes operate outside the front pages, but do so much to affect the strength of our economy. Whether it's the FEC or the CFPB or OSHA, or the EPA. Ultimately he will be able to confirm his cabinet and to stop those agencies as well, but he will not be able to do so with the kinds of radical left-wing nominees that the Democrats hoped to install just a few weeks ago. Now, obviously we will work with the House of Representatives to try to advance legislation that is in the common good. Still haven't passed an infrastructure bill. For many years we have to pass annual spending bills. We have to pass the annual defense bill. Those are places where in divided government, we will find common ground because we must find common ground.

Tom Cotton ([01:14:10](#)):

Some of those bills may be better or worse, but they ultimately will pass. Now, I hope that we can do more than that. I hope that we can come together for instance with a new coronavirus relief bill. I wish that we would have done so months ago, because I've long believed we needed that. Not the kind of broad-based survival package that the Cares Act was in April, but rather something that is more specifically targeted and tailored and calibrated for those who are most in need.

Larry Bernstein ([01:14:37](#)):

I have a couple of quick questions about the, I'll call it inside baseball of the politics related to the Georgia runoff. Historically Republicans have had advantages related to runoffs specifically, and in Georgia in particular. Do you think it's different this time because of the importance of this election? Do you think that more Republicans will naturally show up who are older and

more engaged in the political process, even voters who are opposed to Trump are inclined to get Biden in office. Once they've achieved that objective, will they return to the Republican Party and the Senate race because of their desire for divided government?

Tom Cotton ([01:15:18](#)):

Georgia Republicans have a remarkable winning streak when it comes to these runoffs, something like two dozen runoffs in a row they've won. Although I think I'd liken that to the stats you see on Saturday when you're watching college football, that says one strong program has beaten another program 25 straight times. Well, very few of those involve any of the players on the field at this time. So I wouldn't put much stock in that history. Although it's comforting to see, shows some perhaps structural advantages. Some of which with Nancy Pelosi in charge in the House, and with Joe Biden still ahead in Georgia and in the electoral college at the moment, you would expect Republicans across Georgia to be very motivated to make sure that they not just get the continued outstanding representation they have from David Perdue and Kelly Loeffler, but they have a chance to put the brakes on the Democratic agenda.

Tom Cotton ([01:16:06](#)):

Two questions are whether the Democrats can rival their historic turnout in Georgia, and then as you say, Larry, whether the swing voters, especially swing voters in the Georgia suburbs who might've voted for Joe Biden because they oppose the president, but might want to vote Republican down ticket for divided government. Now, if given that apparent choice, will take that action. Americans for the most part in the last generation has favored divided government. Especially when they see one party lurching to an extreme, as the Democrats have done over these last four or five months, they really tend to favor divided government. Our voting starts in mid-December and absentee voting I think may already be underway. So this is going to be a very hard fought election.

Larry Bernstein ([01:16:49](#)):

You mentioned the harvesting of votes. This seems like something that was ripe for abuse. How do you think about that? How was it done, particularly in Pennsylvania, that leads itself for potential voter fraud?

Tom Cotton ([01:17:05](#)):

Yeah. Larry, unfortunately when you combine universal mail out balloting with vote harvesting, you threaten the sanctity of the secret ballot. So all of your listeners understand, there's a big difference between absentee voting by mail and universal mailout voting. When you absentee vote, there is a clear and audit-able trail of action that is expected on both sides. The voter submits an application, which the clerk receives, and sends the ballot to the voter who is expecting the ballot. The voter completes the ballot and the administrative paperwork and returns it back to the clerk who was expecting it.

Tom Cotton ([01:17:39](#)):

What places like California do is send out ballots to every registered voter over the last two years. Despite the fact that many of those voters will have passed away, they will have moved to other addresses, and therefore live in different precincts in the state. Or they may have moved out

of the state itself. That is a recipe for fraud by itself. But then when you combine it with ballot harvesting, which is the act of canvassers, usually paid by the parties, going door to door and asking for those ballots, you really do raise the specter of intimidation and threaten the secret ballot.

Tom Cotton ([01:18:13](#)):

Because you know, if you have a list of registered voters, that that household has a ballot, it's not asking them to vote by absentee. It's not asking them to go vote at the polls. It's saying, "We're here to collect your ballot." That can be a very intimidating and aggressive action. There are of course people out there who would threaten retribution if you don't participate. So I worry very much about the threat that universal mail-out balloting and ballot harvesting poses to the sanctity of the secret ballot.

Tom Cotton ([01:18:42](#)):

That's one reason why we would never take up Nancy Pelosi's voting rights law, which mandates universal mail-out balloting and still permits ballot harvesting of the kind they have in California. Of the kind that caused an entire congressional election in North Carolina to be invalidated two years ago. That's how big a threat it is to the integrity of our elections.

Larry Bernstein ([01:19:02](#)):

I have a technical question about the rules of the Senate. So unlike the House, which every two years is considered a new House, my understanding is that the Senate is continuously in session.

Tom Cotton ([01:19:13](#)):

Yeah, Larry, you're right about the composition of the two chambers. When one Congress ends, there is not a House of Representatives seated, and then a brand new House is seated. The Senate, of course, because we have staggered six year terms, always has two thirds of our members available, which is ongoing to conduct activity year over year. That's why Senate rules have always been considered to be continuing rules. While they typically have been changed only under the provisions of the rules themselves. That's happened sometime, near the filibuster rule in the 19th century, used to require literally unanimous consent to end debate. Then at one point it was at two thirds. And then it was reduced to the seventies, to its current standard of three fifths. But to change the rules typically takes a two thirds vote. To change them in accordance with the rules itself.

Tom Cotton ([01:20:01](#)):

That's why what's known as the nuclear option is when a majority of the Senate overrules the ruling of the presiding officer and says, "That's not the standard we're going to apply." It's kind of like a brute force action, but the bottom line raw politics of it is a majority of the Senate can do that. That happened 20 or 25 years ago with some technical questions about spending bills, it happened most famously in 2013 when Harry Reid used a bare majority to say that the filibuster rule no longer apply to nominees, we weren't going to require the three fifths vote. It's only now going to be a simple majority.

Tom Cotton ([01:20:38](#)):

So the bare knuckled question or answer is that a simple majority of the Senate can vote to operate in accordance with the standards it sets, even in violation of the black letter rules. That's why a Democratic vice president would be able to break a tie on that. Or a simple Democratic majority had the Democrats won that would have been able to do so. Now, that would be totally unprecedented. I know people say, "Well, you did it on nominees." That's very different. The Senate operates in two different states, the legislative calendar, which is where we do most of our business, and then the executive calendar, which is where we vote on nominees and treaties.

Tom Cotton ([01:21:16](#)):

For more than 200 years, the filibuster had not been used against nominees. Genuinely. You know, Clarence Thomas was confirmed in 1991 on a vote of 52 to 48. Any Democrat, any single Democrat could have demanded a vote to end a filibuster against Clarence Thomas and it would have failed on those votes, but none of them, not Joe Biden, not Ted Kennedy, not John Kerry, none of the old lines of Democratic Senate thought it was appropriate to use a partisan filibuster against even a Supreme Court nominee, much less the cabinet or sub-cabinet nominee. It was only in 2003 when a new Democratic Senator from New York named Chuck Schumer started using the filibuster against nominees that we went down this path. So it started in 2013, it ended in 2017.

Tom Cotton ([01:21:59](#)):

What the Democrats did and then what the Republicans concluded was going back to what the informal rules had been, the customs, the standards, the practices of the standard for 200 years, which is that nominees go up or down with a simple majority vote. It's never been the custom or practice or unwritten rule of the Senate that legislation can pass on a simple majority, especially landmark, sweeping legislation. I mean the filibuster rule is not part of the constitution, but it is directly downstream of the Senate's design and the founding fathers' intent for the Senate to be a place of greater deliberation, of a place to form wider consensus and compromises that reflect the whole of society.

Larry Bernstein ([01:22:41](#)):

Can that vice-president break a 50/50 tie on a Senate rule change?

Tom Cotton ([01:22:45](#)):

Yes, yes they can.

Larry Bernstein ([01:22:47](#)):

Okay. My next question is in a 50/50 Senate, I'll say the most liberal Republican and the most conservative Democrat now take on voting importance. In this last session, we've all got to know who our most liberal Republicans are, but who are the most conservative Democrats and how will they think about some of these issues in order for the Senate to pass some of these radical pieces of legislation?

Tom Cotton ([01:23:15](#)):

So probably the most reliable member of the Democratic caucus in their center is Joe Manchin. After that, you might say Kyrsten Sinema from Arizona, perhaps Mark Kelly, the newly elected Democratic Senator from Arizona, but even for centrists they're pretty far over on the left. And after you get past them, it moves very rapidly to the left. Some of these issues that are really central for the Democratic Party, they view them as absolute litmus tests. Like Nancy Pelosi's voting law, which is what Barack Obama called to eliminate the filibuster for, at a funeral. I mean, I don't know about you, but I've never been to a funeral where they eulogize about Senate rule procedure, but that's what Barack Obama did at John Lewis' funeral. I find it doubtful that the Democrats would muster the courage to stand up to their radical left, which is where they get all their energy and all of their money.

Larry Bernstein ([01:24:04](#)):

Just as a follow-up. In the late 1930s, the Democrats controlled a super majority of the House and the Senate, and they talked about packing the courts, but it still didn't pass. What has changed in terms of the composition of the party that they would change their mind when a court didn't agree with the objectives of a majority Democratic legislature.

Tom Cotton ([01:24:31](#)):

That's really the only time there's ever been an effort to pack the Supreme Court for partisan reasons, because the president doesn't like the outcome of the Supreme Court's rulings. FDR off a landmark victory, I think he won 61 or 62% in 1936, he controlled 76 Senate seats, controlled over 340 House seats. Really at the peak of any president's power, except maybe Washington in his first term or Lincoln. Now one difference is that the Democratic Party was so large in the 1930s. It was much more ideologically diverse. You had a lot of Democrats from very conservative states, but still very Democratic states, who'd been a very strong supporter of a lot of President Roosevelt's New Deal legislation, who were not going to support that kind of radical restructuring of the Supreme Court.

Tom Cotton ([01:25:18](#)):

They're right to do so, because if you take the step of changing the Supreme Court's composition because you don't like the rulings, it doesn't just undermine the Supreme Court's legitimacy. It really undermines the rule of law. Because if one party is going to do that when they're in power, then the other party is probably going to do it when they get to power. And ultimately the Supreme Court just becomes kind of a super legislature, which is not what it's supposed to be. It's supposed to decide cases on the facts and on the law.

Larry Bernstein ([01:25:43](#)):

And just to follow that up, if they do pack the courts, follow what you call that super legislature, the constitution really doesn't empower the courts to do that. Do you think that when it flips and we have a Republican legislature and presidency, in lieu of repacking the courts, will they pass rules that limit judicial review?

Tom Cotton ([01:26:06](#)):

Some of those require a constitutional amendment, Larry, but the problem with some of what the Democrats are proposing is they're permanent changes. We're not talking about say tax increases

in tax cuts. You know, Democrats take office and they raise your taxes. Republicans take office and we cut your taxes, as we did in 2017. But some of what the Democrats propose to do are permanent changes and you can't un-ring the bell. So for instance, if they make Washington DC a state, which it should never be, you can't unmake Washington DC a state when Republicans win the next election. If you pack the Supreme Court, you can't remove justices that have life tenure. If you give amnesty to 15 million illegal immigrants and they have voting rights, you can't un-amnesty once you've created new American citizens.

Tom Cotton ([01:26:47](#)):

That's why these Georgia runoffs are so important. Because again, what they're proposing to do are not just bad policy, not just higher taxes or bad healthcare policy, but proposing to change the rules of the game in part so they never lose another election. That's why it's so important that we win these elections and show the Democrats that those ideas are unpopular and hopefully they'll drop them in the future.

Larry Bernstein ([01:27:08](#)):

I think at that same funeral that Obama was at, he also mentioned DC statehood, in our 200 odd years that we've not made the district of Columbia its own state. Is there a reason for that? Then do Republicans have an alternative to enfranchise those voters potentially by maybe merging the district with the State of Maryland or another state, or what other alternatives there are so we can keep the balance in the Senate?

Tom Cotton ([01:27:33](#)):

The founders were very clear in the constitution and in the Federalist papers that Washington DC was designed to be a federal city. It is not a state. It is a city, and it's specifically designed to provide the seat of government and to provide security, autonomy, and independence to the seat of government. Now, some people may say, "Well, that's old fashioned and that's outdated and outmoded." There were riots across the street from the White House where the president sits with the nuclear codes in June. Do we really think that Muriel Bowzer, the current Mayor of Washington DC, would have stopped all that if she had been the governor of an autonomous state in control of her own national guard? I have serious reservations about it. To say nothing of the security of telecommunications and electricity and water and so on and so forth. So I don't think we should ever give up Washington status as a federal city.

Tom Cotton ([01:28:21](#)):

Now, if you wanted to compromise, you're right Larry, you could retrocede most of Washington to Maryland, trying to take appropriate steps and security measures to mitigate some of those threats to the autonomy and security of our federal institutions. That would give all the voters who currently live inside Washington DC a vote in the House of Representatives, because their population is about exactly the size of one congressional district. The fact that Democrats refuse to do that show what they really want. It's not about the House. It's two votes in the Senate in perpetuity since Washington DC is the most Democratic jurisdiction in America. I think they just voted 93 to five for Joe Biden. It's totally unconstitutional, not only under the original constitution, but under the 23rd amendment as well, because remember the seat of government in the 23rd amendment gets three electoral votes. The maps that they drew would mean there's only

one residence left in the seat of government, that would be the White House. So the whole thing is just a partisan power grab.

Larry Bernstein ([01:29:19](#)):

Final question relates to the stimulus proposals currently being tossed around in the legislature. We're talking about trillions of dollars, and I would've thought this is by far the most important piece of legislation that will be on your agenda in the next couple of years. How do you think you'll get different results in the case of the Georgia runoffs? Are we talking about trillions of dollars difference in the amounts?

Tom Cotton ([01:29:43](#)):

I think you're talking about a very big difference in the amounts, but you're also talking about a very big difference about where their money goes. What we don't need to do is bail out states and cities that have longstanding fiscal problems because of the way they've managed themselves. That's what the Democrats will do.

Larry Bernstein ([01:29:57](#)):

Tom, thank you very much for your time.

Tom Cotton ([01:29:59](#)):

All right. Thank you, Larry.

Larry Bernstein ([01:30:02](#)):

Our next speaker is Ramanan Laxminarayan. He is a senior research scholar at Princeton University and he will be discussing super spreading and COVID.

Ramanan Laxminarayan ([01:30:12](#)):

Thanks for having me Larry. So in the minds of many people, super spreading is a sort of event based occurrence, which is that someone goes into a bar or a religious gathering, and then one person ends up spreading COVID to maybe dozens of other people, maybe hundreds of other people. Now that's not always how it works. It's usually one person spreading it to two or three other people. Super spreading really should be something called heterogenic spreading, the idea that most people don't really transmit COVID, and a small proportion, probably a third of them are the ones transmitting COVID. And they transmit to two, three, four, maybe 10 or 15 other people, but mostly under five. Within the household where much of the transmission happens. Super spreading is not this big gathering based event. It's usually just this notion that some people spread COVID more than other people do.

Ramanan Laxminarayan ([01:31:10](#)):

In our data from India, we found that 71% of people who had COVID, and then whose contacts were identified, didn't end up spreading COVID to anyone else. But the remainder, about 29%, were responsible for all of the transmission. Just about 8% was responsible for 60% of the transmission. So a small proportion of people are responsible for the bulk of COVID transmission. This is really what we end up calling super spreading.

Ramanan Laxminarayan ([01:31:41](#)):

Super spreading just means that people don't transmit COVID the same, but you don't see it in all diseases. So SARS1, which is what we had back in 2002, 2003, was much more of a super spreading kind of a disease, just like the novel coronavirus. Measles, smallpox are much less of super spreading kinds of diseases. You don't see this variation in propensity to transfer the disease. We don't know a lot about why this is the case. Some of it could be host factors, things related to the person who's carrying the coronavirus, and their viral load and how likely they are to shed the virus, which is then picked up by other people. We don't know how much of it is in terms of context, physical proximity with many other people and something related to them, and that determines super spreading. question yet, it's really something that's highly variable across people and across patients.

Ramanan Laxminarayan ([01:32:40](#)):

The role of children in the novel coronavirus has always been interesting. The first set of studies on COVID came out of China, and China doesn't have many children relative to the rest of the population, compared to say a country like India, which 65% of the population is under the age of 25. Something like 27 million children born every year into a country like India. The US has about 4 million children born every year.

Ramanan Laxminarayan ([01:33:08](#)):

We didn't see a lot of children being infected, and certainly not many children suffering adverse consequences, like being hospitalized or dying in China. The situation in Northern Italy, which is where COVID hit next, was similar because Italy is also a relatively old population. The population above the age of 65 accounts for 22% of the population. Again, comparing to India where the population above the age of 65 is only about 6% of the population. So huge differences in how many elderly there are as a proportion of the population. Didn't see a whole lot of kids being infected or dying in Italy as well, and the medical view started to form that somehow kids were immune to the disease, and were not important transmitters of the disease. What we found in this large study in India, which is the largest COVID contact tracing study of anyone anywhere in the world, we looked at 85,000 primary cases, and then about 550,000 contacts. All of them were tested for COVID.

Ramanan Laxminarayan ([01:34:10](#)):

What we found was that children were as likely to be infected as other populations, particularly children over the age of 10. We also found that children were most likely to be infected by young adults between the ages of 20 to 40. We also found that children were most likely to infect other children, which is interesting because during the period of the study schools were closed in India. So somehow kids were able to infect a significant number of other children, even though they weren't really meeting at school. Perhaps just in the neighborhood or the playground and so forth. This study which is about 12 times the size of the next largest COVID epidemiology study, effectively put to rest this idea that children are not important in COVID transmission.

Ramanan Laxminarayan ([01:34:56](#)):

Particularly in countries like India and also the United States where there are a lot of children, and they are probably likely to be infected. They probably don't suffer from severe disease as

much. They probably are not as likely to be symptomatic for various reasons, but they certainly form an important part of the transmission chain. The solution there might be to also vaccinate the children, because then it's an effective way to cut down on transmission.

Larry Bernstein ([01:35:24](#)):

Thank you. You mentioned that you weren't really sure what made a certain individual a super spreader. Do you suspect that someone who is symptomatic is probably a bigger super spreader than the asymptomatics? Do you think it's a function of age? Do you think it is a function of any other co-morbidity or any other physical aspect? What is your best guess as to what's driving the super spreading?

Ramanan Laxminarayan ([01:35:49](#)):

It's probably a combination of these things. So if you were to ask me is someone who is symptomatic, who doesn't really come in contact with many people, more likely to be a super spreader, or someone who is asymptomatic, who's in very close contact with many other people?

PART 3 OF 4 ENDS [01:36:04]

Ramanan Laxminarayan ([01:36:02](#)):

They come in very close contact with many other people, often because it helps their work load or because they're eating at a restaurant, it's an indoor restaurant. It's entirely possible that asymptomatic individuals, even though they shed less virus, have more opportunity to be able to transmit the virus to other people. So it's a combination of these individual factors, as well as the opportunity. We really haven't managed to tease out, and that study will be on the way right now and I think we'll have a better idea, but I think almost certainly the answer is that both are important.

Larry Bernstein ([01:36:32](#)):

There was some recent articles about who we should vaccinate first. Some said we should vaccinate the elderly and first responders, but others said that we should use network theory to find those individuals who have the most contact with the most people. In other words, those who have most opportunities for transmission.

Ramanan Laxminarayan ([01:36:55](#)):

There's two things that determine who we vaccinate first. The first is who the vaccine works for. The first set of vaccines, it's not clear that they are going to be tested on children or the elderly. So it's likely that we just won't know whether we can actually use it for either of those populations. We may end up using it just for the highest risk individuals, within just the general adult bracket. When you vaccinate, we try to do two things, right? We're trying to protect the individual being vaccinated. That's number one. And number two, we're trying to prevent them from spreading the disease to other people. Today, we don't know if the vaccines that we're getting are going to be successful at stopping carriage of the disease, which means that you are carrying the disease, but you don't have a severe form of the disease.

Ramanan Laxminarayan ([01:37:45](#)):

Some of the vaccines do different things. Some vaccines are good at preventing severe disease. Some vaccines are good at preventing carriage. We just don't have a good idea about what end points we can rely on for the first set of vaccines. I think that will determine how that specific vaccine could be used. Let's say we had a vaccine that wasn't very good at preventing transmission, but it's just good at preventing severe disease and mortality. That's the vaccine that we'd want to give to first responders and people who will be put in harm's way so that they are least affected by COVID. The strategy would be very different if this was a vaccine that was able to prevent transmission as well.

Larry Bernstein ([01:38:26](#)):

You've done a massive testing and tracing study. Are there other countries that have tried to accomplish any large scale study like this? If so, how do your results, are they similar or different from what these other studies have shown?

Ramanan Laxminarayan ([01:38:41](#)):

The only other countries that have published similar studies are South Korea, Singapore and Hong Kong, which have really managed to get data from contact tracing. The results are remarkably similar. US states have not managed to do the same level of contact tracing, but there simply isn't the manpower of people who are willing to go out and be the contract tracers. I heard recently that Florida was only able to hire 20% of the contact tracers that they really needed because they couldn't find other people to do the job.

Ramanan Laxminarayan ([01:39:12](#)):

In India, the reason why something like this is possible is because of the legacy of HIV AIDS, where there was a concerted effort when someone was diagnosed with HIV to go back and try to find the people that they might have transmitted the disease to. So there was a vast infrastructure of people who are good at doing this sort of thing. They go door to door, they ask these questions, and then try to find out who that person might have transferred the disease to, or who they might have gotten the disease from. That infrastructure in the South Indian states has been particularly helpful for our study, which is large. Of course the other reason why the study is large is because India is a large country and a lot of people have been infected. So even if Singapore had a fabulous contact tracing network, which they do, they just couldn't replicate a study of this size just because they don't have that many people.

Larry Bernstein ([01:40:02](#)):

The fact that in the American press, there's a lot of focus on public gatherings as a means of super spreading transmission, a funeral, a football game, a paddle tennis tournament, motorcycles driving around in the Dakotas, as being the culprit. But you seem to be saying that the real culprit is within the household. I'm not really sure what we can do about that. Are we talking about husband and wife and parent and child in relatively tight quarters? One of the ironies of this disease is that we are forcing everyone to be home-bound. Now you're saying that the least safe place is the home. What are the implications of your household analysis?

Ramanan Laxminarayan ([01:40:42](#)):

So let me make it absolutely clear. Being in large gatherings is high risk for COVID transmission, but you see that in studies from Hong Kong, for instance, where in a wedding one person is transmitting to I don't know, 50 other people, or the ski resort in Austria, which was responsible for cases in 12 other countries, I think it's very important to stop the large-scale transmission. I don't want to in any way imply that that's not the first thing we should focus on.

Ramanan Laxminarayan ([01:41:11](#)):

Now what's happening within these households is that people are not being tested soon enough, and that's the reason why they've been able to transmit to other household members. That's just because our COVID testing is weak throughout the world. I think it's possible to reduce that number by getting people into testing very early. We have an example from an Indian state on something that we're writing up now, which is when people were identified early with fever symptoms and were tested early and were isolated from their families, they were far less likely to transmit to their families. What's more, the epidemic started to come down in this large city in India, which otherwise would have had a significant COVID epidemic, just like all the other cities in the South of India. So I think the solution to trying to curtail household transmission is really early testing and a combination of using the rapid antigen tests and the PCR to be able to identify those who would transmit, both within the house and I should say the workplace as well.

Larry Bernstein ([01:42:16](#)):

You mentioned kids. During this, you called it a severe lockdown, the schools were closed and yet children were still transmitted with other children. What are the implications therefore for opening up the schools, the Americans were I'll call it not aggressive at opening schools?

Ramanan Laxminarayan ([01:42:31](#)):

First of all, not all children are the same. Children under the age of 10 seem to be less likely to transmit the disease. It's the children over 10, so the 10 to 18 age group that's very much like the adults. So if we would have split these two, I think the risk is much lower in the earlier age groups. It's possible to keep kids together without risking significant transmission events. That said, smaller kids are less likely to comply with any requests for masking, or it's probably unfair to mask them. So I don't think there's an easy solution here. If you have to open schools, and I think there are strong reasons for wanting to open schools, I think the way to do it is particularly for the older children make sure that you have some sort of a hybrid learning system, make sure that there's frequent testing to try to keep the numbers down, and try to emphasize that the kids try not to get infected when they're outside the school.

Larry Bernstein ([01:43:24](#)):

Your work on super spreaders suggests very few people are responsible for most of the transmission. But it's very challenging ex ante to figure out who those people are. So how do we use this information to make better public policy decisions?

Ramanan Laxminarayan ([01:43:39](#)):

That's a great question, Larry. In fact, that's the question we're working on right now. We're in the process of actually getting additional information on the people who did transmit versus not. In fact, get exactly that sort of information. So we hope to have that kind of data soon, which

helps us figure out whether people who are symptomatic are more likely to transmit than those who are not, whether particular age groups in particular contexts are more likely to transmit than other people in other age groups and contexts.

Larry Bernstein ([01:44:08](#)):

One thing I find very confusing is that, is it true that when you get the disease and you're initially pre-symptomatic, it's during those first few days, right after you get the virus is when you're maximum shedding, is that true? If this is a part of COVID where you're not testing and you're oblivious, because even if you will become symptomatic, you're asymptomatic at that initial point, does that just put an enormous challenge both on testing and on the process because it's so early, it's so immediate? Or do you find that the super spreaders are types that are shedding only after day five or day six from the original infection?

Ramanan Laxminarayan ([01:44:50](#)):

So the period of infection is logged right after you get infected. There's an incubation period of about five and a half days, and then the period of infectiousness only starts after that. The solution to that is not to wait for symptoms before you test people, but you use the contact tracing, and so you came in contact with someone that we have confirmed for COVID, and that's why we're going to test you as well. That in fact is really where it worked in places like China and Singapore and Hong Kong, where this has worked in India, that's really been the method that has worked. If we waited for people to present after they showed up with symptoms, that's almost too late because they've already transmitted the disease.

Ramanan Laxminarayan ([01:45:29](#)):

This is one of the arguments that were made in favor of the rapid antigen test, which although is not a sensitive test, it misses a lot of people that have COVID, the one advantage of rapid antigen tests is that you are able to identify imperfectly someone who has COVID right now, and isolate them right away. Versus with a PCR test, it can take up to 48 hours and in some parts of the US it takes much longer.

Ramanan Laxminarayan ([01:45:55](#)):

When I got a COVID test last month in New Jersey, the nurse that I got said, "Well, it could take you 10 days to get the test results back." And I was just thinking, what's the point of telling me after 10 days? I would have transmitted to so many more people if I actually had COVID. The test results are worthless in that sort of a timeframe. So we need much more rapid tests, and if we have the rapid tests we need to make them much more sensitive.

Larry Bernstein ([01:46:20](#)):

Thank you very much.

Larry Bernstein ([01:46:24](#)):

Our final speaker today is Dr. Richard Levitan. Richard spoke on what happens next on May 24th. Richard had just returned from working 24 hours a day in the Bellevue emergency room at the height of New York City's epidemic. On that show, Richard recommended the use of a

cannula oxygen mask in combination with placing the patient in a prone position to help patients breathe. Today Richard will discuss the role of oximeters to determine when and if patients should be heading to the emergency room to treat their COVID infections. Richard, go ahead.

Richard Levitan ([01:46:53](#)):

Thank you very much, Larry, for having me back on your show. Just a correction. I never worked 24 hours straight, but I was in New York for several weeks at the beginning of April during the surge. I do now work in rural New Hampshire where I do work 24 hours. Sadly COVID is now hitting rural New England for the first time that I've seen in the last four months.

Richard Levitan ([01:47:17](#)):

We've learned a lot about COVID compared to my last discussion with you six months ago. I'm really happy that much of what I theorized about silent hypoxia in my original New York Times op ed piece in April has now been proven through numerous studies. I'm also really relieved to see that we have decreased mortality dramatically through incremental gains in treatment as I predicted. In fact, mortality from COVID is less than one fourth of what it was in the spring.

Richard Levitan ([01:47:42](#)):

Unfortunately, however, I'm really disappointed that we haven't done more to reduce preventable death, and that our infection and death numbers are currently climbing rapidly. To recap, what has now been proven is that only a small percentage of COVID positive patients develop COVID pneumonia and will require hospitalization. We have about 2 million persons over a two week period now in the US who are testing positive, but currently we only have about 80,000 hospitalized. So roughly about one in 25 who test positive will require hospitalization.

Richard Levitan ([01:48:16](#)):

Silent hypoxia, what I call the low oxygen levels that develop in COVID pneumonia without patients realizing it, occurs in the majority of patients with COVID pneumonia. It happened to Boris Johnson. It happened to Donald Trump. The President declared as he went into the hospital, "I feel fine." Most COVID pneumonia patients in fact do feel fine. In a study by Sonia Shaw, from Swedish Hospital in Chicago, published in May of this year in Academic Emergency Medicine, most patients, even those who develop severe pneumonia, did not have subjective worsening of symptoms.

Richard Levitan ([01:48:53](#)):

Shaw gave pulse oximeters to COVID positive patients after their diagnosis in the emergency department, she then called them and checked with them three times a day what their oxygen readings were. If their oxygen saturation on the oximeter fell below 92%, they brought them back into the hospital and initiated treatment. 22 of 78 patients developed hypoxia. Most didn't know that they were getting sicker. Eight of the 22 wound up in the ICU, six on ventilators, and two died. Of note in this study, 57% of the patients were Hispanic, 27% Asian and 8% black. We know that these patients are at much greater risk of developing serious illness versus white patients.

Richard Levitan ([01:49:38](#)):

In the same May issue of Academic Emergency Medicine, I wrote an accompanying editorial promoting the use of pulse oximetry as the best biomarker for detecting early COVID pneumonia. Mortality from COVID pneumonia is lowered with early detection and earlier treatment. The disease has no cure, but the disease course is modifiable with early diagnosis. The way to come to that early diagnosis is with pulse oximetry.

Richard Levitan ([01:50:07](#)):

Oxygen administration via nasal cannula decreases the work of breathing and prevents further lung injury. Prone positioning, laying patients on their stomach, helps patients open up portions of the lung collapsed by the virus and decreases mechanical ventilation rates. I was part of the first study showing this in patients in the emergency department, and two thirds of patients who were given oxygen and were allowed to prone, two thirds of patients avoided intubation during their hospitalization. I subsequently created a charity with my brothers called Prone 2 Help, that's with the number two, prone2help.org, promoting the use of proning cushions to help allow patients to more comfortably prone.

Richard Levitan ([01:50:53](#)):

We now know that dexamethazone decreases inflammation and also improves mortality. All of these therapies, early oxygen, proning, dexamethazone, all work much better earlier in the disease course. Nigel Watson, an administrator at NHS England, estimated in the British Medical Journal recently that mortality with mild hypoxia is half of what it is if the hypoxia is severe. NHS England is now implementing a program with 200,000 pulse oximeters to monitor high risk COVID positive patients.

Richard Levitan ([01:51:29](#)):

In Germany, the country that does the best post-diagnosis monitoring, a visit is made by an ambulance to every recently diagnosed COVID patient. If patients have low oxygen, they are brought immediately into hospital. The Germans have a mortality between one fourth and one sixth what we have in the United States. Only two states to my knowledge have pulse oximetry as a standard for all recently diagnosed COVID cases, Vermont and Minnesota.

Richard Levitan ([01:51:55](#)):

I spoke to a Dr. Jennifer Reed, who is at the Vermont Department of Health. She reviewed fatal cases of COVID back in April, and concluded that the common pathway was hypoxic respiratory failure. She put out an alert about this suggesting that pulse oximetry would be useful to prevent this death, and subsequently received funding to make the program a reality statewide.

Richard Levitan ([01:52:22](#)):

I think it is fair to say the outgoing Trump administration will not provide any federal guidance for a national pulse oximetry monitoring program, but states can and should even before the new Biden administration begins. I want to make a plea to news organizations and the incoming Biden administration that the best way to meaningfully reduce death before widespread vaccination stops this pandemic is through pulse oximetry monitoring. I would argue it is also probably the cheapest.

Richard Levitan ([01:52:53](#)):

The fingertip oximeter costs about twenty-five dollars, far less when purchased in bulk. I have many patients, I've seen many patients who come through my hospital regularly and get routine testing simply out of anxiety. I've met patients who have been tested 10 or more times in the last few months. A COVID test itself has not saved a single life. Isolation and mask wearing has reduced transmission and saved millions. But the test itself does not lessen mortality. Just like a vaccine doesn't save lives, it is the vaccination, a vaccine in a patient that saves lives.

Richard Levitan ([01:53:30](#)):

Testing for COVID without a program for early detection of COVID pneumonia will not reduce COVID related death. Before widespread vaccination occurs, a million Americans per week will be told they have COVID. Tens of thousands will develop COVID pneumonia and silent hypoxia. If they tough it out at home and only call their doctor if they feel worse, a majority of these patients will return to hospital with severe hypoxia, advanced lung injury and suffer prolonged hospitalization with high mortality. I believe that all Americans deserve the same level of care that Donald Trump got. We need to act carefully in the next few months to prevent another 200,000 Americans from dying before this pandemic stops. Pulse oximetry should be a universal standard of care after testing positive for COVID.

Larry Bernstein ([01:54:23](#)):

Thank you, Richard. You mentioned that Vermont and I think Minnesota you said used pulse oximetry as a part of their standard care. Are they achieving a different level of mortality as a result? Are they doing a much better job?

Richard Levitan ([01:54:42](#)):

Vermont is probably the best state in the country for risk reduction, decreased transmission. Vermont's at the bottom of the list of states in terms of cases per million, as well as mortality. So the numbers in Vermont are very low because they were in fact the last state to have an uptick in cases. So we don't have data yet back from the intervention in Vermont showing lower mortality. But Vermont has managed this pandemic with the least number of infections and the least number of deaths per population, relative to any other state.

Richard Levitan ([01:55:21](#)):

Minnesota has it listed on a PDF for their patients. It's amazing to me to look at some of the state health sites. When Wisconsin was popping a few weeks ago, I went on their website and I looked, what information guidance are they giving to their patients who turn COVID positive? It says, "If you feel worse, call your doctor." Well, that's not what Donald Trump did. That's not what Boris Johnson did. That's not what every VIP doctor is doing around the world. You know, anybody who has a physician who's looking after them tells them, "Get a pulse oximeter. If you get below a certain number, get treated." We should extend that to everybody, but we don't have data yet back within this country to show benefit, but there is growing evidence around the world. I would say the Germans are the best example of that.

Larry Bernstein ([01:56:12](#)):

So what are the Germans doing so right to get these such better or lower death rates?

Richard Levitan ([01:56:19](#)):

Well, the Germans send a paramedic ambulance to visit every COVID patient every day after their infection. They basically check their oxygen levels and they interact with them. If their oxygen goes down, if the patients are doing worse, they're brought back into the hospital. What is happening a lot with COVID, and your last speaker talked about how infections happen within households, what happens in our country is somebody turns positive, they go isolate at home. They infect others in their family. They tough it out. They're again brought back into the hospital, and then a few days later their family members show up sick in the hospital. I had a friend who was recently working in Navajo Nation in the spring when things were really hot in that area. He described to me cases where mom would come in and get intubated, get flown out to one of the regional centers, and then two days later, another family member in the same household would get critically ill with COVID, get intubated and get flown out.

Richard Levitan ([01:57:20](#)):

Since then a number of doctors in the Navajo health system began using pulse oximetry to monitor every family, every household where there was an infection. What they were able to do was identify people earlier and prevent them from showing up late and sick. You know, the remarkable thing about COVID unlike other serious pneumonias is you can't tell as your lungs are getting severely injured. When it becomes apparent that you're seriously ill, you've already had advanced lung injury. I believe the president was being honest when he said he felt fine when his pulse oximeter went down to 92%, but that triggered his doctors to get imaging, to get CAT scans, to show that his lungs in fact had COVID pneumonia, and that triggered monitoring of his blood inflammatory markers, and that triggered his therapy, and he did well.

Larry Bernstein ([01:58:19](#)):

And so if you were at home with your oximeter, what numbers would you start checking in with your physicians all the time?

Richard Levitan ([01:58:30](#)):

If you're a healthy non-smoker, it's unusual to have a pulse-ox at sea level, below 95%. In the high mountains of the world that's different. If you're in Colorado at 10,000 feet, you can go down to the low nineties. But in the hospital, when we are treating patients with pneumonia, not just COVID pneumonia, but all pneumonia, 92% is our cutoff. So 92% is not normal. There may be some people, chronic smokers, others with chronic lung disease who will be near that area. But for years, pulmonary physicians have been monitoring these patients with pulse oximeters. I believe that in the midst of a respiratory pandemic, if you're going to call up your doctor and say, "Hey, am I sick? Do I really need to be in the hospital or not?" Adding a pulse oximeter is the most valuable piece of information.

Richard Levitan ([01:59:24](#)):

Everybody is fixated on temperature, and it's funny because when we were kids, we're kind of taught that fever goes along with illness, but at any given time somewhere between one and eight, one in 10, one in 12 patients with COVID have a fever. It's not ubiquitous. It's not a

hundred percent. So if all you're doing is fever monitoring to see if you're doing okay with COVID, that's not going to tell you that you need to be in the hospital. Really this disease attacks the lungs and it does so silently with no symptoms. So you really need a pulse oximeter. But 92% is the cutoff, which I would certainly speak to your doctor. If you're running regularly, 100, 98, 96, and you start sliding and all of a sudden you're in 94, yeah, you have COVID pneumonia. For sure.

Larry Bernstein ([02:00:17](#)):

This would only probably apply to symptomatic patients, it has no application to asymptomatics?

Richard Levitan ([02:00:22](#)):

No, no, no. You're not hearing what I'm saying Larry, what I'm saying to you is that most pneumonias, strep pneumonia, many other pneumonias, bacterial pneumonias, they cause pain in your chest when you breathe. They cause other problems so that your blood pressure drops. You go into sepsis. You don't think right. You know, normally we see patients whose oxygen gets low from pneumonia and they are extraordinarily symptomatic. They're either lethargic because their CO2 has risen, their oxygen has fallen precipitously and their brain's not working right. COVID is a killer because it silently advances. And it silently advances over a period of three to five days. The decrease in oxygen happens little by little by little, and patients don't realize it. What they do is they increase their breathing, but their carbon dioxide stays normal or even is low. They're ventilating effectively enough so that they are not altered. They're not altered by rising carbon dioxide. They're not altered by the drop-in oxygen.

Richard Levitan ([02:01:33](#)):

So that's why in New York City, I would see people who have oxygen levels of 50% and they're on their cell phone and talking to us. If you went to 50% over seconds to minutes, even hours, you would pass out, you'd be seizing. You'd be dead. But with COVID, the numbers we saw, the level of low oxygen that we saw, we would consider it not compatible with life. But because these people got there slowly, little by little, they don't realize it.

Richard Levitan ([02:02:02](#)):

So sadly, there are many people who are diagnosed in the ER, after they get some fever or they just feel off and they get a COVID test, and then they're sent home, and then they go home and they die suddenly. What's happening is actually over days, their oxygen is falling and they don't realize it. They generally die during sleep, because during sleep is when our oxygen levels can normally go down through changes in breathing patterns. This is worse in men than in women, and worse in the obese. There are stories I hear all the time of people with COVID sent home seemed to be fine and then die. But what happens is their oxygen drops through this process of silent hypoxia, and without pulse oximetry, a small percentage of COVID patients we send home or send out with positive COVID tests, they're going to die suddenly. Preventable deaths. If they just had a pulse oximeter, we could detect that silent hypoxia, bring them back into the hospital, initiate therapy early.

Larry Bernstein ([02:03:08](#)):

Richard, thank you very much. Okay, that ends this week's session of What Happens Next. As I mentioned at the outset, we're going to be taking next week off in observance of the Thanksgiving holiday and be back ready to go the following Sunday on December 6th. The speakers on that weekend will include Scott Bullock, who is the president and general counsel of the Institute for Justice. Aaron May Dell will tell us about secular versus Orthodox Jewry in Israel, [inaudible 02:03:36] Brazil also from Israel will discuss the value of potentially doing lockdowns split up into two groups, working every other week. We'll also be joined by Connie Rice, Victor Rios and Dwayne Betts to discuss race, crime and police.

Larry Bernstein ([02:03:55](#)):

Well, thank you very much. Hope you enjoy your Thanksgiving holiday, and that ends the show. Thank you so much, and you can disconnect at this time. Thanks again. Thanks to our speakers. Thanks Richard, and thanks to my cohost Mitch Fineman. Bye-bye.

Richard Levitan ([02:04:08](#)):

Thank you.

Larry Bernstein ([02:04:10](#)):

Bye, Richard.

PART 4 OF 4 ENDS [02:04:11]