Bret and Heather 54th DarkHorse Podcast Livestream\_ Lane Spl...

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**SUMMARY KEYWORDS**

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**SPEAKERS**

Bret, Heather

**Bret** 00:11

Hey folks, welcome to the Dark Horse podcast live stream number 54. We are more than a week post election is that Oh, yes, right. That's amazing. We survived this long. So that's something of an accomplishment. Congratulations to you too. Yes. So I'm, I'm wearing a bandana. And one could take that to be a response to the fact that COVID is now very much again on the rise, but it isn't this time, I'm just wearing it because I'm feeling you know, in kind of abandoned mode,

**Heather** 00:43

abandoned mode. Yeah. Now, it would make no sense for you to be wearing a bandana in our home with the four of us and our friendly quadrupeds. In order to avoid COVID unless one of us have been exposed, in which case, probably we should be being more careful than this. So yeah, banned it, huh, yeah, you want to talk about that?

**Bret** 01:01

Well, I don't know. I guess it's been kind of a brutal week on social media. And unfortunately, social media is playing a larger role in our lives as a result of the reduced activity in the world and increased fears of this new wave of COVID. I will say, as long as we're on the COVID topic, there is a lots of gearing up for what sounds like it might be a renewed, I hate the term lockdown. Right? I think it's actually a bad term, a renewed quarantine, also not a good term, because we're talking about keeping people who are healthy from interacting. But in any case, there is, I think, a tension between the political dynamic that has unfolded around COVID. And the fact that they're effectively teams, which there shouldn't be, and the question of what the hell are we going to do about COVID? Now it may be that this new vaccine is, is the silver bullet. But I have to say, we should have done the quarantine thing right? At first, we should have done it much more intensively for a short time. And to the extent that we are now talking about that, I hope that people who've become very skeptical about interventions will consider the possibility that for our well being going forward, collective and individual, that it may be that a brief intense period of suspending non essential activity might be the key.

**Heather** 02:28

Well, I suspect that you and I actually at this point come down somewhat differently as to what the appropriate response society would be. What we're about to see here in Oregon is there's a Governor Brown establish something that she called a pause for two weeks, I don't remember what all the specifics involved in that were, but involve backing off of some of some of the things that were open. And you know, we never as I assume everywhere, but I'm not actually sure we never became fully open. You know, our kids haven't seen the inside of a classroom since March. You know, all of this. And you know, there's, of course, no, no live events, no music, no theater, no sports, swimming pools have enclosed all of this. But she's in I don't know, if three days from now, there's going to be a two week, something more than a pause, I don't think she's using the word lockdown. But in which, once again, there's no in in restaurant dining, all the gyms are going to be closed, all the museums are going to be closed. And so far, what I've said, you know, may make sense given that Oregon, like so much of the country right now is experiencing a surge in in cases, although interestingly, the deaths are not keeping a pace, right? The CFR seems to be the case fatality rate seems to be changing, the longer it is that humans are interacting with this thing, as we would expect, as we talked about back in March, April, May, when we were talking a lot about COVID, for multiple

**Bret** 03:55

reasons, both because we're getting better at dealing with it. And because there may be an evolutionary transition between us as hosts, which will be slow, and in the virus itself, which could be quite rapid,

**Heather** 04:08

right? So it could becoming less virulent, which would allow it to stick around with humans for longer, effectively become something that we were more willing to just have a sort of background level noise. And, you know, and of course, there's also the real possibility and some people say this is herd immunity, but I think this is a misunderstanding of what herd immunity is, is just that, you know, the the people who were most susceptible, both to getting it and to experiencing quick death from it have largely already been affected. And so the people who are getting it now may well have long term negative effects, the full extent of which we have no way to know yet, but they are perhaps less likely to be the ones to get it and die quickly because it has already affected those people that that part of the population,

**Bret** 04:52

especially since we see a correlation between susceptibility and severity. Yeah. So yes, you would imagine This thing would pick off people who are vulnerable for whatever reason, first leaving the less vulnerable population. On the other hand, the numbers of people who apparently are positive for this at the moment are pretty staggering.

**Heather** 05:11

Oh, it's huge, you know. So Oregon experienced more than 1000 new cases a day, two days running, at least this week, which Oregon has always been interesting throughout this pandemic. And that while California and Washington were epicenters, in many regards, Oregon was actually among the lowest had among the lowest number of cases in the country. And also tellingly, despite the amazing number of protests, and continuing amazing number of riots that have been happening, depending on how you count every day, or nearly every day, since the end of May, those don't seem to have been attributable to Super spreader events or rising, you know, even even clusters of cases. And, you know, to this point, the point that we've been making from the very beginning, there is scant evidence that this virus transmits effectively outside that airflow. And boundary layers are key to understanding what it is that you are likely to, to need to think about in order to stay healthy, and maybe not 100% never haven't been in contact with the virus. But very low dosages of this virus may in fact, provide a small level of inoculation against getting sicker.

**Bret** 06:30

Yes, and I will say, I think what we were in to editing and interpreting from what we were reading early on, has been borne out almost entirely. The exception being we were afraid like everybody else that fomites, the surface transmission was going to be a big deal. Turned out, it's not a big part in this case.

**Heather** 06:51

So I early on, decorated most of our outdoor doorknobs I bought and applied copper tape, just figuring Well, we're going to wash your hands, but also copper viruses and coronaviruses, in particular, are known to die faster deaths on copper than on stainless. And so copper is a good antiviral and antibacterial surface. But it doesn't it doesn't seem like that is a necessary step here.

**Bret** 07:20

Yeah. But the I think the important lesson, as I see it is that a lot was deducible, from the high quality information, and there was a lot of low quality information circulating with it. But if you paid attention, it was possible, you know, what percentage of a highly effective vaccine is the what percentage in terms of worth is a high quality model of how it transmits and what you can do to not eliminate, but reduce the chances in each and every instance. In other words, if you get into a car, that somebody else has been driving for whatever reason, or you get into a car, you know, if you're using an Uber or something like that, all the difference in the world, rolling down the windows and making it effectively a high volume space, even if the person has been coughing out COVID you can clear that volume very quickly. Yes. And so because it

**Heather** 08:12

doesn't seem to land in restaurant services very well, right. It doesn't ever happen or

**Bret** 08:16

it doesn't get transmitted once it's landed. Yeah, so there's, you know, and we also specifically said, you know, as, as folks on the right, typically were arguing that these protests were going to cause a massive wave, we specifically said it may be not because high volume spaces on the other hand, there were things that went in the other direction, like shouting, and

**Heather** 08:38

the few times that we went down there, you're seeing the number of people who were shouting at each other's faces, like, okay, let's get out of the line of fire shouting. Right.

**Bret** 08:45

Right. Well, and also, you know, I don't think almost anybody was paying attention to it. But being on the move, right? What we learned from the rapidly emerging data on the topic was that a healthy person exposed briefly to a cloud of COVID doesn't tend to get sick. It's only when you're in prolonged exposure, which of course makes cars ultra dangerous planes, very dangerous rooms somewhat dangerous, especially if people have been in them singing or stuff like that.

**Heather** 09:14

Well, I will say so you know, we are not our plan was not to talk about COVID today, so I did not have any of this at my fingertips. And I do want us to go to where we have talked about going but it does seem to me that there is pretty good evidence at this point that planes have been made much more safe than then people have imagined. In fact, I've had two different people who've been on planes recently. Tell me that both from the research that didn't advance and just their lived experience right their experience of being in the airports on both ends and the plane in the middle was that the plant everyone was being careful. If we are to believe that the H fac on board or I don't know if it's called h back on a plane but you know that the filtration on board is as good as we are being told it is and everyone He's wearing a mask at all times, that the planes seem pretty safe, whereas the airports themselves do not. Now when I first heard this, I thought airports are really big volume spaces, there was an awful lot of space to high ceilings high, high ceiling, so actually airports don't seem like they would be particularly dangerous to me. But in both of these cases, anecdotes, the the was both women, they said as soon as we got off the plane, there were people who we had been I knew two different two different situations where I've been traveling with who ripped off their masks in the airport. And, and we're, you know, otherwise, you know, either because they needed a smoke or they were whatever it was, or because they just thought it was insane that they were having to wear a mask, such that suddenly in the airport itself, which also, presumably, is less focused on how perfect their air filtration systems are, is are maybe more In fact, more dangerous than the actual plane rides.

**Bret** 10:58

Interesting. So my sense is that a good model, which isn't that hard to convey, once you figure it out, it's hard to figure out what the model is at first, but a good model is worth some large fraction of a vaccine, maybe it's 25%, right? That the amount you can do to just limit the number of places in which you could even contract it is pretty high. If you're vigilant about

**Heather** 11:20

depending on how good the vaccine is, it could be worth considerably more than that.

**Bret** 11:23

Right? Exactly. And it's a lot less risky. That's for sure. The things you do in order to prevent this are safe,

**Heather** 11:29

right? Although Okay, so you know, again, this is this was not going to be the the stuff we were talking about today. But one of these women I was talking to this week, who we know somewhat, not very well, came to me and said, I've been meaning to ask you guys, and she just happened to reach me and not not, you know, as biologists, what, like, what do you think of the vaccine? Like, is it I'm hearing from anti vaxxers? I'm hearing from people who are who are saying they won't take it under any circumstances? Is it dangerous? Would you be worried about a vaccine that was pushed through so fast? And you know, we have not talked about this, I actually, what I said to her was, I'd far prefer to take a vaccine that had gone through all of the most rigorous testing, there is no time for that. I do not think that the way in which that this vaccine is law is has the possibility of being less effective than it should is like the descended into the territory of being dangerous. I think it is likely to be less efficacious than it is supposed to be what rather than more dangerous than a more reliably tested vaccine. What do you think about that?

**Bret** 12:40

Well, a this is a perfect segue into exactly what we were going to be talking about. I would say one thing I know for sure, is that we're damn well not going to be allowed to talk about it the way we need to talk about it. In order to do this properly, we're going to be expected to belittle the public and tell them a fairy story about safety, in which their concerns are the result of wild eyed fever, dreams, yada, yada, yada. And the adults have tested this thing. And if we say it's safe, it's safe. And all of this is complete nonsense. Now, the vaccine will have gone through testing, hey, I don't trust the testing, right? I don't trust the testing, because I've seen what happens with drug safety testing. And when somebody in this case, me tries to raise the alarm about a glaring flaw in that system. The bell doesn't ring. So What don't I know about vaccine testing? Who knows? Right? I would also say that there is a second layer of informal testing that we know didn't happen here, which is, if a vaccine emerges, and it is given to people, then time passes, and it is not a good way of figuring out whether something has happened. But over time, a pattern will emerge that something about the vaccine, we didn't know it has occurred, people who've had it or showing this symptom, something like that. In this case, it just simply hasn't been enough time.

**Heather** 13:59

There hasn't been time for the longitudinal study is longitude referring exactly to time in this case that we would normally assume was necessary.

**Bret** 14:06

Right? And what's more in this case, and I wasn't prepared to talk about this, but my understanding is that this vaccine as a is of a very interesting and I think, highly unusual type.

**Heather** 14:20

I don't know anything about it. Well, this is the Pfizer vaccine we're talking about Yeah,

**Bret** 14:24

what I heard was, and in a high quality conversation, sophisticated people who wouldn't be jiving off about this without having done some work, but what I understood is that it is in an mRNA vaccine, right, which I believe me in

**Heather** 14:40

the M stands for messenger, right? That doesn't give a lot of context but well, a particular type of RNA,

**Bret** 14:46

you've got DNA which is made into a template which is RNA, which is a close relative of DNA, that mRNA is then sent to a basically a molecular machine called a ribosome, which turns it into protein which is the active form. right and so a this is interesting because the thing that the Coronavirus does is basically hijack the cell above the genome, it doesn't integrate into the genome. This is a mistake, I made it on one of our first live streams and people correct. It was a retrovirus. Yeah.

**Heather** 15:15

And so mistake your

**Bret** 15:16

talk, that was the mistake I made. But the way it turns out that this coronaviruses are interesting in the sense that they travel above the level of the genome, they never interact with it, they hijack the ribosomes and send the messages with the genomic, right? Well, yes. So in any case, a vaccine that does the same trick seems like it might actually be quite safe. On the other hand, what we don't know about the situation might be larger than normal, because this isn't a variation on a common theme, as I understand it. So you know,

**Heather** 15:51

no one does I mean, I guess the danger potentially is, what other mRNA does it go after?

**Bret** 15:59

Well, there's all of the upstream danger. In other words, you can trigger the immune system to do things at the level of antigen, you can trigger the immune system to be forewarned about particles that actually are hostile before it ever sees them. Right? That would be a typical way. So like,

**Heather** 16:18

typical mechanism for a vaccine, right would

**Bret** 16:21

take either broken up pieces of dead virus, or live virus that isn't pathogenic, and you would put it in the system, the system would then do what it does normally, which is recognizer, there's something unfamiliar here, it must be an enemy, and it would learn to go after it. And then at the point that the real pathogen shows up, the system is already primed. So that's typical. This is a very different mechanism. And so very, you know,

**Heather** 16:47

but I have to I haven't heard all I've heard about the mechanism is it's somehow engaged in the mRNA not what it's doing.

**Bret** 16:54

No, no, it

**Heather** 16:55

is mRNA it the vaccine is mRNA if I understand

**Bret** 16:59

this correctly, and boy, are we going to get some corrections if I don't, Yeah, it is. mRNA. And then what Like what? Well, so the ribosomes transcribe mRNA when they run into it, because they're primed? You know, that's their purpose. Yeah, stuff comes out of the nucleus. So this mRNA is going to come into the system trigger ribosomes, and they are going to produce proteins, which are what? Well, that's a good question, do they? So that's that's

**Heather** 17:27

the part that I don't get. I don't get how plugging new mRNA into your system that then gets ribosomes to print new protein deals with the Coronavirus? Well, this protein has to have some particular effect on the Coronavirus over here. So we just that's a black box, it's a connection

**Bret** 17:44

we should dig, we should dig this up to the extent that it is possible to do it. But you know, it could be that it is producing components of antibodies. So anybody's for example, are proteins that have sticky, basically sticky pads on them. And those sticky pads land on antigens that they match. And they can do all kinds of things including gum up pathogen, so those pathogens can access the surface of cells and things. So I don't want

**Heather** 18:11

RNA could be causing the ribosomes to produce proteins that are antibodies, as opposed to a more common mechanism vaccine, which is give it give the body a little bit of antigen itself, the actual virus, either dead or alive little pieces such that the body is prompted to create

**Bret** 18:26

those antibodies. But that was going to be my other guess was that maybe it's producing antigens that are resident on viral particles and thereby cause basically the vaccine in some sense is being produced inside the cells. Oh, yeah. So if if a ribosome produces an antigen found on a Coronavirus, and the immune system then sees it and recognizes it as foreign because it's not in the library itself, then that could prime the system. So anyway, definitely, we should dig to the extent that I had

**Heather** 18:58

no idea what I had heard nothing except Pfizer's got this vaccine that they're hoping to get rich on. Alright, so now let's let's I will say that when this when this acquaintance of ours asked me, I prefaced my Yo, investigate in terms of an evolutionary biologist but not knowledgeable with regard to this, these particulars answer to her with we will have our family vaccinated, if I unless there is something that I do not understand yet, about, there being an increased risk of danger from this sort of vaccine than a vaccine that might not be very effective. Is is one that we should be taking.

**Bret** 19:42

Well, I fall out quite differently here. And the problem is to have the adult conversation is potentially to trigger a failure in the game theory realm that people rightly fear. But the problem is difference between individual decisions and public health right? So here's the thing I'm not allowed to say oh my god, wouldn't it be terrible if this was true, that the sweet spot is for everybody else to take the vaccine and you're not, therefore you don't get the risk of the vaccine, which has to be rated as substantial just based on the unknowns based on the fact that there will be no one on earth who has had the vaccine a year ago. And so we don't know what it does a year out. Right? So if everybody took the vaccine and you didn't, you get the benefit of their immunity, but nowhere close to everybody's gonna take it. Right. So then the game theory, I mean, effectively this because you know, this, this is one of the things that

**Heather** 20:35

Trump really failed at so badly early in the coronavirus pandemic, which was polarizing, get polarizing the response to it, as opposed to saying, here's what we're going to do. And you know, maybe we'll have to do something else at some other point, right. But turning us into star bellied sneetches and sneetches without with regard to masks, and now vaccines has made it such that that it's not possible to assume that you would be the only person in your community who wasn't vaccinated.

**Bret** 21:06

Right? So no way. Right? But that, so there's a game look, the problem is that the game theory is relatively straightforward, right? The more people who are vaccinated, the less you're being vaccinated actually matters to your own immunity, assuming that the thing works, right? The thing works, the more people who are vaccinated, the less you need to be vaccinated in order not to get it because other people around you will not have the pathogen in inactive form, if they've been vaccinated. As people register that, and they decide to play the game and avoid the vaccine, then the number of people who've been vaccinated goes down, the risk of getting the disease goes up. And so you get into this very ugly equilibrium. Right, which is what the anti Vax catastrophe, shall we call it is about is there is a fear about vaccines and people who are sophisticated about understanding the nature of the the game, recognize that those who opt out are in effect, exposing everybody else to greater danger and saving themselves on the risk.

**Heather** 22:13

Of course, it's also true, though, that just as early on the mass discussion was insane, right? Yes, masks provide no safety whatsoever, this turns out to have been a political decision, right? And then masks are about you protecting other people, right? What then, you know, yes, that is also true, but of course, the masks are going to protect you as well. So I see a similar sort of analysis possible here with regard to vaccines, the anti vaxxers can be like, nope, too dangerous, I'm an if they're sort of savvy anti vaxxers, they're going to argue I'm going to get my benefit from everyone else being vaccinated, well, but there are two There are two ways of course, that you can be safe from the disease at least two one is not be exposed and you don't be exposed by being safe and so and physical distancing and wearing a mask when you're in the presence of others inside and all of this and a vaccine is a second way that you can be protected that also comes with risks that we cannot fully know. But that you cannot get any other way.

**Bret** 23:15

Right? So what I would say is in the case of the masks The game is exactly the same but for one thing which is that the cost of the masks is very very low for most

**Heather** 23:28

people and you and I disagree on this well so

**Bret** 23:31

it's very very low at the level of let's say safety now there are people for home it carries a safety risk and there are you know, I mean look you're reducing the effectiveness of a system that is built to exhale into the world directly you are reducing the effectiveness you are causing co2 at the very least to build up at a higher rate. So there it's not like there's going to be zero effect

**Heather** 23:53

but you're talking entirely about an anatomical and physiological risk. You're talking and so over in vaccine space that is where the risk is right entirely it's entirely about in and of the body. Yeah, and the risk from masks for people who are otherwise healthy for mass growing is is very low exactly what you just said. Yeah. But there but we are as you know, this isn't this is our our drumbeat, right, that humans, like a few other species on the planet are so much more than just our bodies, and it is all evolutionary, and the fact of walking around not being able to actually exchange meaning by looking at other people's faces. And and you know, and having initial interactions immediately made painful and suspect because you're walking on a trail in a park and people leap out of the way because they see you're not massed from 12 feet away even though you're outside in nature. It there there is simply not enough nuance around the discussion and it's I think it's very similar right and In both cases on pro mask pro vaccine, but those aren't sufficient categories, right? Right, pro mask when it is, under those conditions where it is appropriate, and most people don't understand what those conditions are. And outside I am, I am perfectly comfortable, but I don't like the looks that I get once I'm outside of the range of the H fac at the supermarket immediately taking my mask off. Yeah. And having as I walk through the parking lot with my groceries, and the cart, having occasionally people glare at me, no, sorry, I'm outside, and I'm going to breathe the air.

**Bret** 25:37

Okay, so this is in some sense, a perfect prototype that you and I did not settle on in advance. But this is exactly the conversation. Both sides have stupid here. Okay, to the extent that we have a dangerous virus, that we have misunderstood the hazard of it as hazard of death, which is lower than we thought, but that there is a much greater hazard of brain damage, heart damage, etc. Right? That there is reason to use a mask where a mask is effective. And there is reason to minimize mask use, right not to signal with it when we're for example outdoors where things are quite safe still. And again, that could change but it hasn't yet as far as we know. Yep. So in any case, the problem is there is nowhere for most people to stand because the reasonable position is not allowed.

**Heather** 26:26

And sorry, asterisk from way back, Governor Browns order that's about to send us Oregon into two weeks of whatever she's calling it. It's not the full shutdown that we had in March, April, because a lot of the retail businesses are still allowed to be open just a limited capacity. But among other things that are closed his gardens, why the hell are they closing gardens? Yeah, unless, unless they can make an argument for its the workers. Except, excuse me. You know, someone behind Plexiglas taking tickets is, you know, the only the only person who needs to be there at the time, why are they closing gardens? Right, especially at a moment when we've got the, you know, where the windshield of the continent and the fyros of the Pacific is on us? And if you could manage to get outside and enjoy something, you should absolutely

**Bret** 27:13

do it. Yeah. For reasons of mental health, if nothing else, yes, so So

**Heather** 27:17

this, this is my point about actually, that the mask, the mask analysis is a nuanced and the idea that Well, there's, you know, what is it going to hurt? You know, let's take a more expansive view of of harm, actually, let's move it beyond the physical and the physical health and into mental health and social health. And I think it was Nicholas Christakis early in this who said, maybe it wasn't me, he certainly started to say it. But you know, we shouldn't be social distancing. We should be physical distancing. And it's really hard to do the one without the other. But it's even harder when you can't see people's faces.

**Bret** 27:55

Right? So the problem is, we could outline, we could sketch the, there's got to be a better word than smart. But the smart position, would you pay as little cost as you have to for masks, but you get the benefit, right? You want the sweet spot of how much mask we're going to do? And where is it? And how can you minimize your wearing of masks and still get 98% of the value of them? Right? We can do that. But the problem is, the game theory causes a social enforcement of a lie about the utility. And the same thing happens in vaccine space. So there are people who will hear the discussion that we just had as somehow heresy because it acknowledges the hazard of vaccines and acknowledges that in this case, there's a special hazard that just comes from the fact that it hasn't been out very long, right? And so there has to be a way for us to have a proper conversation. And one thing I would say is, again, in the vaccine case, both sides are stupid, right? We have a safety system, that can't possibly work because of the perverse incentives surrounding the economics of vaccine production, right? They're more dangerous than they need to be because there's a perverse incentive surrounding the hazard, right? That means that we are in a, we're in a thoroughly compromised position. When it comes to the game theory and saying to people, you know what, they're not totally safe. We've made them as safe as they can be. Right? We here's, here's how you know that they're as safe as they can be without being perfectly safe. And you need to take your share of the risk along with the rest of us so that we can get the collective benefit of us being immune and, frankly, driving pathogens out of existence or to very low levels, that comes from wide compliance with these things. But unfortunately, those of us who you know, I think vaccines are one of the most powerful inventions humanity has ever come up, but I cannot just be a booster for vec. That's a terrible term, vaccine booster. I cannot be a cheerleader for vaccines given the economic model and the way it compromises safety, I have to be in this camp where you know, I'm constantly getting beaten up because people want me to tell the public these things are safe and you're you know, you're a conspiracy theorists for believing they might not

**Heather** 30:20

be well, you and I agree about some of the basically the top developmental discoveries of Western medicine, being vaccines, antibiotics, and then also several surgical techniques, and then a whole lot of the rest of what is going on has has been done better in a lot of cases by other other traditions actually.

**Bret** 30:45

But in part by interfering less with physiology that we don't understand exactly

**Heather** 30:49

or by, by coming at it just from a different perspective, and therefore being able to see like with anamorphic art, something that you could not see from the cutter pellet, attitude, which is increasingly what the western medicine approach is. But you know, to say that antibiotics are one of the great, great discoveries slash creations of humankind does not suggest that they haven't been wildly over prescribed, aren't making us all sick, aren't making our cattle sick, and therefore the people that eat those cattle sick and people who drink the milk, and like, all of these things are also true. So it does to say that it's one of the great inventions of humankind does not mean that you think it's all good all the time. So I will also say that, I think you've, you've waited into this a little bit more than I have. So you've gotten more pushback than I have. But you know, the idea that you are some sort of a vaccine denier or an anti vaxxer. Our family is probably far more vaccinated than just about anyone watching because of where we've traveled. Yep. Right. And when our kids were very young, I started pushing for us to take them places on you, I think correctly said nope, not yet. Because Because the drugs that we need to give them to keep them safe to travel in some of these places are not safe for them when they're that young. Yeah,

**Bret** 32:07

the longer you wait through development, the less harm given an amount of harm done by a drug or a vaccine, the later it comes in development, the less damaging it is

**Heather** 32:16

exactly. And so at the point that we did start traveling to really far flung places like like the Amazon with them, which would have been when they were, what, like 11, and nine, maybe something like that. We were able to give them not with perfect safety and but things like the yellow fever vaccine, which is actually like required by law, but also we would have done had we gone there because it has been around for a long time. Yellow Fever is one of these mosquito vector diseases that is deadly, that has wiped out all populations. And furthermore, in that case, I also feel that it is our responsibility not just to keep us safe. But to go into a place where you are traveling into a place where other people don't travel between if there's any chance that you could bring disease in. That is that's not an acceptable risk to bring to the people who already live there. However, we none of us have ever gotten the cholera vaccine, because the cholera vaccine, while it's also been around for a while is understood not to have it's so I don't remember the numbers, something like 30 to 40% efficacy. And it's not particularly dangerous, but all vaccines bring with them some risk. And the fact is that the cure for cholera largely especially for you know, comparatively wealthy people, not a americanos is to have access to clean water, which we would always be able to have access to. And so we make these decisions one by one, right. And, you know, I have been wanting a malaria vaccine since we began traveling to Latin America decades ago at this point. But that doesn't mean that as soon as one shows up, it's right away the moment to take it because I've also gone through what four different kinds of malaria prophylaxis, one of which is completely horrifying. And I hope never to be on something like that again. So you have to be able to look at the options before you and say, who do I trust? Who knows more about this than I do? And what did they say? And also, how is it that I can rely on my own knowledge and make decisions for myself? That said, public health is a different kind of analysis, which is where you started here, right.

**Bret** 34:23

And so I think the the bottom line Well, there are two bottom lines. One when it comes to things like medicine, there's a a an analog to the principle that the government that governs best governs least which does not mean actually least it means least necessary to do the job, that the medicine that functions best to function at least that the our tendency to want to interfere in a system always comes with side effects. And to the extent that there are interventions that reduce the intensity of the intervention, they tend to be far better.

**Heather** 34:58

But once if you're looking for vaccine, you're already an arms race, right? So a vaccine is inherently sort of a combative property that is going to do some, some some war somewhere on some part of hopefully most of the pathogen you're trying to combat but also presumably your body.

**Bret** 35:14

Right? And, you know, what is the effect of, you know, if one vaccine is great, is there Oh, do we really imagine there's no cost to just vaccinating you to everything that we can possibly create a vaccine for? Or is there some cumulative cost? I don't think we know the answer to these questions. So anyway, one of the one of the lessons here is about medicine. And a non interventionist bent just as you want to light hand in government, a light hand in medicine saves you from all of the things you didn't know about the system you were interfering with. The other one has to do with the game theory. And frankly, my I'm sick and tired of being shouted at by people who don't want me to say the truth, because they're afraid it will cause people to tune in to the game theory and not participate in something like vaccines. My point is no, there's actually no way around the adult discussion here, which involves owning up to the fact that the system isn't nearly as safe as it might be. And that basically, there are two sides to this contract. If we're going to get if we're going to belittle people and maybe require them to take vaccines, we have an absolute obligation to make these things as safe as possible first, right? There's no two ways about that. And so

**Heather** 36:28

to speak with some nuance and to allow people the possibility of actually understanding what is going on. Because when you make broadcast claims, like masks do not help or vaccines are 100%. Safe, you of course, increase the distress that people have and increase the non compliance that people have with with these rules, because some of them were clearly political and lies. And do we really, really hope that that, you know, this, or many multiple vaccines that get produced are not are not built on lies? But On what basis? Are we supposed to trust a political pronouncement about this at this point,

**Bret** 37:10

right, the whole landscape of discussion discussion that masquerades as analytical has been politicized to the point that we are now unable to talk about even the basics of how we are to interact with each other, or how we are to protect ourselves from threats that we all face. Yeah, and, you know, whatever process it is, that allowed that to happen, has put us in very serious Jeopardy, and we have to counteract it.

**Heather** 37:34

And this, this, actually, we've already been a number of the places that we were hoping to go, we wanted to talk about whether or not there are questions that should not be asked, and topics that should not be approached. And I was reminded that we were when we were in grad school, we had a professor, who, you know, actually, and this is somewhat relevant was of a somewhat Marxist bent, who told us when we were in the field with him, at some point that there were questions that should not be asked for fear that the answers will be ugly or not good for society. And, you know, we were in grad school in biology, and he was a biology professor. And I thought, that seems like an extraordinarily anti scientific approach, and, frankly, shocked that a scientist would advise other real burgeoning scientists, that they need to stay away from certain questions. Because Because the truth might imprison you as effectively what the message is right? Now, the truth will not set you free in his worldview, the truth might imprison you, and therefore, we need to protect everyone from it.

**Bret** 38:37

So you know, it's, it's hard to know whether or not there is actually some place where that principle that he was espousing is correct. I'm not certain that there isn't. But what I am certain of is that, just as with the case of, you know, free speech and things along these lines, we have an absolute obligation to leave everything on the table until there is a very compelling reason that something can't be on the table, because you will rule out all kinds of important stuff. The natural process of progress requires us to be able to discuss all sorts of things and throw them out. And

**Heather** 39:17

well, I will say that asking the questions is different from throwing technology at it and trying to develop new things, right, like they're right. Oh, yeah, we're in a very different territory. When we're, for instance, talking about whether or not cloning humans might be a good idea, as opposed to starting down a path to cloning without having actually really thought through, you know, had all those conversations. A lot of times a lot of different

**Bret** 39:41

people asking a question is not the same thing as engaging in work that modifies things and the number of places you know, could you work on ice nine, if you discover a way that you might create such a thing, you know, this is fun

**Heather** 39:54

Vonnegut reference Yeah, Bonnie

**Bret** 39:56

reference to if I recall correctly, of a molecule that Causes liquid water to turn solid

40:03

on contactor which book.

**Bret** 40:07

You know or you have to use should you should you get involved in gain of function research on coronaviruses that enhances the infectiousness and lethality of these things to study the, you know the pathology and epidemiology of these diseases. That's it, you know, the entire

**Heather** 40:26

population, the world should not get to be in on those conversations. But there should be a lot of conversations involving not just the researchers who stand to gain, but including, for instance, bioethicists and such. Well, I

**Bret** 40:39

want to back you off that a little bit. I think I know what you mean, right? The entire world doesn't get to sit at the table and discuss the reasonableness of this, but we need to have a body that is free from corruption that discusses whether or not the benefit is worth the unknown risk of engaging in these kinds of

**Heather** 40:57

representative democracy at in more domains than it currently is.

**Bret** 41:01

Right. So all right.

**Heather** 41:04

And, you know, with regard we were with regard to topics that should not be approached in questions that should not be asked, you were dragged, I don't. There's a lot of places here that we want to go still. But you were dragged for presumably giving fuel to Trump's fire by talking about the possibility of election fraud, which we talked about a little bit last week, too. And actually, last week, you you had seen nothing to suggest that anything was going on. And I'd had this sense of like, I'm just not, I don't know, I just this doesn't feel right to me. And I don't really know where where you will land at this point. And regardless of what either of us think it doesn't change what's true. Yeah.

**Bret** 41:43

Well, so I saw a mathematical analysis that I found, difficult to falsify, then suggested anomalies that were certainly you know, so I think I did a pretty good job. I pointed to this analysis, and I said, I don't spot the analytical flaw here. I ran it by four mathematically sophisticated people. And I said, Do you see anything here that I don't see, I should point out because people will assume Eric was one of them. He wasn't just to preserve his independence. But anyway, I ran it by people, nobody spotted a flaw. And so I released it carefully. I said, I don't spot a flaw. If there is one, I'll be glad to see it. But until I know that there's a flaw. I think this was worth looking at. Somebody who was not the least bit decent about it, did an analysis that I found difficult to understand. But when I finally did understand it did falsify the evidence that seemed to be contained in the anomalies in the first analysis. And so I put that out, I appended it to each of the places that I had talked about this analysis that raised the question. And I said, Yep, this does appear to account for it on the basis of our rounding error, so it's not evidence. But the blowback from doing this was spectacular. And the number of people who considered it some kind of heresy or sin or something was amazing. And you're not allowed to ask those questions. Yeah, it's, again, stay in your lane. It's not even it's not even your lane, it is yeah. And this will stay away from analysis. This is not a place for analysis. And the more I think about it, so

**Heather** 43:28

there is there are some, there are some places that whatever your lane is, you're not allowed to go

**Bret** 43:33

irrespective of what the truth is, don't you dare raise those questions in public. And my feeling is Who the hell are you to decide this? And if you're going to decide such things, you have an absolute obligation, even though I will oppose you for deciding them, you have an absolute obligation to be even handed about them. Right? How much crap did we get dragged through over Russia gate? And suppose it collusion between the Trump administration and the Russian government? Right, which came to nothing? Right? This was apparently perfectly reasonable to be discussed on the front page of the New York Times. Right. But if it's the other side, you can't even ask the question, even though there are literally trillions of dollars at stake in an American presidential election, right? That is a huge amount of incentive for bad behavior. What's more, in this case, the presidential election on both sides, the candidate was understood by people on the other side to be an existential threat, right? That's another whole layer of incentive. So

**Heather** 44:33

by a small number of us, they both were right, exactly. So at some

**Bret** 44:37

level, you're just dumb not to consider the possibility of collusion in American presidential election, which doesn't mean that you have evidence for it. I would further point out to complicate things. All American presidential elections are now stolen. Mostly it's legal. But the point is, we've all just gotten so used to the idea that these massive corrupting influences have Some rights to play a role in our process. And that that directly affects who we end up electing. Yes, it happens subtly because it's very often in the primaries that the skullduggery happens, and then maybe we get to vote like normal people, members of a democracy in the general election. But come on, there is so much going on in these elections, that has nothing to do with the consent of the governed, that asking whether or it has extended into a new realm is it's our obligation, frankly, yeah, I

**Heather** 45:29

would I would push back a little bit on identifying the things that you just identified as evidence of stolen elections. You know, we've we've talked before, I think, on air about the role that social media and indeed the mainstream media have on affecting what people see, and what people think, and whether or not that is effectively effectively a kind of election tampering. And might we therefore call the such elections that are downstream of that stolen in some regard? Maybe, but I think we need to be, I think we need to be careful using the strongest words, when, when this is what we're talking about,

**Bret** 46:12

I accept that. I accept that. But I will say, you know, a lot has happened as a result of the attempt to unearth this process, even just the recognition. And I was looking at the Wikipedia entry on WikiLeaks, actually, and reminded that, you know, what spilled out of the DNC in 2016, revealed effectively that the DNC had systematically sabotage opposed, used all kinds of mechanisms to oppose Bernie Sanders getting the nomination, and they succeeded in preventing it from happening. And you know, okay, so I think the point is, when you say influence peddling, and people say, Well, what do you mean, what, you know, well, there's influence peddling, it's obvious that people this is a pay for play system, the fact that it's not illegal doesn't mean it's not influenced peddling. The fact that the, you know, what the DNC argued in court about the sabotage of Bernie Sanders was not that it didn't happen, but that they had the right to was their party. Right. So if that's the world we're living in, let's just at least be honest about the fact that that's the world.

**Heather** 47:25

I know. Exactly. And I think I don't know what they actually said. So attributing to them the words that you just said, they said, isn't quite fair, but they do feel like it's their party, not our party. Well, not his party, not not well, did we put that aside? their party, not our party, right? Like, it's, it's not, it's not actually about all of the people who are registered as whatever party it is. It is, it is about the people in power, who are making policy for the rest of us. And this actually, you know, this, this, this brings up a question of ideology, and what makes a person ideologue which I thought, I think we want to go to a little bit here. But let's see. I think we've basically talked about, well, let's spend a little bit more time first on this, this really nasty little put down that happens, which is stay in your lane. And how you know, you and I both have been saying for I think decades at this point, no, well, not you've defined the lane. Even if it's a relay in the first place, there's a good chance that I have insight into a whole bunch of other lanes. And even if I don't, I'm still allowed to go there. And you know, one of the things that is true as evolutionary biologists is that, aside from rocks and corks and a few other a biotic things, it's kind of all our lane anyway. So that is that is one thing that I'm going to claim here. But it's just regardless of who who you are receiving the advice that you need to stay on your in your lane. It's a cheap shot. It works as censorship, it's a tool to silence you. It works to silo people, and thus further make the problem of there's going to have to be more and more policing of staying in the lane. It establishes the role of authorities to dictate from on high to the plebes who are supposed to just receive it and accept it, whatever it is, maybe it's the DNC, maybe it's the RNC, maybe it's the religious authorities, whoever it is. And I think most interestingly, and what we can, what we can add most uniquely here is that it misses one of the core tensions and brilliance is of what it is to be human, which is that we are simultaneously generalists and specialists, right. And so this is this is something you've been talking about for for many, many years. And, and to some degree, I have as well, and it's one of the central themes of of the book that we are writing, which is that humans are the most generalist species on Earth. And yet individually, many of us are such specialists that we far outstrip any individual in any given in any other species in terms of our ability to do particular thing. So how is it that we can be both most generalist and most specialist? Well, it's it's that way by being specialists at the individual level and generalist at the population level, which therefore reminds us that we actually need to be with one another. We all can aspire to be more generalists within ourselves individually, but also to be with other human beings with whom we connect, and therefore increase our command our wealth of understanding and wisdom in the world.

**Bret** 50:29

Yes, and not to put too fine a point on it, the fraction of human well being that is ultimately traceable to somebody not staying in their lane is so large that anybody who wants to impose this rule now whatever Alain may be that you should stay in, it is obviously foregoing a huge amount of progress that might occur going forward. And so screw up.

**Heather** 50:52

Yeah, that's probably not fair. But you know, we could, we could pretty quickly start naming people throughout history who didn't stay in their lane and Leonardo da Vinci seems to come right to the top, you know, any, anyone who's ever gone to a art installation, museum installation, that just just simply portrays some tiny fraction of what that man did? It's extraordinary. And the fact is, you know, just to take two things that are often described as sort of polar opposites, at least within academia, art and science need one another, and they thrive for one another, and they build on one another. And so many of the best scientists have had some kind of artistic passion. Or, you know, or craft passion or building passion, some something that gave them a totally different road in a totally different lens angle, whatever it is in to how it is it they observe the world?

**Bret** 51:49

Yeah, I'm imagining actually a, a wonderful graphic, you know, somehow, my lane, right, and you could imagine a lane like, going fractal in some sort of psychedelic whatever. Yeah. Yeah. You know,

**Heather** 52:08

I don't I don't invoke ITW. Hardly ever, but not staying in your lane. Yeah, that's what it's about. Right? It's pursuing truth and ideas wherever they lead, wherever they lead. That's what it's supposed to be about. And so, you know, super interesting whenever it happens, but especially now, in light of the ever more siloing contentious and nasty conversations that people seem to be willing to have, especially online, but I suspect in person too, you know, safely behind their masks. Yeah. No, let us let us remember that we are all human. And that there will be something to disagree with in the opinions and thoughts of every single other human on the planet. And for almost everyone, you can probably find some things to to agree with as well. So I

**Bret** 53:01

wanted to add a final thing that I've been thinking this week watching people react to various people leaving their lanes, including me and all of that. And there's a I think there's just a basic failure in people's model of how to think carefully. And you know, a lot of us have understood now that there is no reliable neutral source on a lot of things. And many people have talked about their methods for dealing with that involving having two sources open and moving between them in order that they can correct for the distortions on both sides. But there's also a human analog to this. Right? I would say we are now watching a, a social dynamic unfold, where many people are understood to be losing their minds, and the accusation that an individual person has finally lost their mind is now commonplace. Now, I don't want to claim that this is all nonsense. I see people out there that I believe are losing their minds. And in fact, Greg lukianoff, had a thread today on Twitter, in which he took a particular account a I think the person's identity is known, but the account is anonymous, the pope had account, you took them to task for basically belittling concerns about cancellation and being driven out of a newspaper or university or whatever. And so,

**Heather** 54:24

by the most recent move of Matt Yglesias from Vox, and earlier Barry Weiss and andrew sullivan and Matt Taibbi and

**Bret** 54:31

Glenn Greenwald in Well, yeah, right. And so anyway, there's a question I would just say, look, if I follow somebody, right, if I'm paying attention to their work, and then they suddenly say something that I know to be wrong, right? I know they've just said something that doesn't make any goddamn sense. My first thought is not up. They finally lost their mind. My first thought is, I wonder if there's something I don't see in that place.

**Heather** 54:58

What don't I understand? As opposed to, how dare you, sir?

**Bret** 55:03

Right? How dare you? Exactly. And I, I don't I don't understand when it comes at me. And it's like, oh, you know, yeah, I used to respect Weinstein, but he's lost it now. I feel like Jesus if I built up credibility with you, and then I say something that you find bizarre, just take a minute and think about whether or not I see something you don't and maybe that I don't. But yeah, go ahead.

**Heather** 55:25

Well, so you do this, you I, a number of people do this. And it you reveal and so doing that you're not controllable. Right. And some people are going to show up to tell you that they're disappointed in you, that they that they used to have respect for you, but now they don't, or they, you know, something must have happened. Are you are you feeling quite okay. Right. And it's quite possible, and it certainly has happened and it will happen again, that you are I whoever it is, has aired, right, of course, but it's also quite possible and quite common, you are finding this week for the person lobbying this critique to have slotted you into a category, right? Democrat, environmentalist, fascist, you know, whatever the category is, which is actually more constraining than clarifying even if it's if it's a category like democrat or environmentalist one, which you might own yourself. Or if it's one, like fascist one that is just lobbed at you. And people are just hoping some of it'll stick. But regardless, it's a categorization. And the idea that people are carrying around these categories, like they're not engaging you or me or whatever, this is far easier on social media than it would be in real life as a while, that's this guy. And he's got these eight levels in my head, wait, he just said something that tick, tick, tick, tick tick, doesn't match any of those labels. Therefore, he has lost it. Like, no, maybe it's literally a category error. Like maybe your category is flawed. Or maybe fitting a category is itself a sign of an idealogue like this is what ideologues are. It's it's people who, you know, and this is in service of, you know, the easiest examples are religions and political parties, right? Like, we have a slate of beliefs, or a slate of planks that create a whole wealth of identity for you. And if you just accept it, if you just accept everything here, you will find it easier to move your through your life, because you can find the people with with whom you won't have to be in contentious arguments, and you will find a community, maybe you'll find a partner, you'll find friends, it's all very easy. And for those of us who for you know, there are a number of ways that you can arrive at going actually I'm going to, it's going to take longer, but I'm going to try to do the first principles thing as much as possible. And actually not just accept that because I'm a Democrat, I'm therefore interested in all gun regulation ever, for instance, just just to pick an easy one. It confounds people. And they respond by saying, How dare you, sir, you must have really lost it. Like, actually, I might be wrong, I might be wrong. But what I'm doing is trying to figure out what I believe given what the evidence is in front of me, I am not trying to conform to a category, I am not trying to conform to the thing that you already had in your head about me, that's not my job and shouldn't be what you're trying to do. So with me,

**Bret** 58:22

in some sense, they are using a heuristic how to spot an insane person. Right? It's right. And that's their problem. If you're using first prints, yes. And it causes you to fall out somewhere different than whatever their group is doing. Yeah, they're using a heuristic to quickly spot crazy people. Right? Yes, not on you. Right, right. And in fact, you know, there are a couple of good examples of this. I want to be careful here because I haven't followed what Majid is up to so closely. But a lot of people are worried about Majid. And I think because he appears to have come out in favor of Trump, although he's not an American, but you know, online. But on the other hand, if you follow him,

**Heather** 58:59

I don't I don't know. Imagine we had a wonderful dinner with him a while ago, but I don't know anything about the modern controversy.

**Bret** 59:06

Well, I think it comes down to the fact that there are lots of cocktail parties in which anybody who has so much as flirted with the possibility that either the blue side was so horrible, or that the red side wasn't that bad is obviously a nut. And the problem, you know, in my kid's case, you asked the question, all right. I respect market. I know him, right. He's saying something. This is Majid Nawaz. Yeah, maajid Nawaz? How could a guy that's smart and that tuned in get to this position? Oh, it's actually not that hard. Like I was recently on hunger strike, to get the British Parliament to debate the question of the wiggers in China, right? So if you're Majid,

**Heather** 59:48

dude feel strongly about real stuff, and he thinks it through

**Bret** 59:51

and what kind of real stuff that kind of stuff we tell ourselves that we would all do the right thing in the case, right? We've got you know, effective concentration camps. We have orange And harvesting really appalling stuff, right? He's committed enough to dealing with this that he goes on hunger strike. And so if you believe, as many people do, in fact, I think there's a very strong argument to be made for it that Trump is better on China than Democratic administrations have been that they've been a bit blind to the hazard of China, then Okay, you can see how much it would end up there

**Heather** 1:00:22

or no, yeah, actually, it hadn't occurred to me that it's internally consistent with with his last big public thing. Yeah.

**Bret** 1:00:27

I don't know whether that's what happened. But I do know that it's not hard to figure out how a reasonable how, without losing his mind, Majid could find himself there, right. Likewise, James Lindsay, alright, James Lindsay is taking a ton of flack from people over his support for Trump. But if you listen to him, his point is, look, I hate this. But I'm concerned about the danger of wokeness toppling institutions that we're dependent on. So if you believe as he does, it's not hard to see how you would end up there. And all I would say is like, high quality thinking involves not using some heuristic and deciding people are crazy, because they happen to have reached a different conclusion that you regard as crazy. You have to figure out whether there's some first principles way they might have gotten there. And, you know, do you know more about the about Chinese abuse of the wiggers and the effect of different administration's in the US on the power of China in this case? Well, if you don't know more than Majid, then you know, at least you have to give him the benefit of the doubt that he has arrived at a reasonable conclusion given his priors.

**Heather** 1:01:29

That's right. And it seems, in fact, to be consistent, right? What what he what he is doing, given the argument that you just laid out, and I know you I was blissfully, mostly not online this week, but I know you to be consistent. And you know, that doesn't mean that you don't see new evidence and change your mind. But you are consistent in your application of, of, you know, care and rigor in assessing what's coming in, you know, you're more than I think anyone else I know, just constantly going back through and testing the assumptions that the decision tree is based on the assumption that the the other the idea tree is based on, you know, a little bit of being online this week that I had involved in part running into this crazy, crazy pronouncement from the UK Government. That, basically, I'm not gonna pull it up here. But all you have to do is read the three step pronouncement, and you basically arrive at sex is based on chromosomes and hormones, like no, actually, it's gametes, but forget that sex is based on chromosomes and hormones. And oh, by the way, sex is assigned at birth, it doesn't take very much logic to conclude that the government of the United Kingdom thinks that chromosomes and hormones are assigned at birth. And, you know, this, this is no harm intended to or meant ever to actual trans people. But this is trans rights activism, this is the loony horrifying, dangerous fringe of trans rights activists who are taking over the entire conversation that has now gotten to the UK Government and so many other places. And, you know, I tweeted a few things about this and, you know, from from various angles, but in part, you know, I feel totally okay, mocking a government, I don't, I don't tend to want to mock an individual unless they, unless they push me repeatedly in a particularly stupid way. But I saw a little bit of conversation suggesting that I and actually, I think you were named to in the discussion of this, that we were on this topic, meaning as I understand it, basically, the biology of sex, were ideologues. And I thought, well, I thought of that Princess Bride. Quote, I don't I don't think you know what that term means, right? But I also thought, Okay, oh, my God, like, how do you even get there? How do you even get from? Like, not only am I is firmly in my lane, evolution of sex is like what I've been doing for for decades now. But the consistency here in my position, is what has now gotten me labeled and ideologues. So I just went through like, Okay, what did what can consistency in an argument indicate? Right, like, let's just let's just walk through it. So consistency in opinion over time, can mean that you've actually you originally investigate it from first principles as much as possible, hopefully, and you continue to investigate, investigate the question, and you continue to feel that your original position was correct. That's one way that you can end up consistent in an argument, right? It might be that you did originally investigate it, but then you sort of went like set and forget I'm not going to continue to think about that. I know what I once thought, I must still think that in which case your consistency over time actually holds no No information as to what you really think that doesn't make you an ideologue inherently. But it does mean that you should feel less and less certain of your stated opinion, the longer it's been since you've gone back to it and reconsidered what new evidence there might be. So that's a second reason, the second way that you can reveal consistency and what it can mean. And then the third one, I would say is that you never thought it through for yourself in the first place. Right? You simply accepted the conclusions of, for instance, oh, a political party or religion or whatever. And in that case, I provides no evidence at all as to whether or not you believe the thing. And guess what, in that case, there's a good chance you're an ideologue. But that's one of three categories of how it is that you might end up consistent on a point, and always defaulting or you know, when people default to well, boy, you keep banging this drum. This is a point that you've made over and over again, you must be an ideologue. That's really impoverish thinking. That's like really bad logic. It's

**Bret** 1:05:53

the same damn thing. It's somebody applying their heuristic, you know, if you've got three routes to consistency, and your heuristic is, in general, when people are this consistent, it's because they've there's an ideology driving them, then it's your heuristic that's at fault, not the person who's being consistent, right? Right. Which doesn't mean that heuristic doesn't work a lot of the time certainly does. That's why you have it, but But anyway, there, I think, if there's a, like a nugget here to be derived, it's okay. If you've learned that, the way you're going to figure out, the way you're going to correct for the bias in media is you're going to have two opposing bits of media facing each other and use each to correct for the other. There's another way to do it that involves people, right? If you follow somebody, right, I would argue that one of the ways to recognize somebody who is not an ideologue, right, is a that their belief structure does not match anybody's slate, right? They are dining all the card because they are arriving at conclusions independently based on first principles, which will result in an eclectic mix of conclusions. The other thing is, how well do they reverse course when they are revealed to be wrong? Right? Right. If somebody is not good at that, that's a red flag. If somebody is good at that, that suggests we'll actually you can afford to put your weight on the ice. So you know, just as you have the two sources you might go to to correct. You might have a small slate of people that you actually trust enough that when they come to a conclusion that seems batshit crazy from where you're coming from, it doesn't cause you to declare them batshit crazy, but it makes you think, Well, what do they see that I don't?

**Heather** 1:07:29

Right, right now? That's exactly right. Yeah, yeah, that's, that's terrific. Yeah. So Well, there's many more places we could go. Or we could stop here.

**Bret** 1:07:44

Well, I have one thing I want to talk about, because I have a sense that it's timely. And you know, I don't know how long it lasts.

**Heather** 1:07:51

Okay, next week, then, we will talk about whether or not women were big game hunters in pre Columbian Americas.

**Bret** 1:08:00

How big were that? No. terrible joke. So that what I wanted to talk about is this thing, clubhouse, which you have, I think you are technically on it, but you haven't been there.

**Heather** 1:08:12

Yeah, yeah, I have it on my phone. I've been invited, but I've never, never visited. Yeah. So I wanted to find what it is. Yes,

**Bret** 1:08:19

clubhouse is a new social media platform that has emerged. I don't know how old it is. And frankly, I don't know how many people are on it, it still seems quite small on the inside, which could be an optical illusion or not. But anyway, it's created a lot of buzz in Silicon Valley. There are lots of Silicon Valley types on it. And just the basics of it. Actually, Zack, did I send you a screenshot of it? Yeah. Okay, so this is like a room inside of clubhouse. This is from this morning. And it involves This is the key thing to this social media platform is there's effectively no text other than your profile and your name, everything is done by speaking.

**Heather** 1:09:02

And it's not recorded. So it's totally in the moment. It is totally

**Bret** 1:09:05

in the moment. You know, there's always a danger that somebody will record it, but

**Heather** 1:09:09

you can't go and sort of scroll through listen to past conversations, right?

**Bret** 1:09:12

So it's ephemeral by nature. It is conversational. It's audio Snapchat, yeah. And it mixes people in a way that I'm finding very unusual for the moment. So there are some ideological lines inside of clubhouse. But at least until yesterday, you saw all of the public rooms that were available, they have titles, which may or may not be all that indicative of what's going on in there. And you saw some indication of who was in the room and you could just drop in and listen.

**Heather** 1:09:42

So the idea is that you can go into any room you want, but you have to be invited to have a voice in that room.

**Bret** 1:09:47

Yes, that's correct. And so the person who starts it and whoever they designate as moderators can invite you on stage or if you want to come on stage and you haven't been invited, you can raise your hand and they can bring you up but you cannot Put yourself

**Heather** 1:10:00

can't walk in and just start yelling,

**Bret** 1:10:01

right? So anyway, the, I think there are a couple things that are going on here, one, so far, I don't think the thing has a business model, it's still in the generating buzz phase, right, which is a very interesting phase, because it doesn't have the constraints that come along with the economics of the model. So it's still lively, and nobody knows what it is. And we're all learning the rules and that sort of thing. So it's more dynamic than it might otherwise. Be. But so there's, there's also a lot at stake and people, I don't know how people you can invite two people if you're in, I think, and then people who were there at the founding, presumably invited a lot of people in, but people don't necessarily know who everybody is, it's not necessarily clear from profile. So there's a lot of mixing going on in this app, you know, across huge, you know, orders of magnitude in terms of economic status. Education is widely variable. There's a very strong black contingent in clubhouse, some of that is, you know, consequential in the sense that there are rooms that are explicitly labeled as black, and they often have a very different culture than other parts of clubhouse. But anyway, it's, I think it is going to ultimately collapse into another version of all of the things that we already have. Because in some sense, it's going to face the same selective pressure, where the desire to you know in competition with other social media sites, it's going to have to feed people, that which will keep them coming back spending time. And that is going to involve I believe, unless they are very, very careful, it is going to involve reinforcing people's existing beliefs. In other words, we haven't yet seen filter bubbles emerge in a powerful way there. But as soon as the economics kick in, it's going to be there with a vengeance.

**Heather** 1:12:01

And I think I think you have not yet said that you saw what you think is the first pivot point in this yesterday.

**Bret** 1:12:07

Yes, the first pivot point? Well, I don't know, because I came in at some moment, I don't even know how long it had been going. But the first pivot point that I saw, and when that is very clearly a step in this direction, is that the ability to see all of the public rooms disappeared yesterday, the update of the app caused it so that you'd only see rooms, I think, with people that you follow.

**Heather** 1:12:27

So and it's not, you can't change that setting, you can't then also go scroll through all the public ones. So it's not it can't really be argued as a look, this doesn't scale, we have to be able to show people the top 30 or whatever, it's actually now completely blocked you from even seeing a bunch of what's gone,

**Bret** 1:12:46

you don't even know what you're missing, right. And so I advocated yesterday, in a room where this was being discussed, hey, we actually need the ability to override whatever's going on. Because for some of us, it's not even that, you know, if you follow a wide range of people, that it broadens the scope of things that you see, we actually need to find the room that is most opposite to the one we would be expected to be in in order to tune into a conversation we need to know about that we can't find,

**Heather** 1:13:11

know and get and given that, given that you can't give that you have to be invited to speak. It you don't, no one is at risk of having their conversation destroyed. Yeah, I think there's there's a separate question never haven't been on this. You know, for me, privacy always rises pretty high in the rankings. And you know, I would if I were going to end up using this, I'd probably want to be able to have a private room where I invited eight people or whatever, right? Although in that case, how is it different from a phone call? Right, right. But the you know, the option for privacy is quite different from not being able to see, to see and choose to go into all of these rooms. And you know, I would say that even if there were private rooms, I would want the option to see or that's, that's something that's happening. I can't see what's behind that door. But all these other doors that I never would have been shown given the new filter on it. Yeah, most of them I don't want to go to but I want to know they're there. And I'd like to pop in see sometimes to listen.

**Bret** 1:14:14

Absolutely. So I want to point to two things. One there is. You know, people talk frequently about black Twitter. I feel like there's clearly a black clubhouse, but I've never heard the term used, right, but it's there and you'll find rooms with, you know, sometimes 100 people in which pretty much everybody's black and these rooms. You know, there's an awful lot of black vernacular spoken. And there's a lot of you know, there are rooms in which the N word has every fifth word, right? People are referring to other people with this term. It's very jarring, but it's also very interesting to be able to hear such a conversation, right? So that's one thing that's going on but what I saw happen yesterday when I participated in yeah Yesterday, to me was quite singular. So there was a room yesterday that somebody started on the question of socialism, communism and capitalism that was the title of the room. And it was clear that the purpose of the room was to discuss the merits of these things. And so I went in, I wanted to hear what this discussion was, first, I wanted to know if they were going to define these terms, because that's a can of worms in and of itself. But anyway, I went into the room, and you know, they were having a discussion, you know, something you might expect, you know, that you could hear on a college campus, for example. And I went on stage. And I, of course, I couldn't resist. And I started pushing a little bit, you know, to see if I could get the conversation to shift and people met me where I was, which was cool. Right? Now, this was a very diverse room. I don't know why actually, but it had diverse in a way. It was diverse in every way. Right? So their sex, sexual orientation, race, and religion. So you know, there were on stage, there was a Native American, there was a, a Muslim, there were many blacks, several whites, male and female, gay and straight. Go ahead,

**Heather** 1:16:25

I, I just want to asterisk object to the idea of sex being a category that is used in diversity, because it's binary. And I'm not sure that a binary category is qualifies as diverse. I feel like you have to have a category that has more than more than two, two states. Okay, I accept I'm not you're not the guy who did that. I'm just whenever I hear that, I think, I'm not sure that's diversity anyway,

**Bret** 1:16:53

in any case, this room went on for four hours, right? Very popular big room, right. And people were very eager to speak, it had a kind of a hybrid culture, right? It wasn't the free for all that some fun, you sometimes find in some of these rooms, and it wasn't there's a, so there's a free for all culture where people have there, they're not on mute, and they just talk over each other, like they're sitting at a dinner table, right. And then there's another culture, which is sort of like the Silicon Valley, academic culture in which everybody's on mute and one person talks. And then they go, you know, they might talk for three minutes, and then they hit mute. And then the next person jumps in, and all of this, this was sort of a hybrid, which was interesting. But it emerges that there are some BLM guys in this room. room was started by a black guy who was moderating. He would he had power to moderate and he moderated very well. In other words, he kept the conversation dynamic. So anyway, what I heard for the first time in a long time was a conversation that moved in the direction of race and power and politics and economics, but did not derail over all of the things that cause such conversations to fall apart in modern circumstances. So what I typically see is either a conversation has many perspectives, and it derails over accusations of who's defective in what way or it's a bunch of people who have a similar perspective, and it doesn't derail. But it's not all that generative, because there's wide agreement over the conclusion, right? Yeah, this was not that. And I think everybody felt about it, that it was extremely positive. And I guess my concern is that whatever is possible, there now is going to fall apart as a result of the economics of the situation. I will say, I tuned in this morning, there was another room on code switching, right? A mixed room black and white, and a discussion about the the unwritten rules and civilizations surrounding dialects code switching, you know what it's like to be, for example, black and to speak black vernacular and to have white people attempt to do it. Anyway, another conversation that was very generative and didn't fall apart over the the, the triggers that cause these conversations to be so difficult in modern times. So what I'm hoping is that people begin to recognize that we lost ground recently, we've lost the ability to discuss things we used to be able to talk about, and that they miss it. And that resurrecting that is highly valuable. So yeah, anyway, I think clubhouse is still in a closed beta. And so you have to find an invitation either from somebody who's in there, or maybe you can email them. I don't know when that changes, but I would be very interested to see people who are excited about finding those conversations join and reinforce the desire to Have them because without them I mean, we've seen just catastrophes across social media and in the world.

**Heather** 1:20:08

Yeah, well, actually, so I'd forgotten that I want to read just two paragraphs from a letter we received, which I think that's a good segue. It's a little bit less hopeful than what you were seeing in clubhouse, but from from a different perspective. So this is dated November 1. And I'm just going to two paragraphs from this from someone who, who wishes to remain anonymous. Last night, I went to the Trump rally in Butler, Pennsylvania, which you can read about online. I originally declined to go because of fears of COVID-19 because I'm not a particularly fervent Trump supporter. I'll vote for him, but I'm keenly aware of his many flaws. In the end, I did go. The letter writer talks about the various risks of COVID, and how concerned he is and asks Why did a highly risk averse person right? Why did a highly risk averse person like me go to reasons. That morning, I took a walk with a very good friend, he said that he would consider going to the rally. But if a camera panned the crowd, and someone from his workplace saw him, that his career at a quasi federal agency would be ruined, is put into clear focus the dangers of the current canceled culture of which you frequently warn, I realized that we as a society face a risk of silence through intimidation. This is not the country that I love, where people can express their beliefs, whether I or anyone else agrees with them or not. So I went to that rally for my friend and people like him as a small act of courage and defiance to defend the First Amendment. And it goes on without Well, I'll stop, I'll stop there. He also ends up going for his son, for whom he wants to demonstrate some courage and, and that he is willing to stand behind, you know, his beliefs, which in this case, you know, he says I don't, I'm aware of the many flaws of the man and I'm reluctantly voting for him. But I felt that it was important to go to this because many people can't because of fear of retribution. And so what you're relating, hearing in that room and clubhouse, a conversation that include What did you say? race and economics and class and politics? Maybe I think I feel like that's

**Bret** 1:22:13

certainly true. But yeah,

**Heather** 1:22:15

I'm seeing seeing people not go off the rails and seeing the conversation itself not get derailed is possibly the most helpful thing I've heard in a while.

**Bret** 1:22:29

Yes. The other thing, which I think I'm failing to convey is how much it became clear amongst all these people who almost none of them know each other. Right? A kind of camaraderie breaks out because people realize that the room is feeling a sense of its feeling emboldened, it's feeling relief. It's you know, it's bright, it's breathing after holding its breath. And this is so powerful that I really, I don't know if there's anything that can be done to preserve it, or to augment it. But if there can, I think it's important now that said, I will caution people that it is very easy to waste time in clubhouse as it is on all social media. And it is also difficult to integrate with your life because unlike something that you can just passively read and type, you know, you're out, you know, just as you don't want to be on the phone in the room with people who aren't part of the conversation. It's disruptive. So anyway,

**Heather** 1:23:27

yeah, you were particularly thrown when the two of us were making dinner one night and you were you were on one of these things, because you you were on your headphones, I was actually okay with that I was almost done. But in general, yeah. When we're, when we're in the kitchen together, it just feels rather you not be in some world, whatever it is,

**Bret** 1:23:44

so some virtual thing. So anyway, use with caution. But if you can get in there. And you know, it also takes a bunch of hunting to figure out which rooms are generative. But I've now seen good examples. I've also seen people use it for interesting novel purposes. So it has not yet figured out what it is. And that that makes it more interesting than than other such things.

**Heather** 1:24:07

So join us on our Patreon, where there's a Discord server that you can join for conversation as well not audio text. We have a private q&a once a month for darcars members at my Patreon and Brett has more intimate conversations at his Patreon every month. We have a clips channel now where you can find clips of various things. And we answer your questions in the second half of the show, as the vast majority of you already know. So put in a Super Chat. We are going to get a replacement for Super Chat online soon. That doesn't involve going through the Google YouTube machine.

**Bret** 1:24:45

Yes, and early indications are that it will be vastly more awesome.

**Heather** 1:24:51

Yes, absolutely. vastly more awesome. But for now, we're doing Super Chat. So pose your super chat question either now or at the beginning of the next hour. And we'll be back in about 15 minutes to answer your questions for about an hour.

**Bret** 1:25:05

All right, be well, everyone