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vaccines, point, fact, case, questions, wikipedia, week, discussion, find, lives, people, odyssey, read, nausea, pandemic, called, insurgents, science, create, censorship

**SPEAKERS**

Bret, Heather

**Bret** 00:24

We're talking Can anyone hear us?

**Heather** 00:26

All right Hey folks,

**Bret** 00:28

welcome to the Dark Horse podcast live stream where we face enemies who create problems but this was not one of those problems. This was a problem that we created for ourselves. Sorry for the dead air at the beginning.

**Heather** 00:40

Things weren't feeling complicated enough. No, they

**Bret** 00:42

weren't complicated enough. But let's orient to Well first of all, hopefully most of you are watching this on Odyssey. Maybe you are listening to it on your favorite podcast distribution app. Some of you may be watching it on YouTube, you should be warned, because the sword of Damocles Damocles continues to hang out above the dark horse. We will be terminating the stream on YouTube shortly after a brief orientation to our censorship battle. And you will move over to Odyssey you might be more comfortable if you moved now. But if you're listening on a podcast app or you're watching on our seat, then just sit back relax and have a listen. So the censorship battle continues. Those of you who have not read Matt t B's recent piece as of yesterday on the current state of the censorship battle should do so. I believe it is behind a paywall. But I would say as a longtime subscriber of mats I believe his content is absolutely worth paying for. And I would recommend signing up for it. Maybe that piece will emerge from behind the paywall at some point. But in any case, it is excellent. One of the things that Matt has found out,

**Heather** 01:57

did we want to put that up?

**Bret** 01:58

Yes. Could you put up a it's here image of that, Zach, where Yes, there you go. We're here we can see. mats excellent piece, one of the things that he found out in talking to YouTube, and apparently, YouTube talking to anybody about who they censor is pretty unusual. But one of the things that he found out is that they apparently are in consultation with governmental authorities and formulating their censorship policy, which obviously raises first amendment questions. So have a look at the article. Now, as to what we are doing. Those of you who have been following us closely know that YouTube demonetised, both of our channels, and that it has effectively drawn a line in the sand, it has invited us to reapply if we would like but obviously, the quid pro quo would be one of our self censorship in order to rejoin YouTube's monetization program.

**Heather** 02:54

This is this is inside baseball. And I know that if it that, I wish I didn't have to care about this. But D monetization and what was happening to us before but the strikes is actually somewhat different. Although I went back and found some screenshots of we've been soft demonetised before, which is where we get less ad revenue for the ads that they're, they're rolling. And in fact, the first time that they soft, demonetised us, which is to say we're making less per view than we were was after our very first two live streams back in March of 2020. Now what were we talking about in those first two live streams? We were disagreeing for instance, with the US Surgeon General in the who, at the time, having for having recently been arguing that masks are useless. And you were basically laughable if you were interested in wearing them to protect yourself against Coronavirus. That is the sort of advice that we were giving back in March 2020, which seems to have prompted a softer connotation by de monetization by YouTube, then we have in the last boy, what is it month to two months, had several videos taken down and had and somehow each of which resulted, the collective of which resulted in only a single strike on each channel, which caused us to not be able to post on either of those channels for a week after that first strike, three strikes and you're out, meaning three strikes actually within the 90 day period and you lose the channel permanently. But this D monetization thing is sort of outside of their strike system. So they seem to be making up the rules as they go along. Which, you know, part of what we are seeing and what we're pointing out is this is exactly their this is what they see as their right, you know, their platform of their rules. And not only don't we get to make them or question that we don't get to know what they are at any given point in time. So the D monetization means they're going to keep running ads, and they're just going to take all the revenue from those ads, and we don't get any of that effectively making our content theirs.

**Bret** 04:42

Yes. So we have been removed from the monetization program. And that obviously, as we have mentioned online removes more than half of our family income. That we are not going to be cowed by this. Obviously, we are Talking about the issues that we are discussing, because they are vitally important. And we will get to some of that importance later on in the live stream. But recognize that this leaves us in a position where we have to scramble and we have to find sources of revenue to make up for that. And so one of the things that we are doing is we are releasing a new pair of shirts that you could purchase to help us fight censorship. And I think you're really going to like this. And while I hesitate to call it a fact, the, the strong possibility that everybody on your block is going to be wearing one soon and you should be first is something you should be aware may be coming down the pike. So that's rather remarkable. Yes, I don't know why I said that. But anyway, so let us show some images of the shirt. So this is our new shirt. And you can see for those of you who are listening and not watching, it is a beautiful t shirt that has the the word Goliath spelled out in a way that is perhaps reminiscent of the type of presentation that is sometimes deployed by our enemies here, and then let's show the back of the shirt. The back of the shirt says, Don't be evil. We've got that covered. All right. So anyway, these Goliath shirts are, I think, going to be quite excellent. They are locally made somewhere. I have no doubt about that. Certainly within the soil, they're made of humanely harvested cotton, you don't know. So there was no suffering to the cotton plants whatsoever. And they are kosher for Passover. So I mean, I wouldn't eat them. But actually, you know, there's a section of catch 22 in which Milo minder binder attempts to do away with a bunch of cotton that he's gotten stuck with by feeding it to people. Yeah, that's definitely yes. So

**Heather** 06:58

all right, that is lurked. So where can they find the shirts?

**Bret** 07:00

Where can I find the shirts, they can find the shirts at Teespring slash

**Heather** 07:05

throw some words or I don't know where? podcasts,

**Bret** 07:09

store dot Darkhorse podcast.org and there is a coupon code for 10% off and the coupon code this weekend, I believe through this weekend is divide by and then the numbers zero. So the word divide by all caps and the number zero which is our invitation to Google that they should at their earliest convenience, divide by zero and thereby solve the censorship problem. All right. So I think we have arrived at the point where we are going to end the YouTube stream and hopefully everyone has comfortably moved over to Odyssey if you have not the link is in the description. And you should do so now. And we will now start the official Dark Horse podcast. Hey folks, welcome to the Dark Horse podcast live stream number

**Heather** 08:00

86

**Bret** 08:01

is 86 Yes, today's

**Heather** 08:03

episode is brought to you by the number 86 on the letter F

**Bret** 08:06

letter F letter F my goodness letter F that's an interesting letter which we'll

**Heather** 08:11

get to yes. announcements at the top is that what we should do first? Actually first so we're gonna have some announcements we're gonna tell you where we're gonna go we're gonna do a couple of ads and and then get get into it. Today we are going to talk we're gonna give some corrections. Couple of corrections. Important corrections from last week's episode, we are going to talk a little bit about Wikipedia, I think it is almost July 4, Independence Day in this country. Last July 4, when we actually live streamed on July 4, I read a bit from Sebastian youngers excellent book, tribe. This, this almost Independence Day, I'm going to read a small excerpt from his most recent excellent book called freedom. We're going to talk a little bit about comorbidities, and some some other things and and then also, as is now our want, we are going to be reading an excerpt from and discussing a little bit from the third chapter of hunter gatherers guide to the 21st century, which is our book that will be coming out in September, just in time for us to have finished these weekly excerpts and discussions for each of the chapters, all of which are quite different from one another. So maybe we should do ads before announced but you could do that. Yeah, I think I'm supposed to go first. This time.

**Bret** 09:30

Why don't show lead the way

**Heather** 09:33

All right. Okay. Yeah. All right. We have a new sponsor this this week, it's relief band that can help with nausea. First, though, I want to talk a little bit about what nausea is under ancient circumstances and some modern ones. Nausea was generally a useful signal that something is off you've eaten something you shouldn't have, or near something that is emanating a bad smell which is itself a signal that you should not get near it. In majority we still need to track our bodily sensitivities and not just a raised discomfort like nausea whenever we feel it that said some of modernity creates nausea that does no good at all. Travel sickness especially when there's nothing to be done about it you're on a plane or a boat can be agonizing and getting some relief would be lovely. Enter relief found relief band is the number one FDA cleared anti nausea wristband that has been clinically proven to quickly relieve and effectively prevent nausea and vomiting associated with motion sickness, anxiety, migraines, hangovers, morning sickness, chemotherapy, and so much more. parenthetically, I would say that, for instance, a better way of dealing with hangovers is to drink a lot of water while you're drinking the alcohol but if you mess that up relief band can apparently help you. So relief band is 100% drug free, non drowsy provides all natural relief with no side effects for as long as needed. So it's also really packaged nicely here it is. So many things are packaged nicely now actually. So here it is. That technology was developed over 20 years ago in hospitals to help patients with nausea, but it's now available to everyone. It's the only over the counter wearable device that has been used in hospitals and oncology clinics to treat nausea and vomiting. We happen to be lucky you and I Brett to rarely suffer from nausea but a good friend is not so lucky. And she had this to say about her experience of relief band and I quote, I used to have knowledge on a near daily basis from both anxiety and the need to take regular medication. Relief bands relieved my nausea in less than three minutes without the side effects I was experiencing from anti nausea medication they have entirely changed my life for the better. So as you're getting ready to take that summer road trip, hop on the boat or nauseous for other reasons. We've got good news right now relief bad has an exclusive offer just for Darkhorse listeners. If you go to relief band calm and use promo code Darkhorse, you'll receive 20% off plus free shipping and a no questions asked 30 day money back guarantee. So head to relief band. That's Arielle iefband.com. use promo code Darkhorse for 20% off plus free shipping.

**Bret** 11:55

Excellent. Yes, I would say I have not suffered much, much from nausea. Until recently, I have a cognitive kind of nausea that I increasingly get when I read the New York Times perhaps you should use for us relief. We fans when reading New York Times? Yes. All right. Next up, it's ExpressVPN. Did you ever read the fine print that appears when you start browsing in an incognito mode window? It says your activity might still be visible to your employer, your school or your internet service provider? How can they even call it incognito? To really stop people from seeing the sites you visit, you need to do what we do which is use ExpressVPN. Think about all the times you've used Wi Fi in a coffee shop, hotel, or even your parents house without ExpressVPN. Every site to visit could be logged by the admin of that network. And that's still true even when you're in incognito mode. You don't really want your parents to see what you've been browsing for. Do you? I mean, not necessarily. All right, this What's more, your home internet provider like Comcast or at&t can also see and record your record your browsing data, and crucially, they can sell it to advertisers. Can you believe that? ExpressVPN is an app that encrypts all of your network data and reroutes it through a network of secure servers so that your private online activity stays private. ExpressVPN works on all your devices and it's very easy to use. The app literally has one button you just click it, tap to connect and you're browsing securely, hidden from prying eyes. So stop letting strangers invade your online privacy protect yourself@expressvpn.com slash Darkhorse. Use the link expressvpn.com slash Darkhorse to get three extra months free expressvpn.com slash Darkhorse to learn more. Thanks, ExpressVPN.

**Heather** 13:44

All right. A few more announcements, then. We are we are using our new q&a system that we've been talking about, and has been being developed for us for four months now. And we are using that today. So if you're interested in asking questions for this live stream, go to dub dub dub Dark Horse submissions.com. And it should be pretty straightforward from there. And if you have questions, you can let's see Odyssey has live chat is that right? tech people are in live chat. Yes. So you can ask there there should be a moderator to in the chat today. And you can also always email Darkhorse dot moderator@gmail.com if there are confusions or questions about that new q&a system so again, as as usual, we will the questions will be being collected this hour and also next hour during the live q&a. And we will prioritize them somewhat definitely we can be you know, it's a live fire exercise. So we'll figure it out as we go along, but high high monetary value questions, questions that come in early in the next hour and, and just questions that we think are particularly awesome. Oh, and there's also going to be an opportunity to to vote that you like ticular questions and so we'll see that too. So we may also prioritize particularly popular questions that people have asked.

**Bret** 15:06

And please be kind to our moderators, they are unusually good people, and they have a very difficult job. So they do. Be nice to them.

**Heather** 15:14

Okay, please consider joining our Patreon since since YouTube has been messing around with us, they have been growing and we are extraordinarily grateful for that. But we have Brad had a conversation with his $100 patrons this morning on you will have another one. Usually it's the fault that you choose the first Sunday of the month, but we're not going to do it on Independence Day. Because in a couple weeks, we had our private q&a that you get access to on my Patreon last Sunday, they really are a lot of fun and on either the Patreon you get access to the discord server. And there Oh, there's also a new feature on Odyssey this week, a tip jar which you can you if you feel like just just tipping us you can pay in the library blockchain currency or or dollars American dollars. And we are not going to be here next week. Because we are we are we are doing the inverse of what we're doing. for food. We'll have been four weeks ago, picking one of our sons up at camp. So we will try that I think we're going to try to fit another one in between now and two weeks from now, but but we're not going to be here next Saturday. And the other reason that we missed our live stream three weeks ago is that one of our children was heading south to camp and the other who's also the producer of dark horse was heading north to participate in the Nationals for the American rocketry challenge. And because of COVID, they weren't all held at the same time in DC as they usually are outside of Washington DC. But there were sort of there were a lot of nationals and then two weeks later or actually, a little over two weeks later, they were announced and the the the winners the national champions of the American rocketry challenge were in fact analysis last week, and our son Zack Weinstein's team that he co captained. Not only was it the first time they made it to the finals, the top 100 teams out of the over 600 that participated but they actually won they got they won the national championship, so we were just thrilled to death

**Bret** 17:16

thrilled to death the competition involves controlling the height and the time necessary for descent as precisely as possible in an

**Heather** 17:25

entirely new rocket entirely made by them and holds an egg inside that does not that is still intact after landing,

**Bret** 17:33

right? So not only did they use inorganic egg, but they outstripped all expectations with respect to the control over their rockets. And so, Ilan, if you're listening if you need some crack engineers let us know. Zack and his friends from tark are

**Heather** 17:52

right now as it turns out, they're not actually cracked and others the egg know that they're crack engineers. Yeah, that's Yeah, it's really easy to crack

**Bret** 17:59

engineer sounds bad when they're excellent high quality adept engineers. That's better.

**Heather** 18:04

Yeah. Know what I like I we could go on about some of the engineering techniques and and innovations that these guys did, and that Zach was coming home sometimes. Well, late into the night occasionally, in the morning, the next day after having worked all night, having done but I think well, we'll leave that for now. And just say, that happened this week. And we're really thrilled. So today's episode is brought to you as I said by the number 86, this being Episode 86 and the letter F. And I will as also has become my want read the index for the letter F from the hunter gatherers guide. And you would like me to do this in some kind of a frenzied wild, wild wild, okay, okay. It's not really my style, but No,

**Bret** 18:58

it isn't. Yeah, it makes it all the better.

**Heather** 18:59

Yeah, I will say that there's two things in here that have a ton of sub sub things. And I won't read the sub things for either food, which is its own chapter and we'll be getting to that in a couple of weeks or fourth frontier, which is the final chapter of the book. So f is actually rather long entry because of the subs under food and fourth frontier. But here we go. fairness and theory of mind, fallacy of division, fast food, feasting, financial collapse of 2008 the finite nature of resources fire slash campfire, first principles fish, fitness flame, RASS flavor, fluoride food, Foucault, Michel, fourth frontier, fragility, freedom, justice, trade off Freud Sigmund friendship freut. Fukushima Daiichi, nuclear disaster functional biology and for

**Bret** 19:48

all right, you got the wild eyed down

**Heather** 19:51

Excellent, thank you. It's it's gonna be my new thing. You asked for

**Bret** 19:55

it. I guess I did. Yeah. Only myself to blame. That's right. That's right.

**Heather** 19:59

Okay. So We wanted to start out with corrections. And you know, starting out at this point, yeah, well, 20 minutes into the into the podcast is not exactly like starting out. But we made a couple of errors last week that need to be corrected. The first is this Wallach at all 2021 paper that we talked about. And so if you can show my screen, we mentioned it, both of us had seen it, neither of us had read it. And we mentioned on on air that neither of us had read it. And we mentioned that what it had found effectively was that the vaccinations for every three lives that they were saving the mRNA code vaccinations for every light for every three labs that they were saving, they were actually costing two lives, which seemed like an extraordinary result. And it was too extraordinary to be true. And you know, we are all grateful that that is that is the case, this paper has in fact, since been retracted. There are enough problems with it. I don't think it's worth going into all of the all of the problems with it.

**Bret** 20:58

Yeah, I would, I would just say something over the course of COVID. We have seen papers retracted that didn't need to be retracted. In this case, the methodological flaws are real flaws. And so I think the retraction is absolutely warranted. But in any case, people should just be aware of that dichotomy.

**Heather** 21:14

Yeah, no, absolutely. And in fact, we've seen in other arenas, and you know, probably in COVID, too, sometimes. Now basically, retractions are a political move in which activists get to the editorial board of a journal, and cause force a paper to be retracted when it really ought not be retracted. We've seen that a number of times, this is not that case, this paper really isn't wasn't good work. And that finding does not hold up. So you know, don't don't repeat it. It's It's It's simply not true.

**Bret** 21:42

Actually, I think I know something about the story of how this got retracted on that. Yes, I will say I do believe that there was activism that contacted the board, but that their point was accurate. And so you know, to be fair,

**Heather** 21:57

if they're activists versus academics who see who who have looked at the analysis and said, We were Wait, this this shouldn't this should never have seen the light of day they shouldn't have passed peer review, they shouldn't have been published. When I say activists, I don't tend I tend to be meaning that people who are actually carefully looked at what was done and said, this, this isn't good work. The activists may speak in those terms, but they're not actually coming from a place of trying to get the best work out there. Even if it disagrees with their priors.

**Bret** 22:26

That's That's true. But I would just point out that we have given people journalists, I think, very rightly, a hard time for the preposterous proposal that the reason that they missed the importance of the lab hypothesis was that Trump had voiced some sort of interest in it, and that that, therefore made it something like wrong. And that's, of course, an insane logical fallacy. I don't even know if that fallacy has a name. But in any case, it is an insane logical fallacy and the fact that activist put pressure on the journal, which ordinarily shouldn't have any impact, the question is, is there an actual problem with the paper, but the fact that activists may have put pressure on the journal doesn't mean that they were wrong. And in this case, I don't know what they said, of course, but there was substantial reason for critique of the methods in the paper,

**Heather** 23:16

no, there shouldn't be, you know, there's journals should be able to retract papers, it should be a very rare thing that happens, because the more the more papers a journal retracts, the, the more that indicates that there's something wrong with the process by which publication is happening in that journal. And I actually don't know anything about the history of retraction here. But it, you know, I have actually been, I don't know which side of this. And a couple of cases in the last years, I have written into editorial boards of journals who were getting activist pressure to retract some paper that actually just had really politically incorrect findings. And in one case, what I said to the editorial board was, I don't happen to think that this result holds up like I could I can find fault here. But the work itself is is careful insofar as it does what it says it does, you know, I would have done something else. But caving to caving to activists, when what they're saying is that they don't like it is anti scientific. Yeah,

**Bret** 24:22

I mean, in fact, the way this should work in a world in which our publication apparatus was hooked up properly to the system of incentives, you would have lots of things where something had appeared to be true as a result of one methodological approach. And then later on some other methodological approach reveals a third correlate or something like that. You don't want a retraction for every paper that turns out to be wrong, you want actually to be able to track the development of thought that resulted in whatever the current presumption is. But that said, a new paper with a seriously broken methodology that should have been caught in peer review and There's no reason that the peers, whoever they may have been in this case, didn't catch it, they should have it to the errors are serious enough. But given that the paper was new, given that it was a focus, and given the obvious nature of the critique, it does make sense to retract in this case.

**Heather** 25:19

Yeah. And I guess I also want to say as maybe as a way of segwaying into the second correction that we heard, we heard pretty quickly from a number of people, both privately over email, and to some degree publicly over Twitter and such that both this and the second thing we'll be talking about was an error. And it was notable, if this has been the case for all sorts of things, but this week sort of concentrated it was notable how much you could tell about the argument based on the way that they approached us. So I ended up having a back and forth with a Professor of Computer Science about this paper, who said, This is not my wheelhouse, but I just did some back of the envelope stuff. And this is what I find. And you know, I went back to her and said, Okay, I see that. And I already know that there are a bunch of other problems with this. But you know, okay, you say x, how about why she responds with z? And we were able to do that back and forth. And there was never any, how could you? How dare you? What the hell are you doing? Yeah. And, you know, I think it was, it was an error for us to talk about the results of a paper that we did not read. I am glad that we were careful after said, we're not yet written. I mean, we would have to write but on air, we should, we should talk about it. And I'm glad that we said you know, actually, we don't know, we haven't read this paper yet. But this is what it this is what it says it finds. But that that is an error. And all of our all of the human errors that are made in good faith should be interacted with, in response in good faith. So just to say some people wrote in, in anger and derision. And in at least one of those cases, I went and looked at what they were saying and said, Yep, the point is true. But I actually have no need to hear the message coming in that way, because I've already gotten it in the other way. And just just know that you will be heard more easily when you are dealing with someone who is trying to get it right. If you also indicate that you're trying to get it right, and that there's forgiveness in you. So that said the other the other big mistake from last week is this question of the CDC guidelines on critical threshold value. So last week, I said that while I could not find any evidence of what past critical threshold value recommendations were from the CDC for the PCR tests, it was clear from the New York Times article in I think was August summer of 2020, that in general tests were being run from too high critical threshold value thus, and that the effect of that is that you're going to get a higher number of false positives, which would then cause us to think that you know, the data would make it appear that there are a lot more cases of COVID than they're actually to something

**Bret** 28:04

like contamination could get amplified. So it looked like a signal. Exactly.

**Heather** 28:09

And so that's all that's that's all true. And then I found this undated document from the CDC, which I showed on screen and linked to on the show notes, which I said specified the breakthrough cases, that is cases and people who had been fully vaccinated, not be counted unless the critical threshold value was less than or equal to 20. That last thing, which is what I said last week is is not true. What the document actually shows and here, I'm going to not quite yet sec, it's not playing ball with me yet. Here we go. Okay. So this is the document that I showed last week COVID-19 vaccine breakthrough case investigation, information from public health, clinical and reference laboratories. And there were two like this that I showed, the other one being this switch is for state and local health departments. This one, that's for the reference laboratories, has this respiratory specimen for SARS, Coby, to sequencing, specimen collection, selection, rather, clinical specimens for sequencing should have an RT PCR critical threshold value of less than or equal to 28. So that does not mean if I have my screen back now, Zachary, thank you. Um, that does not mean that that the CDC is saying I'm going to confuse myself I try to explain what it doesn't mean, what it what it does mean is given that high critical threshold so this is this is how I interpret why it is what it is. Given that high critical threshold values indicate less signal in the sample, the higher the critical threshold value is, the less of the the particles that you're looking for were present in the sample. That is, in this case, less of the actual viral material sequencing such samples would be more likely to be a waste of time and what this work is about is looking to sequence some these these samples in order to figure out what variants they are, what strains they are. And there is presumably very little point in sequencing samples that have so little virus virus in them that you're not going to be able to signal. Now that, of course, raises a lot of questions, it raises the question of why if you can't get enough viral particles to sequence above a critical threshold value of 28. Why is the New York Times reported in the summer of 2020, many of the PCR tests were were being done at 37 or 40. That is, you know, they had that many more cycles before they got signal. So what you're what I said was wrong, and I'm I'm very sorry to have been wrong. And of course, you know, it's more important that I come back and tell you that what I said was wrong than that. I not tell you at all. But I will also say that I still find no indication anywhere, of whether the threshold for sequencing samples for unvaccinated people is the same. This is literally the only document that I found that provides any number in this. And furthermore, the links that we put up last week, which went to the CDC site where I found these documents are now dead. Why is that? Here? I'm just going to show you so this is, Zach, you can put this up. This is the last week's episode, which I can't stop for some reason. And in the description, we have, as I always do as many links as I thought to put in here. Where is it? The information for public health clinical and reference laboratories right here? They say it's a redirect, okay. And, and now as of three hours ago, that just went to a dead screen. And now it's changed again. And it goes to specimen packing and shipping, which is not what it was before. So things are moving rapidly there at the CDC website. And one has to wonder why. I don't know how many CDC sites go down within a week. I think it's suspect that the very ones that I linked to in last week's episode are the ones that are now dead they both are. So um, I will say that part of what I was just saying is, is a big part of why many of you were here, when we make an error. And it's non trivial. We come back and correct it. And we keep digging, and we try to figure out what is actually true. So what I said last week about unvaccinated versus vaccinated people having different critical threshold values as recommended by the CDC for the PCR tests and assessing whether or not they are in fact positive for COVID is not true. But it's also true. What is true is that something is being obscured something either intentionally or not, there is at the very best, a woeful lack of clear communication from the CDC. And it seems like it is likely worse than that.

**Bret** 33:02

Remarkable. Yeah, so I do. I do want to say a word or two about the predicament we're in and you and I almost feel like we need a pair of hats that we cannot wear, like literal hats that I guess would only work for people that were watching. We did the hat thing. No, no, we did the hat thing for a different purpose. Okay, emphasize the fact that you can do science in a complex system like a tropical forest. And actually you don't you know, it is nice to have a beautifully controlled environment. But science does not depend on it. But in this case, we need something to distinguish between two roles that we find ourselves in that when they are conflated are causing confusion, right? So I would say, there are things on which we can use our expertise as evolutionary biologists to evaluate evidence in this complex system that involves epidemiology and involves immunology. It involves physiology, medicine, all of these things that interface with evolution. And that is necessarily more speculative and noisier than the assertion that certain things are factually obvious and inconsistent. In other words, I've used the term anomalies, conspicuous anomalies, like the fact that we are vaccinating people who have had COVID and as far as we know, have immunity that's every bit as good as the vaccines create. That is an anomalous state of affairs, it is difficult to explain in light of any significant adverse event signal which we have a very significant adverse event signal, whatever its explanation. So there's the very secure things that we believe should motivate people to reevaluate where we find ourselves and why. And then there's the question of, well, if we use our eyes as people who are experienced with complex systems experienced with evolution, and we point them when we say Well, what do we think is going on? What do we expect COVID to do, how did we get here? Right? Those are all valid questions, they are well worth exploring, but they are of a different nature. So I don't think actual hats is going to work for one thing, the conversations do sometimes move from one to the other. But I do wish that people would track which of these these things are. Which headspace? Are we in in these cases? And I guess we can try to signpost that a bit better.

**Heather** 35:25

Yeah. Well, I don't I don't know that's gonna happen actually. So I'm not gonna I'm not gonna pretend to try to signpost it better. But um, you know, one of the things I said to you this week was, you know, I never thought that I was or imagined that that I would be trying to do what's effectively investigative journalism, of government of government bureaucracies, like, you know, scientist, and investigative journalist are not the same thing. And investigative journalists of bureaucracy that is that is giant, and, and good at hiding. And clearly hiding is really a very different set of set of skills. And it would appear that it's sort of delving into science, like, Okay, I know, I know, the parameters of what it is that we're trying to talk about here. Let's figure out what the guidelines from the government actually are. And it's that move in, don't we know, what are the guidelines that they're actually putting out there, and we know for sure that they're at least obscuring some of what they're doing. That is it's not anti scientific, but it's clearly not a scientific endeavor, trying to figure that out.

**Bret** 36:33

It's not a scientific endeavor. as Eric has pointed out, the CDC and who are not scientific organizations, they're public health organizations. And there's a big distinction between those four reasons, even under the best of circumstances, they function differently. Certainly public health should proceed from the science. And one concern that is clear here is that that's not the driving force. But they are recommendation engines about a particular set of concerns, like contagious disease, limiting the spread of contagious disease, which is different than investigating what is contagious disease, right. But I will push back on one part of what you said, okay, the job here for us is not investigative journalists, maybe investigative, we may be using our scientific toolkit to look into these systems and see what we can figure out the problem is, you have a state of journalism that is as broken or more broken than all of the other institutions. We don't know why or how that happened. But it is somewhere in the set of beliefs, incentives rules that go along with journalism. And one thing that is necessary in order for us not just to simply reproduce the failures of failed institutions, is not to sign up for any of their slates right to do this all a cart where we look at those things, which makes sense. And so in any case, sleuthing investigation that's all I think,

**Heather** 38:04

so I didn't hear the pushback. What it what do you disagree with?

**Bret** 38:07

Well, you mentioned that you were doing the job of an investigative journalist and I

**Heather** 38:12

Well no, but I said was I don't want to I'm not skilled and I don't want that job. I

**Bret** 38:16

don't want that job. I don't think it's I don't think it's an it's an appropriate modality for us. Right.

**Heather** 38:20

And and yeah, this is part of why you I and we are so grateful for not just you know, Matt Taibbi, Barry Weiss, Glenn Greenwald, many others those you know, those are the three that come to mind right away, but Josh Rogan, Yeah, yep. And you're, the problem for everyone is, you know, welcome to complex systems. We live in such a multifaceted world now. Add to that science education is so broken, at least in this country, that most people who don't think they're going into science have really even if they're hyper educated and very smart and know it, don't have as much background in science as they think they need in order to go in and delve into the, you know, the, the science stuff that's happening. And so, you know, the state of science journalism is particularly depauperate because it's basically I think it's basically populated at least in terms of like, who's writing for science news and such like the the news part of Science Magazine, is people who ended up with PhDs in science but were narrowly trained, you know, maybe never even formed their own hypothesis ever because you don't have to and many PhD programs you know, got got a degree decided they didn't want to go into the academic thing. And, and, but aren't necessarily trained in journalism. And you can you can become an awesome journalist without being trained and you and you we have said many times, everyone is effectively born with scientific instincts and we mostly have it drummed out of us, but If you are not thinking about what it is your job is supposed to be as a journalist, and you only have a very narrow scientific background. And now you're being put in the position of basically being, you know, the one of the elite science journalists are very good chance that you're going to make a lot of mistakes. And we've seen that.

**Bret** 40:18

I think part of what we're seeing, and actually, this was a very good focus in our Patreon discussion this morning, has to do with the fact that people are relying on heuristics that may ordinarily work, but in this case, are showing signs of having failed utterly. And so for example, if you wanted to know something basic about, let's say, geology, you could go to a geologist, or you could look into the literature on geology and be pretty sure that if you know you were trying to figure out, I don't know something about the way strata in the rocks relate to the progression of time periods, or sedimentation processes or whatever. There's no reason to expect that what geologists say isn't going to be pretty accurate on those fronts, and at least represent the honest, you know, ay, ay, ay. What would the term be a, I don't want to try to avoid the word consensus, because as I've argued before, there are two different kinds of consensus, there's the kind of consensus that emerges over time as we figure out what's going on. And then there's the kind of consensus that is imposed all of a sudden, and the former version of consensus is not inherently right. But it is at least an indication of something that, you know, we believe plate tectonics to be accurate, where at first, it was heresy, we have arrived there, because the hypothesis was on the table. And the doubters, were eventually overwhelmed by the huge amount of evidence that points to plate tectonics and floating continents being accurate.

**Heather** 41:55

So you're sort of you're alluding to what I have called sort of the punctuated equilibrium model of how science progresses, which is like it's kuhns structure of scientific revolutions, right, there's a paradigm shift. And then things go along, more or less stable without much change, you know, with like, the brick in the wall type of science being done, but then you have another massive change, as opposed to, you know, the more quickly moving, you know, the things are changing all the time. Even the foundations may not be what you think they are type of type of model. And I think, you know, different different types of science at different times, because of in some cases, different political forces will operate under different different of these models?

**Bret** 42:38

Well, I'm not sure I'm talking about that, because, you know, what Koons is getting at is that there are these perverse incentives that cause schools of thought to have control over fields for far too long. So that revolution is a far more likely process to bring about a change in, you know, in respectable scientific opinion. Whereas if nobody had any perverse incentives, you would see updates more frequently,

**Heather** 43:02

he would see the gradualism and would see the gradualism, exactly.

**Bret** 43:05

But the point is, look, if you could, you know, you could probably go to Wikipedia, and read up on the geology of rock strata, and get a decent window into the current state of, of understanding of the process, there's no reason to expect some massive distortion in that literature. But if you then take your experience reading up on rocks, and you say, Well, now I'm going to go apply that to medicine, you've just walked into a realm where there's a huge amount of money flowing, and the beliefs and emphases have every reason to interface with it. That's unfortunate. It's not good from a scientific perspective. But the point is your heuristic about well, in general, you can sit down next to a scientist and ask them what they think and get, you know, a kind of update on where the the state of the art is, that doesn't work so well in some realms, and it works much better in other realms. And in this case, people's heuristics about just simply, you know, listening to what what is being said, Those heuristics are all broken, in part, because the censorship causes both the censorship and the pressure not to say certain things causes the false appearance of consensus where there isn't one. And in any case, our role here, I think, is to expose the mismatch between the evidence and the appearance of consensus because what it does is it implies a much richer discussion, which ironically, does happen inside these heterodox circles. As I've been pointing out more and more, if you take all of the people that we have been in contact with, we don't all agree, right? There's there are certain things on which many of us agree, but there is what, to me reminds me of what used to take place inside the excellent laboratories where we got our training, right? You had honest disagreements, right? And They were passionate. But they were, you know, what you heard was people hashing out different perspectives you heard given take you heard people realizing they had something wrong, backtracking. That is the natural sound of the conversation. And this rush to consensus thing is the inverse. And it's very dangerous in and of itself.

**Heather** 45:20

Well, while back, you mentioned Wikipedia. Yes, I did. Interesting. You should do that. Now. Excuse My French, but I really do wonder what the fuck they're doing. So Zack, if you would show my screen, it was brought to our attention on Twitter this week. That that, Brett, your Wikipedia page now reads the end of the first short paragraph. Weinstein and his wife, Heather Hawking have spread misinformation about the covid 19 pandemic on numerous occasions. And if you go to the link there to mine, it says the same thing. And if you go to the the links you have here is vice article from June of 2021. Which if you go to its links, you find that it it? It doesn't actually say what they say it does. Six here we have the Reuters fact check, which we have already talked about. And PolitiFact. This is the PolitiFact no sign of the COVID-19 vaccine spike protein is toxic or cytotoxic. So the so called evidence that Wikipedia is providing that we are spreading misinformation is itself easily debunked, appeals to authority purely. It's a it's purely appeals to authority, which is by the way, in case you haven't been paying any attention at all anti scientific. So this though, this actually, this actually shocked me. You know, since since we've been here last on air. Our channels have been demonetised, which is a huge head. That is, is bad. But it didn't shock me. This actually shocked me. And from what I see on on Twitter, just in the conversation about it. Some number of people are saying Yeah, yeah, yeah, this is Wikipedia has been going this way for a while. I didn't know. Wikipedia is one of those few places where whenever an appeal to donate came up, and it had been more than a year since I donated last I always did. I always did, because Wikipedia has been an extraordinarily important innovation that has allowed for information to reach people who otherwise would not have it. And apparently it's in the grip of ideology, just like everything else.

**Bret** 47:30

Yeah. Which is shocking, I will say, a few years before my grandfather died. I remember specifically showing him Wikipedia because the thing about Wikipedia

**Heather** 47:43

as would have been like 2010 11, something like that. Yeah.

**Bret** 47:48

Wikipedia as a non profit, what are the terms is nonprofit, I don't know that open source is the writing descriptor for an informational technology rather than a you know, algorithmic technology. But the basic point is this runs counter to the conventional wisdom of capitalism really, right, you've

**Heather** 48:13

got Wikipedia runs counter Yeah, and in its in its sort of platonic ideal what it

**Bret** 48:17

is, by far the greatest compendium of encyclopedic information ever compiled I mean, it just so far outstrips the next nearest encyclopedia that there's no there's simply no comparison and it is or at least has been excellent on so many different fronts you know, professionals actually use it because sometimes you know, you need to look up some term of art that is being used that isn't familiar to you or you want to reassure yourself that your understanding of it is actually correct and you go and you find out that it either either is or it isn't so it's an invaluable resource.

**Heather** 48:55

It's been it's been an important good first step Yep. For in embarking on even even research you know, we we didn't shy away from telling students Yes, you can start there you can't ever end there and you can't ever end with the read the references that they cite, you have to you have to follow follow follow follow but it has seemed like the Encyclopedia of you know, that we always needed that was impossible to have updated because it was people doing things that then had to go to printing presses and right and

**Bret** 49:27

it was that and it got better over time. And you know, I'm just a guess we you look up on Wikipedia, Dry Falls to where the scab lands or something in that neighborhood. There we go. You want to read a paragraph of that exactly drive that Dry Falls

**Heather** 49:50

is a 3.5 mile long scalped precipice with four major alcoves in Central Washington scablands. This cataract complex is on the opposite side of the upper ground. coolly from the Columbia River at the head lower Grand Coulee northern end of Lenore Canyon. According to the current geological model, catastrophic flooding channeled water at 65 miles per hour through the upper Grand Coulee and over this 400 foot rock face, at the end of the last glaciation, does estimate that the falls were five times the width of Niagara Falls with 10 times the flow of all the current rivers in the world combined. Alright, this is a place we used to spend time with our students probably once or twice, sometimes three times a year, we go on field trips there yep, for a week at a time,

**Bret** 50:28

it is embedded in a wonderful and paradoxical geological landscape that a geologist named Jay harlen bretz, first realized could not be explained by any of the normal processes that we use in geology. And he living in an era in which geology had discovered gradualism, and had made such progress by rejecting catastrophic processes and realizing that things like the Grand Canyon were in fact formed very slowly, over time by processes like erosion. Geology had fallen too far in love with gradualism. And it was incapable of recognizing something that had been produced all of a sudden, like, you know, in a space of weeks,

**Heather** 51:08

catastrophes were not allowed to be discussed were not allowed

**Bret** 51:11

to be discussed. And so Jay harlen bretz realize this and you published in 1922. There were holes in his model, he could see that there had been this incredible flood he didn't know where the water had come from a less courageous geologist named Jay de partie did know where the water came from, but didn't say anything. And so, anyway, Brett's fought over the course of the 20th century or much of it, and was finally fully vindicated by his field in 1978. When he after his death, no, he was still alive, he was still alive. He was he got the I forgotten what the name of the prizes but the highest prize in theology Finally, the field, acknowledging that he had been right about the formation of the scab lands and Dry Falls being one of its most conspicuous features. And when asked how he felt about finally being vindicated, he said that everybody he felt like calling up to gloat to it was was already dead. But disappointment to him. But anyway, the point is, you can go to Wikipedia, and you can be pretty damn sure because there's not a lot of money in the conflict over, you know, the scab lands

**Heather** 52:16

at this point. But what if Wikipedia been around in 1940? Right, what is the misinformation? What is dry fault? Does trifles even have an entry? Or is it just like, you know, Central Washington, and there's no mention at all? It's like, oh, there's this. There's this weird thing with some rock strewn around,

**Bret** 52:30

right? But if the idea is, well, what do most geologists say most geologists were wrong and Brett's was right, right. And, you know, and so anyway, the thing is, the the encyclopedia ought to look like something it's not a final, you know, find detailed source although, frankly, on a page like that, my guess is you've got a pretty good survey of all of the various different features of the scablands that look unusual and are hard to explain like the giant erotics. Yeah, those rock stirring around. Yeah, he's got these giant what are called glacially radix, right. And these are big rocks that have been moved from our they were formed to some other place by glaciers, and then you have the paradox of the fact that glaciers never reached the scab lands. So this is one of one of Brett's pieces of evidence. You're gonna,

53:13

you keep talking, I'm gonna find it. So anyway, the point would be,

**Bret** 53:19

I don't know why Wikipedia is now a political battleground. Or maybe I do know why. Because how could it avoid that right, Wikipedia probably does not have an immune system capable of fending off politicized pseudo information. And so one has to, one has to separate somehow between the the subjects on which Wikipedia is likely to be a good survey of the current understanding from the subjects in which there is something at stake that would cause the the narrative described there to be inaccurate.

**Heather** 53:57

Saw the one I was looking for. We've got we've got a number of pictures of this is you and your signature hat with actually this is going to be the program, the 2015 16 program that we taught together that we then spent 11 weeks in Ecuador and the firing so you're in one of them, you're standing on my knees, erotics, holding forth doing a little mini lecture.

**Bret** 54:21

Yes. I think many years ago, I posted that picture of me stamp. So we used to have students not look up.

**Heather** 54:28

Exactly the fact we have a piece that we wrote called don't look, don't look it up. So

**Bret** 54:31

the idea was, yes, geology figured out what the scab lands were, but most people don't know the story. And so as you drive in, you can point to all of the evidence that Brett's used, and in one day, you can point your students at the process that, you know, was at the center of this battle over much of the 20th century, and they can get the benefit of trying to puzzle through what this weird paradoxical evidence actually means Anyway, it was a great it was a great exercise one that I think we should be very I'm proud of but point being. At one point, Wikipedia was such a beautiful demonstration that things outside of the standard economic model where you would imagine that in order to create the greatest encyclopedia the world had ever seen, you would need immense amounts of money to beat Encyclopedia Britannica at their own gamer, whatever. And that's not how it worked. It could be done through this beautifully surprising crowd sourced mechanism in which Yes, you could write anything that you felt like writing, but it improved over time as the, you know, the differences were hashed out. But now, of course, without an immune system, something has politicized the content and taken one of the great assets that we had one of the surprising beautiful demonstrations of what people can do sometimes not for money, and has compromised it such that now it is declaring that it knows what the information is on the subject of COVID and therefore knows who is saying things that are not information. That's right. That's a preposterous claim in the first place.

**Heather** 56:04

I think this is actually a perfect segue to do a very brief excerpt from youngers new book, Sebastian younger. His book called freedom came out this year. He's a, he's an excellent human being. And this is yet another excellent book. The basic dynamics of asymmetric conflict readily scale up, insurgents like the Montenegrins cannot hope to beat a large conventional military and open combat so they don't even try. Instead, they do what small athletes do. They stay mobile, they avoid standing toe to toe and trading blows, and they strike only when they can get away. Conventional armies burn through more fuel munitions and food in the same way that large fighters burn through more oxygen. And even wealthy nations can't afford to maintain that level of effort. And definitely, the logistical demands of a modern mechanized army are so enormous that most of its resources go into simply sustaining itself. No more than 1/3 of its soldiers are directly engaged in combat, and usually far less. insurgents, on the other hand, are almost all engaged in combat, often including senior commanders, and they never have to win, they just have to keep not losing. Air Power is also limited value against smaller forces. In fact, there is almost an inversion of ordinary military principles. The fewer enemy there are, the harder they are to kill and less likely they are to be defeated. A million man army could probably be destroyed faster than 1000 men insurgency because it's completely dependent on command hierarchy and resupply, destroy those things and there is no army. Most insurgencies, on the other hand are composed of semi autonomous cells that are dependent on the society they live in and targeting civilians is a war crime. It also turns the populace against the invaders and drives them into the arms, the insurgents, bombers and attack aircraft can drop devastating munitions on the battlefield. But they're easy for insurgents to avoid incredibly costly to operate. That does not seem to be enough jet fuel in the world to keep enough aircraft aloft to kill all the people who are willing to die fighting them. airpower alone is never broken in insurgency and reliance on it could almost be considered a sign of strategic failure. On the ground. combat soldiers in the US military carrying loads up to 140 pounds on approach marches and 70 or 80 pounds in combat, including a 30 pound ballistic vest that traps heat and sends body temperature soaring. machine gunners and ammo bears routinely carry a lot more than that. The weight is a problem in hot weather when soldiers require as much as two or three gallons of water a day to avoid dehydration and heatstroke. According to the asymmetric warfare group adlg, an elite high mobility unit within the US military soldiers are often reduced to maneuver speeds of one or two miles an hour by such loads. And yet they're fighting insurgents who can move several times as fast. The result is that Western troops struggle to corner and defeat even lightly armed insurgents. The parallel between current day Taliban forces in Afghanistan and the Apache of the 1860s and 70s is so obvious at the School of Advanced military studies at Fort Leavenworth, Kansas has published a monograph on the Indian Wars, quote, the failed subjugation attempts assisted the Apache to develop a warrior culture based on resistance and survival through tactical action. That's the author, major Steven P. Snyder, a former a wg commander, the ew g was disbanded in 2020. Quote again, the Apache created a warrior that was an expert at fighting in austere environments understood the use of irregular tactics to render numerically superior force vulnerable and possess an intrinsic warrior or ideology that defeated all previous foreign invaders. After two decades of war in Afghanistan, the United States found itself having to negotiate with an insurgency that lacked airpower tanks, heavy artillery, and sometimes even boots. A relatively small number of Taliban insurgents fought the most powerful military in the world to a standstill, and a prior generation of Afghans and the same thing to the former Soviet Union. The Taliban represent an oppressive ideology that has almost no respect for human rights. But many insurgencies are fighting for those rights. And if all insurgencies and uprisings were easily crushed, there would be no possibility for political change or freedom in the world. Among other outcomes, the United States would not exist. However, it is defined freedoms due in part to the fact that powerful nations do not always win wars, and powerful men do not always win fights. In fact, as often as not, they lose.

**Bret** 1:00:08

That is fascinating. And I would point out the obvious relevance to you YouTube, and to our discussion of Al anon and Goliath last week, haven't caught up on that that is at the beginning of last week's live stream. But I would also point out that this is relevant to the discussion which we mentioned, largely between me and Jordan Peterson about what to make of myth, and this actually comes out in Jordan's column here, because the point is, some myths are resonant in various different contexts, because they are the result of some process that is duplicated. And so in this case, when we talked, somebody give me pushback on the question of our pituitary tumor giants fragile and they are fragile, they die early, have organ failure, because they have outgrown their design parameters, right? You're not designed to be that size. And so your parts don't actually work well as a result of something that we biologists call allometry. allometry means that things don't scale at the same rate,

**Heather** 1:01:15

you don't have elephant sized mice, or mouth sized elephants, for instance,

**Bret** 1:01:20

right? So the point is, giants are not simply, as you point out scaled up smaller entities that work because lots of processes don't scale. And so if you, you know, make an army really, really big, and you slow it way, way, way down, then the point is, well, that's a reason that these you may not want a big army, there are places where you want a smaller force. And so in any case, the David and Goliath story, which is the allanon and Goliath story, is a model that is a mythological model that builds something in our minds that just because somebody is outgunned, just because somebody is facing a much larger, more powerful foe does not mean that they will lose. And that's the fight we're in. And, frankly, given the reasons that the institutions of civilization are all apparently compromised, and that's what we're seeing, from journalism, to the, the Academy, to the social media environment, these things are all compromised. And we little guys have to figure out how to take the advantages we have, like the ability to, you know, to speak truth and to disagree with each other honorably, and discover what is actually right, and the ability to, you know, to crowdsource an audience that is willing to be supportive all of those things, we have to learn how to apply these things in order that we can fight successfully because we don't really have a choice.

**Heather** 1:02:53

We don't really have a choice and I think the very hopeful thing in that passage I read from youngers book freedom is that those with the extent and pre existing power those with the force those with the size and the numbers do not always when history proves this and and in some cases they aren't even expected to win and so you know in advance of the section that I read, he talks about fighters and different weight classes and you know, basically what you know what comes in an army we just heard about the trade offs what comes of having a bigger size body, you're going to tire sooner, you know, you're going to experience muscle fatigue sooner all else being equal, if you are having to oxygenate more muscles. So So endurance being the you know, the word of the day for the David for the allanon for us, for everyone who is interested in not simply being sucked into, you know, the YouTube Borg or whatever it is.

**Bret** 1:03:56

Now, this is this is the lesson and we will you know, it's also a process of discovery I mean that well

**Heather** 1:04:03

Exactly. And so you know, being nimble not not you know, not landing in places where if you are found you can be destroyed and also having a lot of irons in the fire so diversifying and you know, you're still for us. And, you know, the point is not primarily about us, for us, we need we want to be getting the kinds of thinking that we're doing out there into the world, but it's really important to us that everyone else be able to do similar things and so we could we, we could be creating solutions that would protect us and allow us to immediately pretty much, you know, replace lost income from YouTube, but, you know, Odyssey where we're streaming from now, is is terrific and part because it's, it's not going to decide that what we're doing isn't Okay, it actually it's not going to because the people behind it are honorable and fantastic. But it also couldn't if it wanted to. Yeah.

**Bret** 1:05:05

It's built into the structure of it.

**Heather** 1:05:06

Yeah. There's a. So we're going to finish by talking about our book a little bit. One of the things that I want to talk about is underlying conditions and comorbidities. Should we go there next? Or do you have a place to go before them?

**Bret** 1:05:21

Well, I have something that I wanted to quickly run through that emerged actually out of the excellent discussion that we had this morning, amongst the folks who came to us through Patreon. So this is the coalition of the reasonable discussion. And anyway, we were talking about the current situation. And I should say, there are a lot of things about this discussion that I regard as evidence of a very healthy intellectual environment. And someone who has long been part of this discussion, contacted me afterwards, out of the blue to say that he had seen this too, that it was it looked like a very healthy discussion, because there is healthy disagreement. Right? Everybody there is open to a discussion of, let's say, vaccine hazards, I believe, much more than half of the membership of that discussion is vaccinated. Right? There's no, there's no apparent correlation between the willingness to contemplate these things, and the decisions that have been made by the individuals. But what I wanted to point out, we was talking to them about what they hear and see from the outside that we can't hear and see from the inside of this battle, right. And one of the things that was apparent is that there are things that we have discussed on dark horse that are essential to figuring out how to evaluate the conflict that we're in, that many people have missed, just by virtue of the fact that there's so much content that nobody's paying attention to all of it, I'm pretty sure are very few are. And so anyway, here's the important thing. We find ourselves with many people who I consider friends, people that we admire, who find themselves dismayed by our insistence on talking about things like repurposed drugs, and vaccine hazards and the like. And it is quite clear that these folks are motivated by an earnest belief that discussing these questions is a not likely to lead to some discovery or insight that is actually going to be net beneficial, that the investigation itself is going to be net harmful, and that therefore engaging in it. And the obvious costs that come along with engaging in it is simply counterproductive. And what is not visible to some of these people is that this is not a slam duck, that even that those who are enthusiastic about the vaccines and I will say at the beginning, I and I think you were enthusiastic about the possibility that vaccines were indeed our most likely way out of the pandemic.

**Heather** 1:08:04

And I mean, like last last year, early pandemic, right.

**Bret** 1:08:07

And the problem was that, that we believed based on what those who were experts in the question, were telling us that it wasn't likely to be soon that the vaccines were going to be delayed. But you know, in the end, that was likely to be the way out, the vaccines emerged much sooner, were of a very interesting novel type. And the the point, the point is this, if those who are enthusiastic about the vaccines and those who are hoping that everybody will stop trying to bring nuance to this discussion, because my analogy is this. seatbelts save lives. Somebody could focus, they could create a, you know, series in which they looked into all of the cases in which somebody had drowned because they were belted into their car, and wear a seatbelt had cost lives. And the fact is just simply putting on your seatbelt, the net effect is likely to be that it's going to save your life, it could cost you your life. But the chances are low enough that just simply putting it on without thought is is the way to go.

**Heather** 1:09:13

This is of course, but my point with regard to the nearly fatal boat accident that I was involved in, in Galapagos that when your boat is, is having trouble you, you stay with your boat, because if a person separated from their boat tends to be the person who dies. And in the case of that particular boat accident, those of us who because of where we were sitting and what we understood about what the most safe thing was to do, who were able to stay with the boat were the ones most damaged and most at risk of dying. And so I've said I think I wrote into the piece that I wrote about that. You know, just as sometimes having been strapped into your car will have been the thing that killed you. In this case. You know, having held on for dear life as I was thrashed against the side of a boat almost killed me. But that doesn't change the fact under all circumstances, if there's a chance of you separating from your boat or getting into the car and deciding whether or not to buckle up, you know what you're supposed to

**Bret** 1:10:09

do. Right? So there's, in those cases, a simple net analysis. Yeah. And the thing that is important here is that there is no simple analysis that it is possible. And I got into a thing last night, I'm not very happy about with Claire Lehmann, about the vaccines and the net analysis, in which she alleged that I had said that the vaccines didn't work, which is preposterous. I have never said that. I've never thought it Nope. And in any case, but the point is, if you say,

**Heather** 1:10:45

Sorry to interrupt you, so the Wikipedia article on you and me is not correct. You have not spread, I have not spread misinformation. But what has happened is that medical misinformation has been spread in our name. So you don't like I think, I think that is actually an important distinction and point that I have seen over and over again, people saying, but didn't they like, Well, actually, No, we didn't, right. So the fact that you think that we did doesn't actually that doesn't come back to us, it's like waking up from a dream in which I saw you kissing someone else and getting mad at you for it. Like, actually, you're not responsible for that thing, you know, right.

**Bret** 1:11:22

Okay, so here's the thing. I wasn't happy with what Claire alleged. And, you know, our discussion was very clear. So it will be obvious to anybody who goes back and looks at it that I didn't say that. And, you know, she points to what she saw that she claims adds up to that, and it doesn't, but I do know, I think I know, because Claire is somebody I have admired and followed for a long time, that she is motivated by an earnest belief that her perspective is the one that actually clearly saves the most lives irrespective of countervailing evidence and nuanced that the net analysis is clear. What we came up with this morning in the Patreon discussion, was that people have missed a certain analysis that I take to be part of the discussion that we need to be having. And it has to do with let's just in a hypothetical case, imagine that everyone were to be vaccinated as those who are enthusiastic about these vaccines and who believes that their safety is very clear, are arguing for, does that mean that the pandemic will come to an end? And the answer is, it could, but there is another possibility on the table. And it is something that we have been covering in various places for I don't remember when it would even have forgotten, but for a very long time, the Gary Vanden bush episode being a place where it was discussed most thoroughly. But the point is this, we are doing something unusual, and that unusual something has an evolutionary impact, it is a selective force that we are applying to a novel pandemic. And one possibility is that the fact that these vaccines are very effective in driving the virus to low levels and reducing the effectiveness of the virus in infecting people that that could be enough to take are not, which then becomes our sub F and drive it below one at which point the virus would go to extinction. That is not however, automatically what will happen. There is also the possibility that the application of these vaccines all of which target the same as one subunit of the spike protein will exert a very powerful evolutionary selective force on that protein in the virus in the wild and cause the favoring of variants that escaped immunity. So this is what Garrett vandenbosch argued, he predicted that what we would see is the proliferation of variants for which the vaccine does not produce high levels of immunity. And so we are seeing a drop in cases at the moment. Part of that is likely to be due to the fact that people have been cooped up for a very long time The sun is shining in the Northern Hemisphere where most people live. People are enjoying being outside you and I are seeing this all over the place we are hearing reports from you had trouble buying sunglasses the other day because apparently there's a run on sunglasses because people are spending a lot of time outside

**Heather** 1:14:34

Yes, sorry. I was apologetic that their supply was so

1:14:37

low. So

**Bret** 1:14:38

in any case, people are outside we know the virus so far doesn't seem to transmit outside very well at all. And there's going to come a point, Winter is coming and people are going to return to that. People are gonna return inside where the virus has advantages where it is on its home turf. Apparently. When that happens, the variance which I strongly believe are going to be blamed on those who are not vaccinated, but are actually very likely in most cases to be driven. The evolution of them will be driven by the vaccinations, which unfortunately, it's not the fault of the people who design these things they made vaccines, it turned out that these vaccines do not provide sterilizing immunity. They provide excellent immunity, but by deploying them in a pandemic, where you have people in various level at various states within the trajectory to immunized and you have people who have breakthrough cases, right. In both of those instances, you get selection for those variants that the immune system sees less well. So we need to be monitoring, for example, which variants are being shed by people who have breakthrough cases of SARS Coby to. So the point is, one possibility is that the vaccines if everybody got them could drive SARS, cofi to extinction. Another possibility if everybody was vaccinated is that it could cause waves of pandemic of new variants that are escaping the immunity and we could be on effectively a treadmill. I

**Heather** 1:16:13

mean, it's, it does seem like and I, you know, it wasn't clear to me, I looked it up, it was March, end of March, the first time we were talking about your time delicious work, and then you had him on the podcast shortly thereafter. At the time, when we were first being exposed to his ideas, like, Okay, he's basically arguing that the vaccine itself as a selective force, at least during a pandemic, which is going to potentially drive the evolution of new variants, and I say that sentence now and it just seems self evident. Yeah. You know, of course, actually, always. Vaccines will themselves be selected forces. And the, you know, the more the more of them that are the exactly the same select of force that are being deployed at a time at the same time, the stronger the selection is, right?

**Bret** 1:17:01

So the analogy that I came up with this morning, which I think is useful, imagine that you deployed some kind of weaponized drones that hunted jaguars, by looking for their spots,

**Heather** 1:17:16

we need more dystopia, we need this.

**Bret** 1:17:19

Alright, I will fix the analogy. So it's more humane later. But for the modern man, you've got drones that hunt jaguars based on some sort of visual indication of their spots. And you deploy them, you know, across Jaguar habitat? Well, what you're going to see is the evolution of melanistic. jaguars. Why? Because those are the Jaguars that the drones don't see. And so the point is, there's always some level of melanistic jaguars, but they are typically less common than spotted jaguars. And in the case, the world

**Heather** 1:17:55

utterly lacking so far, said drones.

**Bret** 1:17:59

Right. But anyway, the point is, this is just this is not a difficult evolutionary problem, right? All of these, all of these vaccines so far, are very narrowly focused on a single protein. That means that they create immunity, a very effective immunity to that protein. And it means that alterations to that protein which caused the existing immunity and people who have had the disease and have become immune to that protein, or the immunity that is created by the vaccines. That selective force leads to the the competitive superiority of variants that escape so it is not obvious that the net benefit to humanity comes from just us just all getting on board with vaccination. And getting over the idea that this is the time for nuance. I understand the argument that there are times when nuance is not the right approach. If every time you clicked your seatbelt, some, you know, recording came on that said, You've probably you know, just increase the likelihood that you'll survive this journey. But it's possible that you'll drown because of what you've just done. Right? That would be counterproductive. You want people to click the belt because it is obvious that the net benefit comes from doing so this is not that case. And I hope people will understand that that they are not arguing against people who don't get it that we are actually having an argument over whether or not these vaccines are good. And it isn't just strictly about the adverse events, which are, I believe, alarming. Right? It is about the net impact of this program of vaccination. And I don't see a way around having that discussion.

**Heather** 1:19:34

No, I think this is very important. I do think that at least many and maybe the vast majority of people who are arguing, you know, who are saying at us, you know, how dare you How can you think of the blood on your hands for the people who won't get vaccinated and then die. And you as we have said, you know, for weeks now, actually, it looks the opposite way to us. You know, how dare For instance, big tech sensor, the conversations that are bringing to light some of what we are now increasingly seeing about the real risks to especially young people, and pregnant women, for these vaccines.

**Bret** 1:20:17

Alright. So I just want to point out, if I'm going to put a fine point on what it is that I think we believe in, what motivates us is that the conversation is much more likely to save net lives in the end. Yes. And what does that mean? Well, it means that first of all, there are categories of people that we probably should not be vaccinating just simply based on the risk benefit analysis. And you know, reasonable people can disagree over the risk benefit analysis. But people who have had COVID, it is not obvious that we should be exposing such people to any extra extra risk, especially in light of the fact that they have extra risk of adverse events,

**Heather** 1:20:58

I won't be able to put my fingers on it right now. But there's a paper something this week that said, you know, I've reviewed the evidence, and there actually isn't any clinical evidence that people who've had COVID are less protected against future infection than the vaccine would give

**Bret** 1:21:16

them, right. And in fact, there's a very good mechanistic reason to imagine that they will be more Of course, there, especially if the vaccines drive the evolution of escape mutants, because those who have had COVID, when I'm not, you know, having the vaccination is sure to mean much better than having COVID for especially people who are older or in jeopardy. That analysis does not necessarily apply to young people where I think we're doing something very bizarre and indefensible. But But nonetheless, the if variants are driven by the application of vaccine, then those who have had the disease itself actually have an immunity that is likely to contain multiple antigens to which they will have created a response. So if you know, one of these two kinds of immunity is likely to be better, it is likely to be the natural form. But I would also point out, there's something so bizarre about the reaction of the enthusiastic vaccine prospective COVID vaccine, right, the COVID vaccine perspect. Yeah, we are vaccine enthusiasts, in other cases, and would love to see a great COVID vaccine. But there's something very bizarre about the idea that those who are enthusiastic about these vaccines even now are generally and this is not the case. For Claire Claire, who expressed some interest in seeing ivermectin used in some places, but were you going to put your foot on the gas with respect to these vaccines and try to get as many people vaccinated as possible and run some risk of a waves of pandemic being driven by vaccination and the immunity that comes from it, then it would certainly be an excellent idea to have ivermectin as a backup, right? to have it for people who get breakthrough cases to have it for people who can't take the vaccine to have it. We should be using it in places in the world where the vaccines won't get to. So even if you were in a different place from where we are, it would still make sense for us to be doing something else. And frankly, the clock's ticking. Why are we not stockpiling ivermectin, which clearly has two kinds of utility if used together, incredibly potent, it can be used prophylactically for people who can't or won't take the vaccines. And it can be used to treat COVID especially effective if administered early. Right. So if you use those two things, and we do find ourselves with an unpleasant surprise, with respect to something like escape mutants, we would at least have a tool to apply at that point. And the fact that we are not doing that is a head scratcher at best. Well, I

**Heather** 1:24:03

think that's actually again, a good segue into the little thing I want to say about underlying conditions or comorbidities. And I think I've said this on air before but I I'm not sure when so it bears repeating. Which is that some of the most common to it's two parts. Some of the most common underlying conditions slash comorbidities for COVID are things over which individuals have some control and just you know, this is this is anecdotal ish. I received the Oregon Health authorities regular COVID emails. And I've been doing that I've been I've been looking at them since the beginning of the pandemic, they come out many times a week, and I've noted this and in fact, here we have Zach you can show me this is just a web version of the most recent one it came out on yesterday. So safety and the very bottom. Every every time one of these comes out. They talk about cases and deaths. And they always have a separate little paragraph for each of the deaths recorded since the last one has come out. And I have yet to see why. And again, I've not seen absolutely every one of these. So it's possible I missed one. But every single death that I have seen, and there's been 2779 in Oregon thus far attributed to COVID has as the final sentence, either he had underlying conditions, or she or presence of underlying conditions as being confirmed. I have never seen a death reported in the Oregon Health authorities, emails that they send out that there were no underlying conditions. And again, I may have missed one, but it is at least vanishingly rare. And so this sack, if I may, raises the question of Well, okay, what are then the underlying conditions? What are the comorbidities, which are often used interchangeably? These two terms underlying conditions and comorbidities for COVID? What are they? And, you know, strangely, given the underlying conditions is this term that is used in the Oregon Health Authority, his emails every single time, they don't have it defined on their website anywhere. And I went down that stupid rabbit hole a bit looking for, you know, who defines it which way and, you know, I ended up at the CDC, for COVID-19. Here we go people with certain medical conditions, which is the, it's been updated regularly. And the, you know, it's, it's okay, it's got a lot of hedging and such. And there's a lot of things that we don't have control over things like cancer and chronic kidney disease and COPD, chronic obstructive pulmonary disease and dementia. Diabetes, I will say that some of those that we've looked at already, even though some diabetes, some COPD, some chronic kidney disease, while not doable with particularly effectively in the moment, once you already have it had you had access to excellent quality of life resources early on, things like good diet and active exercise and time outside and such, you would likely have at least delayed these things. And you might not have them have them now. So there is there is an ability to make yourself healthier, even against some of these things, but less so once you already have them. And then actually Zack, if I can just have my screen back here.

**Heather** 1:27:22

There's a it's a fairly long list. But the page also includes down near the bottom, these three things overweight and obesity, overweight and obesity as a as a category, smoking current or former. And that's interesting. You know, we talked early on like in April of last year, I think about there being some counterintuitive data about about smoking. And you know how protective it was or was not actually against COVID. But at this point, they've got smoking current or former on the list of comorbidities for COVID, and substance use disorders. And all of those things individuals have some control over and yeah, it's hard. And yes, sometimes people really can't seem to make it work and extricate themselves from the grip of whatever it is. And, you know, all of us struggle with with something probably in some related health space, right, where we know that we aren't doing absolute the most that we could do to make ourselves the most healthy and, and anti fragile against things like SARS, COBie two, but we also have what seems to be a downplaying of those, those conditions over which people do have control. Like if every single death that I have seen in the Oregon Health Authority attributed to COVID also says that the person who died either had underlying conditions or that their underlying conditions were being confirmed. And if separately, I've seen and I wasn't, I didn't chase it down. But several, I've seen that the most common underlying condition that people have is being overweight is being obese, or overweight. Well, that is something over which we have control. And you know, me saying that isn't fat shaming, it is talking about the actual truth, that's something about and it's going to be in metabolic syndrome space, right? That's something about being you know, having a lot more weight on your frame, then is optimal, allows the virus to get in and grab ahold more easily than it otherwise

1:29:19

or it could be could be a third correlate, it could be

**Bret** 1:29:22

that sedentary lifestyles produce weight gain and result in you getting less vitamin D But somehow counteracting these things and, you know, advice that we've been giving go outside, right?

**Heather** 1:29:36

Yeah, I mean going outside doesn't inherently cause you to lose weight but no, but my point is not only have we seen probably over reporting of cases from you know, again, following from this new york times article from last summer with you know the high critical threshold values for for the PCR test for for COVID but We're also seeing, like, basically no discussion on the media about the things that each of us could be doing. To help reduce the risk. The only thing we are being told the only tool we are given is be vaccinated. That is the only thing we are allowed to discuss. It's not just you can't talk about ivermectin because that's medical misinformation. You can't talk about losing weight is that medical misinformation? Like seriously, this is, it's diabolical. It is diabolical.

**Bret** 1:30:28

The fact is, this is a complex system, it has lots of different inputs, being vaccinated does make you much less likely to get the disease, it's one factor in the equation.

**Heather** 1:30:37

And guess what? Being an appropriate weight for your size seems to be strongly correlated with not dying from COVID. Yep, it's a comorbidity of COVID. That's what it means. Why don't we talk about this?

1:30:50

Yeah, no,

**Bret** 1:30:51

the problem is there some sort of at the most generous thing you can say is that there is some sort of a political map that makes certain factors in your likelihood of contracting the disease, discouraged from discussion and other factors highlighted beyond all proportion. And the elephant in the room being that actually there is an alternative that seems to be highly effective, which we're not allowed to discuss, because the CDC and its bizarre set of beliefs suggested it would be counterproductive.

**Heather** 1:31:21

Well, it just it further infantilizes all of us, it takes away our agency, the idea that none of us can do anything all you know, just at first, and you know, we weren't, we were in favor, we hated it. But we were in favor of strong lockdowns to shut this thing down. And, you know, instead we've got a year and a half of garbage, right. But, you know, we were in favor of some of the things that could have been done. And where I, as far as I can tell, done kind of nowhere effectively with the possible exception of Gosh, Taiwan, maybe South Korea, like Vietnam, like early on some of the countries that actually like really locked down and really had low case loads. And I'm not sure I remember exactly which countries did it, but, but actually, there are things that individuals can do an individual level, and population level analyses are different. But in the case of actually, you're reducing the risk that you will get sick and put further strain on the system and, and, and make other people sick. That's when, when that's good for the individual and good for the group. And yet somehow those things that individuals can do are completely taken off the table with the exception of the one thing that you can go and you can get your shot, and you still have no agency in that. Like it's it's it's it all seems in service of you do what we say, and we'll keep you safe. And you know what, they're doing a terrible job of keeping us safe. So why? Why do we believe them now? Yeah,

**Bret** 1:32:52

I think that I think this is this is worth pointing out. They have done a terrible job of keeping us safe. They've told us that masks didn't work when they believe that they did.

**Heather** 1:33:00

They chose they prevent us from going on to beaches and in parks, right. They kept us indoors, the Coronavirus, the transmits indoors pretty much exclusively,

**Bret** 1:33:08

right. And the fact is just simply spending more time outdoors would have reduced the rate of transmission for

**Heather** 1:33:14

everyone, right? Even if all of us even if the entire planet went outdoors at the same time, right. In fact, we've just written this in the afterword of the book

**Bret** 1:33:20

in a different In addition, going outdoors, especially the beach would have produced an awful lot of vitamin D, which seems to be a critical contributor to a native innate immunity to this disease

**Heather** 1:33:33

and mental health, we could have seen each other unmasked outside.

**Bret** 1:33:37

So you know, let's put it this way. We know from the question of masks from the question of outdoor transmission from the question of vitamin D, that they have given us bad information or failed to give us good information when the evidence was very clear about it. And that has had a huge cost in terms of suffering damage to people and the loss of life. So Who the hell are these people to be declaring what's misinformation? Yeah, right. They've been purveyors of misinformation. And the best thing we can say is that maybe they thought it was good information at the time, but they're hardly the Oracle. Yeah,

**Heather** 1:34:13

yeah, they are hardly the Oracle. So that actually, that I think, in turn is a good segue to chapter three of, of our book hunter gatherers guide to the 21st century. So Chapter One was a sort of theoretical introduction called the human niche chapter two, comprised a deep history of the human lineage and then in chapter three, we're really getting to the meat of the book chapters three through 13 take a system in turn and chapters three and four, both kind of about the body and and medicine. So you know, rather apropos for what we are talking about here. I'm going to read just the very beginning of the chapter and, and then a couple of paragraphs that are relevant to it. A couple of pages later, to two and a half page. is here this is called ancient the chapters called ancient bodies, modern world. We've got a raptor out there calling you hear that? Okay. The sun. The San Bushmen of Southern Africa, most of whom were hunter gatherers, until just a few decades ago have little trouble with the kinds of optical illusions that Westerners struggle with. Consider two identical lines, except that they have arrowheads at both ends going in opposite directions. This, incidentally is called the Muller lyer illusion, and I can for those of you at home, there's a thing there, you can look that up. Consider two identical lines, except that they have arrowheads at both ends going in opposite directions. They appear to us to be different lengths, even though they are not our eyes fool us with help from our brands. When asked to do a simple task, assess which line is longer, we tend to fail the son do not were you to raise an American infant among the son though that baby once it grew up would not have the same problem that her parents did with the optical illusion. Similarly, raise a son child in Manhattan and susceptibilities, the illusion but again show itself. In this case, sensory capability and physiology are being driven by differences in experience and environment, not by genetic differences. Most readers of this of this book likely live in weird countries Western educated with Western nations with a highly educated populace and industrialized economic base that are relatively rich and democratic. As societies we have benefited from industrialization and democracy, which have raised the quality of life for nearly everyone who lives in these countries, but there are many negative, unintended consequences downstream of society wide changes. While it is clear to most people how much the 21st century weird environment has expanded the menu of possible experiences that we have at our beck and call, it is less obvious how 21st century weird life has curtailed other experiences, often to our detriment. What Why can we, unlike the sun be fooled by simple set of lines, it has to do with an alteration in our visual sphere, our homes are clean the climate controlled and square, just as depriving kittens of some visual inputs renders them less capable of seeing as adults. Perhaps with our modern comforts and conveniences, we are effectively depriving our weird selves and rendering ourselves less capable, or perhaps our visual capacities being tailored to our uniquely square environment, or their way modality is doing something to us at a deeply fundamental level. And the fact that we don't understand it is alarming. One thing we can be sure of is this models of human behavior and psychology, which tend to be based on empirical studies of weird undergraduate students may well be accurate readings of the psychology and behavior of weird undergrads, but they do not inherently make for good models for the rest of the world. Indeed, it is now clear that we in the weird countries are outliers when it comes to many aspects of the human experience. The implications of this are far more important than being easily tricked by visual illusions. But understanding why we are susceptible to such illusions can provide insight into the risks of hyper novelty. It is likely that our highly geometric homes and playgrounds, which make up so much of what we see during early childhood, calibrate our eyes that we suffer from such illusions far more than do those in the rest of the world. That geometry, which we mostly take for granted, emerged apart from being able to run wood through sawmills and create dimensional lumber. Most people when their culture began to run with through some mills and build homes at the dimensional lumber that results would not have thought to ask what in our human experience and capability might be affected by this dimensional lumber and the carpenter corners that result are novel features of the modern humans environment. How has it changed how we perceive the world reframing your approach to the world? Such those questions do occur to you even if you're not sure what the answers might be, is part of the goal of this book, and then just skipping the other, skipping forward a couple of pages.

**Heather** 1:38:33

If homes will have carpeted corners have made us more susceptible to particular kinds of optical illusions, altering our ability to see what other costs to a weird lifestyle might exist. As recently as the 1990s, he would have been considered a crackpot, if you would suggested that spending your workday sitting at a desk might have long term effects on cardiovascular health, or risk of type two diabetes, no longer. carpeted corners create greater susceptibility to certain optical illusions, over reliance on chairs creates all manner of negative health outcomes. What then might deodorants and perfumes have done to our ability to smell the signals emitted by our bodies? What might lives filled with clocks have done to our sense of time? What have airplanes done to our sense of space, or the internet to our sense of competence? What have mapped into our sense of direction, or schools to our sense of family? So that is all in keeping with the rest of the conversation that we've been having?

**Bret** 1:39:24

Absolutely, I mean, it goes right to the issue of heuristics which are built around the realities, which you have in your developmental environment. And, you know, the sun live in a very different developmental environment. And so it's a it's a trick that once you see that you're using these heuristics to great effect, but that they are actually contingent on being used in environments in which the conclusions that they lead you to tend to be right and not wrong. A whole world opens up

**Heather** 1:39:52

Yeah, and this is not this is certainly not a noble savage mistake that we're making nor a looking at the past through rose colored glasses. It is it is certainly true. And as we say elsewhere, I think in this chapter even excuse me that antibiotics, vaccines and surgery are three of the most remarkable feats of Western medicine and the world is much better for all of them. That is true. And the fact that they are all of them, all of them over applied and used in places where they actually do harm is also true. And this again, is not a Always wear your seatbelt in the car, stop asking questions sort of a thing. This is actually observing that saying that something is a major advance, and also questioning whether or not it should be ubiquitously applied blanket like over every possible thing that happens, though, you can have those two thoughts. I think that's amazing. And I don't think it goes here in the same head at the same time. And in fact, we need to we need to be having this conversation. Yeah.

**Bret** 1:40:56

And in fact, even in the case of something like you just put on your seatbelt. And don't think because it's much more likely to save your life than costed. You might also think well, what if I did get involved in the nuanced discussion, and I realized that rather than just bank on the ratio of these things, I would like to have a device that allows me to cut a seat belt quickly, if I cannot escape it in the car with you. So you get the benefit of the clicking the seatbelt automatically, while retaining the ability to escape it if you cannot undo it in a kind of accident, that's unusual. And there are many of these things. You know, just because you think vaccines are the way doesn't mean you should be scoffing at ivermectin, That, to me looks like a business conclusion, not a medical conclusion. A medical conclusion would have people who are enthusiastic about vaccines, also enthusiastic about ivermectin. So, in any case, it's the discussion stupid, right? We have to have the discussion. That's the point. And, you know, does that mean that discussion is safe and won't cost lives? No, but it's a net question. Right? And, you know, it isn't simply about lives, either. There is there is a real question, I would argue, and I have not yet heard pushback on this. I would argue, it does not make sense to sacrifice the lives of healthy young people in order to save older, unhealthy people. It just doesn't it's not something a rational society does you protect children. And so that means that the calculation is not a simple one in there under any circumstances. That's right. But we can do better. We can do better by discussing things.

**Heather** 1:42:34

Yeah, we can. I think we've arrived at at the end at the announcements that happen now and and unless there's anything else you want to say, All right. We are going to as as is I want to take a 15 minute break and then be back with a live q&a. That is the q&a stream is not up on the screen. Okay. So it's going to be it's on a stream, it's you go to WWW dot Dark Horse submissions calm. And that is where you ask questions as of now and that hopefully will be where where we are retrieving questions from from now on. Again, consider joining us at either or both of our Patreon ads, where we have access to some private conversations every month and also at either of them you get access to the discord server. If you have logistical questions, not questions for our q&a, but logistical questions about where I find that fabulous Goliath t shirt or, or anything else, go to Dark Horse dot moderator@gmail.com and send an email. But since I asked I will tell you guys it's it's dub dub dub dot store dot Darkhorse podcast.org. And that's where the Goliath and other previous products are available. And we're here on Odyssey. And we're thrilled to be here, we're still you know, we're diversifying or we're figuring out a lot of stuff out, but we are intended to stay on Odyssey so so please, if if you if you find this valuable don't just subscribe to this channel, subscribe to the clips channel, on Odyssey and actually go back into YouTube and subscribe to those two as well. We hope not to lose those channels. We hope to turn this around and it helps to have those growing as well even though we're not we're not putting things up there. Until then, unless something's changed. And like the videos as well. All right, anything else to say?

**Bret** 1:44:33

No, I think it is time to recommend some some behavioral modifications that will upgrade your life.

**Heather** 1:44:40

Yeah. So be good to the people you love and eat good food and get out side

1:44:46

yeah