Your Questions Answered - Bret and Heather 55th DarkHorse Po...

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**SPEAKERS**

Bret, Heather

**Bret** 00:07

Hey folks, welcome back to the Dark Horse podcast live stream 55 Q and A segment with animals. Yep, that's right. Here we are. Yes. All right. Well said Maddie,

**Heather** 00:21

oh my goodness. Alright, um, alright, the first one I forgot about this. The first one from last time we're gonna start with four questions from last time move to the discord question. And then in the questions from the last hour, someone asked for me to read Ode to spot by data, the Android from Star Trek, and I had forgotten about it, but I have it pulled up here and I will find it and we will do it. If I can figure out how to use my computer. That didn't work at all. Okay, here we go. Okay, so this is a poem supposedly written by the tenant commander data despite Felis catus as your taxonomic nomenclature, and endothermic quadrupeds. carnivorous by nature. Your visual, olfactory, and auditory senses contribute to your hunting skills and natural defenses. I find myself intrigued by your Sub Vocal oscillations, a singular development of cat communications that obviates your basic hedonistic, predilection for a rhythmic stroking of your fur to demonstrate affection. A tail is quite essential for your acrobatic talents. You would not be so agile if you lacked its counterbalance, and when not being utilized to aid and locomotion it often serves to illustrate the state of your emotion. Oh spot the complex levels of behavior you display connote a fairly well developed cognitive array, and though you are not sentient spot and do not comprehend, I nonetheless consider you a true and valued friend. That's beautiful. That's wonderful. Why not an ode to spot is cat's name Aspies, cat's

**Bret** 01:56

name is spot. spot. Yeah. Yeah, it does raise a certain question though, because obviously that was not written by an Android that was written by a person Yes. Well himself in the mindset of an Android there's

**Heather** 02:09

all sorts of discussion online as you will no doubt not be surprised to find as to who exactly actually wrote that and put those words into his mouth. Yes,

**Bret** 02:17

yes. is a good question.

**Heather** 02:19

But apparently data, rather loved his spot.

**Bret** 02:24

He had a cat. I don't recall this. It's been forever. Yeah.

**Heather** 02:29

All right. Next question. Kindly share your sources and articles that support the lovely hypothesis. It needs more attention. Love you both.

**Bret** 02:37

Yes, I would say best thing to do is actually to follow Yuri Dagon. Alina Chan and Rosanna segreto. On Twitter, and you will have the ongoing development of the vanguard of investigation into what the origin of COVID-19 and SARS COBie two might be,

**Heather** 03:01

and your conversation with Yuri Dagon from April or May, is up on this channel as well. And you discuss some of the sources as well.

**Bret** 03:12

Oh, well, yeah, it's certainly a good place that you can get a grounding. You can also look at your Dagens initial medium posts that lays the whole thing out so well. It might be time to revisit, actually, yeah, because we are a great deal down the road from this. And we have learned a lot and I would say, it is interesting, the lab leak hypothesis has not been falsified. It has grown stronger, so might be worth going back there at some point.

**Heather** 03:43

Good. Next question. What are your thoughts on teenage anti depressant, use the standard practice of school security to search? Second, what are your thoughts on a teenage antidepressant use and be the standard practice of schools cue security to search student belongings? Boy, when I read that the first time, I only saw the first half teenage antidepressant use. I think with almost all of these mood affecting drugs, there are some cases in which they are the right move. And almost all of the cases in which they are used, they they should be a last resort rather than a first resort, which is too often how they're being used. And I think the idea of putting such drugs into a developing human's brain when all is chaos, when you know there's a lot of restructuring going on and reframing of neuronal connections, there are potentially going to be long term consequences that we have no idea of at this point.

**Bret** 04:50

Yeah, it's effectively inevitable because the mind is learning how to think and to feel and to balance things and to the extent that you are interfering With the processing, you are creating potentially a lifelong dependence. It is also the case that these things have been massively affected by what is being called the replication crisis. And there is a huge bias in favor of seeing effectiveness of these things that may not be what we think it is, or may be ephemeral. So to the extent that almost any change of scene can take a person who is mired in depression, and cause them to drop out of it, because things are somehow different and feel different, and all of that, but it's not a long term solution, we, we may have a very wrong idea, even where they work about why they work and what's taking place. And so, yeah, it's very, very scary that we would have leaped to this and largely sidelined other modes in which a, you know, my mind that is not settled and doesn't feel right, could learn those skills and have them for the rest of the person's life.

**Heather** 06:00

Yeah. And in some cases, your mind isn't settled and things don't feel right, because something is wrong in your world. And dampening that ability to respond to that is actually more dangerous than feeling the upset in the first class.

**Bret** 06:13

Yeah, that's all true. I would say the caveat here. And the problem that it is the reason it is so hard to have this discussion, is that obviously, people harmed themselves. And it will not be the case, even if all it is is a change of scene, even if it just causes the mind to feel different. It will certainly be saving some lives. That's not to say that in the end, it doesn't result in more people harming themselves. Yeah, but you know, one does not want to take a position and say, these things are bad when you know, they're likely to be people walking around who wouldn't otherwise be because it got in the road of some, you know, cascading mental phenomenon at some point where the person needed to get in the road. But, but God dammit, we can do better. Yeah, this is not, we don't know nearly enough about the brain to interfere with it that way. And the model on which these things were predicated is known to be false. Right, this idea of chemical imbalances that's possible that they exist. In some cases, it is very unlikely to be involved in the majority of cases, which doesn't mean that you can't, you know,

**Heather** 07:23

no, and if it if we really are experiencing an epidemic of chemical imbalances in the brain, that wasn't true. 500 years ago, yeah, it wasn't true. 2000 years ago, it wasn't even true 200 years ago, therefore, this is something that we are doing to ourselves. And rather than treating the symptom of something that is resulting from something we're doing to ourselves, we should figure out what it is in the modern environment that is causing us Absolutely. The second part of this, which is what are your thoughts on the standard practice of school security to search student belongings is a more complicated question. I actually don't know, it's to be the case. It's not the case. Well, our one of our children has never even been to the school that he attends since he started this year. And that's been all virtual, but I don't know it to be the case at his school. And it's not the case of the other guys school. So yeah, there are certainly situations in which it is unfortunately, probably called for, and that's a that's a tough question. Yep. That is, do you have thoughts on government Brown's government? That's not a word, government browns, Governor Brown's new two week freeze, and whether or not it'll only be two weeks, I am well, I emailed you on behalf of an Oregonian, seeking help in creating restrictions and oversight for the governor's emergency powers. Yeah, so we are what on day three? day four. Now, I guess I would freeze? I don't know. I don't know if it'll only be two weeks. Yeah. And you know, it's not it's not the lockdown that we had in March, April. Because all the retail stores are open. They're just at 75% capacity or something like that. And I think it's it's a real shame. One of the ways that it's being done well, we talked last week about one of the ways it's being done being a real shame, which is that they've closed down the gardens for instance, you know, Jeff, Portland has this beautiful world famous Japanese garden, to which I've been going with some regularity and it's closed. It's a garden outside. I'm not gonna be walking my dog. No, no way. No, but you know, all jokes aside, you know, the garden shouldn't be closed. Probably the zoo shouldn't be closed. But also a lot of restaurants. You know, Portland has an extraordinary food scene. And a lot of the restaurants had really been ramping up their outdoor seating. As the weather changed like they've got not just canopies, but heaters, you know, where there's still a lot of airflow. It's but it's definitely outside. But it's but it's warm. And a lot of these places had just it appears to me had just gotten it ready. And now they're being told that you can only do takeout and delivery. And so now this stuff is sitting out side not being used, potentially, you know, at risk of being damaged. And I don't see why a lockdown that is due that is supposed to be doing what this one is supposed to be doing, shouldn't be preventing restaurants from serving people outside.

**Bret** 10:31

Yep. And we have been consistent about this from the beginning, we should be borrowing from the places where the virus is not successful at transmitting in order that we can afford to institute precautions that people will find somewhat onerous, where they actually work. And the sort of, you know, it's just this sense of like the purpose of governance is to do something rather than to be effective. You want it to be effective at the minimal possible intensity. And this does not, it does not feel surgical, and I'm increasingly worried that bad testing and bad models for what the virus is a result of very blunt interventions that

**Heather** 11:25

blunt and like aimed raw, yeah, like, you know, when they do hit their target, they don't have much of an effect. And often too often they're aimed at the wrong target.

**Bret** 11:33

Yeah. And I guess, I would like to start the discussion not about saris, covi, two and COVID-19. But about next time, because in some sense, I feel like well, we bought this one, we know how bad that is. And next time, you want to get on the ball right away, we want to be on the same page about what we're trying to accomplish, so that the interventions are surgical, they might need to be intense and short lived. And we don't want half the population freaking out that that's tyranny having arrived, that means we have to protect people from these sorts of things being used in a tyrannical fashion. So anyway, let's have that conversation. Now. Yeah. So that next time we can actually be epidemiologically effective and stop this in its tracks before we find ourselves in this. You know, quagmire.

**Heather** 12:29

Yeah. Okay. The question from discord this week, actually from last week, because I missed it last week, was is, you have discussed the fact that young people are not being given the tools they need to compete in a meritocracy. What are these tools? And how do they function?

**Bret** 12:45

Well, you want to go, you know, me to go You go first. I would say that the, the key tools involve experience in systems. Boy, there's gonna be no way to answer this because I thought the answer is painfully obvious. And so something about the word tools must be throwing people to ask that question, but in some sense, you know, we spend a lot of time talking about the difference between knowing how something is done, and knowing how to do it, right. You probably know enough physics to do parkour, you probably don't do any parkour. And you couldn't just go out into your city center and say, Well, okay, I know how, how it works, and just start, you know, bouncing off things and jumping over others. And all of that. point is how do you get there, you get there through some pathway in which each jump is small enough from the last one that you pick up the skill so that eventually when we tune in on you're doing parkour, you're able to do amazing things that cause us to boggle right? So everything is like this, right? You want to do science? Well, you're going to need to go through a lot of iterations of formulating a hypothesis, figuring out what the predictions are testing them, figuring out how it comes back as a model, and how you're going to do it better next time. And so you know, I guess what I would say is the key tool is a prototyping mentality, whether that's metaphorical prototyping where you're talking conceptually, or it's literal prototyping where you build something that proves that the thing that you want to invent is actually possible. And then you work your way there in steps

**Heather** 14:38

and iterative practice and play, which can be that prototyping but isn't inherently I'm reminded of so our youngest son Toby, and I've been playing a lot of pool lately. And we have we have generated three categories of shots. I see my shot and I have the skill to do it. Whether or not I make the shot or not. I see the shot. I know what I want to do, but I don't think I have the skill to accomplish it. And I actually don't even know how to do this. I can i think that that's possible. But I don't even know how to get there, I don't even know. Like, I both lack the theoretical insight and the skill. And that's pretty rare, like much more often, both of us find ourselves in this position of, I know what I want the balls to do, but I'm not sure I'm not sure how much English this, that and the other right to do to get there. And just like creating those kinds of categories for any given thing that you're doing, be it playing pool, or building a table, or bicycle riding or, you know, robotics, or you know, any of these things, and ending up with categories of Okay, where when, when I didn't accomplish the thing? Did I not accomplish it? Because I just failed to try? Well, just No, don't ever do that. But did I? Was I too confident of what I knew. And I actually was missing the full landscape of possibility of outcomes. Was I missing some key tool? Maybe? Was I missing some key insight? And do I tend to make errors of the same type of category such that Oh, actually, I just need more stuff. Like I just need more tools. Usually, that's not the case. But for some people that will be more often it's, I need more experience of the system sufficient that I actually have a more complete model of what kinds of things that throws at me, so that I have encountered this sort of problem more regularly and have a sense of what to do to unravel it.

**Bret** 16:29

Yeah. And if I can add something that I think this implies a huge fraction of what we actually know when we when we are expert at something in some meaningful way, like actually capable of advancing a field or whatever. It comes from a huge store of knowledge that is not describable. Right? You become expert in something and there is the part that you can convey with words. And then there's a lot of stuff that is stored in some other way. And it's sometimes gets metaphorically described as muscle memory, or whatever it is, or lab hands or any of these things,

**Heather** 17:10

but distinct from jazz hands, am I right?

**Bret** 17:12

Totally distinct. In fact, if you do that, in the laboratory, it breaks. Well, there's demerits galore. And then you could also knock over a erlenmeyer flask, or I don't know what but but it's not good. Yeah. Yeah. So. So anyway, the point is like, there's a way school is so broken, right? What we teach you is largely how to compel the person who gave the assignment that you did the reading or something, right. It's not about show. And I increasingly, I think, look, somebody who can show it's not important that they can describe it, great if they can describe it, in addition to showing how to do it, but Well,

**Heather** 18:00

no, I would, I would, it depends on what the thing is. Agreed. Right. So if it's art, I think you're right. And often the statements that accompany artists works, you know, artist statements, right? Writing statements are actually a problem in their own way. Like, I'd rather not see those things. But you, as you know, when I would teach animal behavior and teach students, you know, from the very beginning to like, how do you how do you even come up with an idea in the first place all the way through to the end. So they would have done a complete piece of research from beginning to end, the communication in both written work with ample review of the peer reviewed literature, and in a spoken talk about what they had, what they had found, was absolutely critical. And that wasn't just because I needed it to assess it, they need to be able to translate what they knew, into words such other people can understand it.

**Bret** 18:51

Yeah, although they're the skill, right? The the entire field is there to take things that are true of creatures and discovered them and convey them into the body of shared wisdom about them. So in some sense, the point of the exercise is, get something robust, that can be conveyed to the rest of us. But even so, to the extent that somebody can, let's say, reveal a pattern of animal behavior that is previously unknown, a student who could take you into the field and say, I want to show you something interesting. And they can show you something about a creature that no one had ever described before. They have accomplished something, yes, they have a skill and if they can do it twice, then it was not a fluke. Right? So my point is

**Heather** 19:45

that it's not the complete skill set I was hoping they will generate Alright, but in fact, seeing something new that is here to for undescribed by science is something most people will never do. Including, you know, most people who are publishing in scientific journals all the time. Yeah.

**Bret** 20:00

Absolutely. And so all I'm saying is that we don't, that show is its own thing. And that show arises through a kind of iterated engagement with something that allows you to discover things, even if you never are consciously aware of what you've discovered. So you have an intuition about where to look how to, you know, position yourself, or whatever it is. And so yeah, what are those tools? those tools are deep engagement with systems that are representative enough of the way important systems work that you become expert at, deducing what's true, what's false, how to interact with the system in a way that's productive. And so much of school is built around, say, you know, it's almost like it trains you to get by the, you know, the filters of your teacher or your professor rather than to know anything about the world. Because if you've succeeded, if you've convinced the prof that you're, you're on it, and, you know, your prof might be a fool. Yep.

**Heather** 21:05

Pretty good chance, actually. Pretty good chance. Okay, next question. How can those lacking in moral, moral courage, learn to act in spite of fear, especially if the threat is real? simply saying, just do it? As I often hear, it seems insufficient, as it avails no one to know what it is to be done if it's not known how to do it?

**Bret** 21:25

It's a great question. And it's, it fits with what is the example people use that the dog does not know. It's very difficult for the dog to learn that the mailman is not a threat. If the dog barks at the mailman every day, and there is no attack on the house. Right? The dog heard this a dog may think that it has fended off an attack each and every day. And likewise, let's get his cat doesn't know that it has failed to save its life by hiding under the bed because it would have to not do that in order to discover that actually, the world has not come to an end when a stranger walks

**Heather** 22:02

by. Yeah. So how do you how do you break those patterns with the benefit of consciousness and language?

**Bret** 22:09

Well, I think actually, this one is a good easily answered question. more easily answered than done. But they, it actually it's the same answer as the last one. These environments are a system with an unwritten set of rules. And the if you say, well, well, actually let me just report, I met somebody in that clubhouse environment. And somebody I knew from Twitter, but I've never met them in person. Anyway, we will consider

**Heather** 22:45

that you have now. Think so? I don't know. That's interesting. We

**Bret** 22:49

need new terminology. But anyway, this

**Heather** 22:53

past what you talked about last time being an audio only real time conversation in in spoken word.

**Bret** 22:59

Yep. And we were in a room that was engaged in an argument about racial dynamics, inter racial dynamics. And this person said, of me, that I said, things that she would have predicted would have caused a catastrophe, but then didn't. And she found that interesting, right? In other words, and I think I know what she was seeing, which was that there's very often a way to work your way towards being able to say something that you couldn't go directly. And there's often a way to say things with, you know, slight alteration that makes them more horrible than they would be if you just tried to go at them directly. Just

**Heather** 23:43

because this is apropos to what you're saying. Are you saying that she saw this with regard to what you wrote on Twitter or what you said in clubhouse said said spoken right spoken word because it is I mean, I, I love to play with language to surprise people such that it's not what they thought it was, yeah. But it's much easier to get people to jump on you. It's much easier for people to make an error, because they, because they think you've written something that you haven't. And it would seem like it was easier in spoken word, because once it's done, it's done like sound passes. And it does it's not it's not permanent in the way but because there's additional even more so in person. But there's additional stuff around tone and pauses. And you can just you can put more intentionality into the way you say something, but you can just with letters on a screen.

**Bret** 24:29

Yeah, so actually, this is dovetailing with a different conversation we were having this week to you and I but I would argue those two environments are variations on a theme, but they have different assets and liabilities associated with them. But in each case, you're dealing with a system in which one is learning to be able to say things in such a way that they are more easily heard or that they don't cause a conflagration and the trick and the answer to this question here is, I think You want to pick an environment in which you can learn the skill that you're trying to get? and partially the skill is, you know about the boldness to try it. And so you know, you're not going to try it on one, go, you're going to start with something beyond what's comfortable. And partially the skill is how do I do this, and have the greatest chance of surviving it, you know, living to fight another day? And anyway, I think the answer is, it's very learnable. If you can find the environment where you can, you know, afford the risks, and in which the lessons can be derived through behavior you're comfortable with. Yeah, and those environments exists.

**Heather** 25:49

The next question. I don't think the whole thing is here. So I'm just gonna say it to suggest to the person who wrote it, that I need more of a question here. Can now it says, Can the study differentiate domesticated animals from the parasites and other hangers on? Or how about rats or insects, other pests, etc? Can the study Yes, I just don't i don't know what this is in reference to. But this is a high money value question. So I wanted to say I'm not ignoring it. I just don't know what it means. Not a continuation of somebody looked. Now there's a couple other from this person, but it's not. It's not the same thing I see. Okay, next question. What are your thoughts on the me to movement? It took over our national consciousness around the same time you two were railroaded out of evergreen? Yeah. So, evergreen blew up on May 23 of 2017. And me, too, starts happening. I'm rolling into the first fire conference in October 2017. And Harvey Weinstein was just just beginning to make the news at that point. So it was fall of 2017. Yeah, I've I guess mostly it's been on Twitter, unfortunately. But I had a lot to say at the time, it seemed like a potentially important moment, which could have revealed to the vast majority of men out there who were who are who are good men who would never behave in in bad ways to women, that that doesn't mean that the vast majority of women, at least when we're younger, don't experience bad treatment at the hands of a handful of men. So that's, you know, that's the that is the truth of the matter. It was then it became this activist movement, or maybe it was from the start, right? I'm not I don't actually know exactly what the origins were. And that nuance that I just put in, there was never part of the conversation that I heard. You had, you know, people mocking the hashtag, not all men, as if this were not true. And of course, not only is it true that not all men behave in these atrocious and could broke quid pro quo at work for sexual favors ways. But the majority of men don't. And that somehow was seen as the anti feminist anti woman, I said, I would say that I have internalized misogyny. And now I've got internalized reality. I think, you know, that that said, myself, like, I think the vast majority of women, especially when we're younger, have things happen that don't happen to men, and we wish they wouldn't. And it's used to be useful for all men to recognize that's actually something that is going on, but that was no way to, to bring that to awareness.

**Bret** 28:36

Yeah. Let me explain how this actually works. Yeah, go for it. Now, the, I think the thing is, A, there's a huge amount of bad behavior, and that huge amount of bad behavior and worse, is, you know, grounds for a movement, the problem is that the nature of the movement is such that abuse of the, you know, the hashtag is inevitable. And so what we saw was, there was a lot of energy because a lot of people have experienced bad treatment, and then the thing got carried away and suddenly, you know, nuance was being stamped out because it was understood to be dangerous in and of itself. And so the thing became a, you know, a mess of its own. So, I would also say, though, that people the older you are, I think the harder it is to appreciate how messed up the mating and dating environment has become for younger people. And that part of what is going on here is that you have people at every generation who have stories to tell about bad things that have happened to them, but that the way people are interacting that young people are interacting are so broken and pathetic. On such a faulty model of human sexuality, that there is a huge amount of dysfunction. And that huge amount of dysfunction is sort of being shoehorned into the same set of questions that would be raised by dysfunction that existed for older generations, and that the thing is a mask, because we all assume that we're talking about the same thing. I think we just aren't. Yep,

**Heather** 30:22

that's right. This is a comment. There was a news article this week that described how the Italians got curious and tested preserved blood samples for a research project in September of 2019. They found somewhere around 10% of the samples tested positive for covid 19. I have not heard of this. You're nodding you I thought yeah, have you? Do you think it's real?

**Bret** 30:43

Well, increasingly, I'm having the sense of Okay, now we have to sort between where are the tests broken and giving us some very false signal? Where are the tests accurate, and telling us something about the trajectory of the virus is very different than we thought. But I did look at that result. And I thought, well, that's pretty interesting. And I wonder why we're not doing more of this. I mean, just in the same way, the easy, of course, yeah. And of course, there are going to be samples that have been stored away and all kinds of different, different places. But it goes back to when COVID was first happening. And we started our live streams, we talked about the instance of Was it the Teddy Roosevelt, the aircraft carrier that

**Heather** 31:27

I think that was the name of that on there? I'm not sure.

**Bret** 31:28

In any case, we talked about the question of where are the places where there's some natural experiment that has been natural experiments, a term of art, but where nature has delivered you an experiment that you didn't set up like, an aircraft carrier in which you've got an outbreak, and you've got a population that's separated from the world, but you know, it has the disease spreading? And how do you make use of these things? And how stupid are we that we are doing foolish things like allowing such a ship to dock without being very careful to, you know, to keep the population separate, so that we can track this limited group. And this is more, this is more of the same, we have all kinds of opportunities, and we are missing the value that would come from just simply just figuring out where we are by using the obvious means at our disposal.

**Heather** 32:16

Yep. Next question. Might it also be that sexual tension between mentors and mentees causes the mentorship to be more effective, this could be tested by looking at same sex attracted pairs. So let me start, the final thing this can be tested by looking at same sex attraction pairs is interesting. And I think, yeah, I think that that would be the right the right test of this. The hypothesis, I doubt, I think there can be sexual tension between mentors and mentees. And everyone knows that these stories of people who held it together until the person graduated, and that turns out, they were in love the whole time. And they lived their lives happily ever after. And of course, there are a lot of those stories that don't end nearly so well. I think that must be a majority. My sense, both anecdotally, and just just more broadly, is that the last thing that you want, and the last thing that any of my female friends in graduate school, or anywhere else ever wanted, was any threat or prospect of any kind of sexual tension at all. between us and you know, either a mentor or frankly, door to an advisee you know, once we once I became a professor myself, like, you just you just do not want that to be there. And that's not to say that there that there isn't sometimes some something that is like a recognition that like, okay, you know, you're male, I'm female, and we're both straight. But you know, something that is fleeting and gone is quite different from the idea of, oh, there's this thing that we're both sort of not looking at, and that's upping our game. I would,

**Bret** 34:06

I would predict the opposite. Yeah, I would think

**Heather** 34:07

it would would slow down the game. That's, that's one thing.

**Bret** 34:11

You would have three categories here. Yeah. You would have categories in which the mentor was attracted, you would have category in which the mentee was attracted and category in which both were attracted. And my guest

**Heather** 34:24

hadn't been thought of this, right. Like usually it's going to be unrequited on one end, right. Yeah.

**Bret** 34:29

So the thing is, here's the reason I strongly doubt it. And I think actually we'll go in the opposite direction is to the extent that there's any reality in the idea that there's, you know, male wisdom about how to get shit done that involves poking holes in your friends work so that it gets better.

**Heather** 34:47

It doesn't apply within a romantic situation or the opposite applies.

**Bret** 34:51

And so to the extent that such attraction is exist, I would guess that they compromise that value if that's in fact, what's being measured, but it would be it's, you know, it's a, it's a hypothesis that goes in a different direction. So it'd be well worth figuring out what of these, you know, what is the effect of all of these things. But I agree that same sex attracted pairs is the way to test that hypothesis. Yeah.

**Heather** 35:14

And then this next question just follows up on that one. Maybe the person asks, but can Stein was homosexual? I don't know enough about best concerns. To say anything about that. Or does my rustle that can Stein examples suggest more to student teacher relations in the paper assumes paste, Lenny Bernstein and etymology of learn? I think there's a lot in there, but I don't know enough about the context. To know

**Bret** 35:41

Yeah, okay. I don't know either.

**Heather** 35:43

I would have been. Okay. I would have been honored to have you as my professors. I am a conservative born in Nicaragua raised in Venezuela adopted by this great country. Thank you. Indeed. Please chat about an idea. monetize US immigration draw. What is going on? Please chat about an idea. monetize US immigration draw by creating digital immigration currency. handout in worldwide UBI. With preference for us citizens exchange for citizenship, use passport info for civil resistance. generative foreign policy, I so I this is enough, outside of my wheelhouse, that I think even if this was, if this person had a paragraph to write it with all the words included, I don't it's not really anything that I know how to say much about, but I'm having a hard time even quite tracking the proposal.

**Bret** 36:35

Yeah, I don't, I can't make heads or tails out of it.

**Heather** 36:39

There are there are limits. And we we have in process a, a new way to ask questions that will hopefully be available soon, which may allow for slightly more characters for questions that aren't them. Okay, next question. Is there an evolutionary reason for people being more individualistic or going along with the mob? Our lizard brain phrase, the phrase, our lizard brain? made me think of how fish travel in schools and others not so much? And how that might apply to humans?

**Bret** 37:10

Oh, yeah, many, many evolutionary reasons. And I guess my answer to this would be we don't talk enough about niches and we haven't, we haven't broadened the concept to get full usefulness out of it. And this is a an extension of a principle that I use for for lots of things, which is that there's often something discovered in a field that's very, very important. And then it is hobbled by the fact that it is forever associated with the field in which it was first spotted, rather than broadened to its natural scope. So my favorite example of this would be diminishing returns, which I would argue, is the most powerful concept in all of complex adaptive systems. But because it's discovered in economics, people always think that you're using it by analogy, rather than it's a fundamental property of the complex, adaptive universe. And so in any case, niche is like this. niche is a concept that exists in many, many places. And the fact that niche is spelled out first in in biology is is hobbling and what I would say is that there are social niches that exists inside of human societies and inside of human groups. And that we adapt based on a developmental feedback system where we sort of detect that there's a niche, we explore it, if it seems rewarding, it gets augmented, and this has a lot to do with why there are birth order effects, for example, right, you're, then the home you were born into is not the same home that your elder siblings were born into, because they've altered what the available niche space looks like. So yes, there are going to be all kinds of reasons that you might be more susceptible to mob mentality are more likely to be an independent heterodox pain in the ass thinker or whatever. And they will have a lot to do with what niches were open to you when you were young. And that you, you know, the fact that a niche may have been opened doesn't mean anything if you didn't discover it. So there's some intersection of what was the total niche space, which part of it Did you find and what cascade of things did it result in? And my guess is, if we had that map for all of us, we'd know an awful lot about why our personalities end up the way they do.

**Heather** 39:39

Terrific. Next question, I work for a large public water utility and the role as a safety officer. Maintenance which can be deferred will require workers to be in close proximity. Should I inform the media to pressure my general manager to delay I've advised against it informed OSHA etc. Do I have a duty greater than less Going moral, if I go to the media, this will pressure my GM, my general manager, I will probably lose my job. What is your advice?

**Bret** 40:12

maintenance that can be deferred will require workers to be in close proximity now, I think is the implication.

**Heather** 40:18

Yeah. And and your job is safety officer. You know, we don't want to be offering advice. That is any, you know, it's no a legally binding or any of this right? Like we're not we're, we're not pretending to be in that role. From what little I've seen of this question, though, your job is safety officer. And the maintenance could be deferred, in your opinion as safety officer, which it is your job to determine. The only thing that we can't know here is what losing your job will mean for your immediate and long term future. Well, the other thing said, your job is safety officer. And the maintenance can be deferred, and people are going to be in close proximity right now, during the peak pandemic, presumably, I am assuming you're at the US, I don't know. But in some place with a lot of a lot of infections happening. I would hope that you feel free to go to the media. But it really depends on your personal circumstance.

**Bret** 41:34

Yeah. I would also say it depends a bit on what close proximity means is close proximity, so close that if you end up working with somebody who has COVID, you're very highly likely to get it? Or is it the kind of close proximity that we are regularly encountering in different things? Yeah, I

**Heather** 41:53

mean, I guess there is definitely a middle ground like is is the work that needs that doesn't need to be done, but is about to be going to be done? Is it such that each of the workers can excuse themselves every 15 minutes for five minutes, right? That that that the model that is developing seems to suggest that basically getting fully clean air with some regularity. You're not just having flow through in a space, but you're even if you're in a space enclosed, evacuating yourself from it with some regularity and coming back to it can be highly productive. So you know, is there is there a way to mitigate the risk at some cost, presumably to efficiency of getting the job done?

**Bret** 42:32

Yep. Or in this case, respirators. Seems to me that the problem with masks and face fields and things like that is that if the environment fills up with aerosolized virus that eventually overwhelms these protections, and you you breathe it in in a way that you can get an infection. But that there may be a higher level of protection, which would allow the work to be done. And then frankly, what I would do in your shoes, I think, is I would submit a report that said, here's the risk, here are the possible mitigating remedies that could be applied here is the rank order of their effectiveness. And then here is the possibility of delaying the work. And I would I think I would deliver that to my superiors and put the onus on them and you know, do you go to the media that's a tough one I think I don't know enough about situation to even begin to, to say whether that makes sense. It really depends on how much you know what population of people you're protecting from what level of risk Yeah, something like that.

**Heather** 43:52

Okay, we're gonna answer a couple more here before going to the questions from this hour. This one is two different comments from the same person have such totally different tenor that I thought I'd just read them both. power couple right here American needs to listen to leaders of our communities. Okay, thank you. And then from the same person, gender dysphoria is a result of misandry, also known as feminism, pay attention to who was causing the division in our country dragons of chaos. So I'm going to take issue with misandry also known as feminism. There is a lot of there there are there are people who call themselves feminists now and for decades now I've been privately to you and sometimes to my students been calling them foe feminists FA UX you have been called I have been calling them foe feminists who identify as being part of third and fourth and nth wave feminism. That Yeah, it is about it does have a strong misandry component for sure. But that is not inherently what feminism is and this is not the top of my list to you know reclaim that word but I will it is one of the words that I would like to reclaim feminism as as a word that doesn't mean that so let's take out the really the kind of it's not misogyny in this question it's like this anti feminism in this question and say is the claim is gender dysphoria is a result of effectively third and fourth wave feminists

**Bret** 45:33

like that's advertising

**Heather** 45:35

D stigmatizing but I'm having a hard time I mean really the argument could I've seen the argument that a lot of for instance the teenage girls who are transitioning many of whom then D transition afterwards to transition into becoming boys will say things like I just couldn't see how being a girl who's going to feel good and society and so you know they're responding to what they see as sort of a pervasive misogyny now I don't see that either I don't see a pervasive misogyny in society I didn't when I was a teenage girl I saw a lot of stuff that I didn't like, but I didn't see pervasive misogyny. So there you know, there are people claiming rampant misogyny and rampant misandry. And I do see that a lot of the you know, the woke culture is very interested in demonizing all that has had privilege in the past, and that includes men. But if anything, I think, gender dysphoria, to the degree that it's partially about hating on some group, it has been about hating on women rather than men because of the direction that we're seeing so much of the gender dysphoria happening now.

**Bret** 46:42

Yeah, I mean, I think, you know, let's do this slightly differently. We have a garbagey notion of maleness and femaleness that has taken over, and we are being told what we are to think of each and it all kind of sucks. And it's not surprising to find people who have through no fault of their own landed in one sex or the other. This is no good. I'm not all that excited about this. Maybe the solution is the other thing. Right? Right. So anyway, I think it's a I guess the question is why? Why is the questioner focused on one side of this equation, when in fact, it might be a predictable result of garbagey?

**Heather** 47:28

Well, so but it's but it's also true, and you just you may not know this, this statistic, which I believe I learned actually from Abigail Schreier, is, which is that, historically, trans people have been much more male to female. Yep. And, right now, the, just the skyrocketing numbers are specifically younger people with very often with almost no history or any history of gender nonconformity who are female to male right and so that, that change suggests a something that is you know, societal and, and such, but also suggests a, you know, a running away from femaleness,

**Bret** 48:11

right, but the question here is focused on gender dysphoria, and if I'm not mistaken, a lot of the wave of female to male transgenderism is actually not based in gender dysphoria. Well, they claim it as well. No, I mean, a, there's some claim of that. But I think there's an awful lot of recognition. And in fact, this whole, this whole terminology around trans medical ism, and transcom. And all of this is about the assertion that gender dysphoria is not required

**Heather** 48:52

is not required. But you but you hear as you hear a lot of the girls talking about sort of recreating in their past that they were actually do experience, were experiencing gender dysphoria. And then if they transition often saying, Yeah, well, actually, maybe that wasn't, maybe that wasn't the case at all. Yeah.

**Bret** 49:09

But in any case, to the extent that gender dysphoria is central to this question, yeah, it is consistent with the idea that misandry might be at the root of it, and certainly at this moment, all of the discussion about masculinity being closely associated with toxicity or being synonymous with that or whatever. Fits. Yeah, I

**Heather** 49:29

mean, it fits. Except that's not that's not the way that's not the group that is experiencing such a tremendous amount of greed, right? So anyway, I don't actually think it does fit given what the numbers say. Heather, you so we're gonna go through three more of these before moving to this hour. Heather, you had once mentioned that you've been working on a sci fi story prior to the Evergreen fiasco, where the planet goes through evolution differently, can you please tell us more about it and if it would ever be made. So I actually talked about this a little bit again at the end of the impact Every episode that I just did, how do you pronounce his last name? Do you know by? Bill you? Okay, I don't think you know, because you missed a letter.

**Bret** 50:11

So, you've now outed me. I'm sorry.

**Heather** 50:14

I'm sorry. Um, yeah, I would when, when our book is is final, there may be another book that I want to work on first, but I do, I absolutely do hope to go back to it, get into a form that I am excited to share it and then try to get it published. So I did, I wrote the science fiction novel, I was on sabbatical and literally finished the second draft the day the riots broke out at evergreen. And so have this complete draft that I'm excited about. And just just to correct one little thing in the question, it is about the search for evolution of consciousness on other planets. And so it it follows some people, some humans from Earth, who go to a planet, that they have reason to think, given the research program they're part of, might have not only life, but conscious life on it, and what happens there, that's tremendously fun to, to both figure out what the planet would be like from a physics perspective, and therefore what kinds of life might have evolved there. So my little my tagline to myself that I was imagining saying to potential agents was most good science fiction gets the physics right, but doesn't necessarily get the biology right. And I'm aiming to do both. So I'm pretty, pretty pleased with that story, but but it's going to be at least a little while before it sees the light of day. Next question, at what point do different species that share a common ancestor stop being able to interbreed? What exactly determines the cutoff point for this? So there is none. This is I mean, this is a question that we could both just say there's none. It's not that easy. And we could spend hundreds of hours talking about Do you have something intermediate between those two options?

**Bret** 52:06

Yeah, I mean, I would say there's certainly no, there's no point, right? lions and tigers can interbreed. They never encountered each other. They've been separated a very, very long time.

**Heather** 52:18

Well, but I mean, there is a point because lions and sea urchins can interbreed

**Bret** 52:22

now, but there's no. But the point is many things that are separated a lot less than lions and tigers can't interbreed. And so the point is, there is no point is arbitrary. When this kicks in, I would say the thing that is most likely to make it kick in is a change in chromosome number. The change in chromosome number is very hard to get past. And so anyway, that's not an absolute as far as I know, it's going to depend on what's on which chromosomes but

**Heather** 52:53

I suspect that there that it often happens without a change in either ploidy or chromosome number,

**Bret** 52:59

that the inability to interbreed, and you know, that we in biology, talk about pre and post psychotic isolation, you know, to creatures that can't recognize each other as potential partners, but could breed if their gametes came into contact or separated in a different way, but it's a very,

**Heather** 53:18

one of them's become diurnal, and one of them is nocturnal. So they just never meet that sort of thing,

**Bret** 53:21

right? Or don't recognize each other as potential mate, like, does not compute. Right? That. So anyway, all of these things are in play. But if you're looking for a rule as if biology was a machine, and there was a an instruction about, you know, interbreeding it, ain't there because it's very different in in different clades. Yep.

**Heather** 53:45

Okay, could arcis could a society breed out sexuality from the human species? No, is the answer to that? Would it mean that we would be bisexual?

**Bret** 53:56

But how do you breathe it out?

**Heather** 54:00

Well, the answer is no,

**Bret** 54:01

no. Okay.

**Heather** 54:04

Zach, there, I don't see a line here. Where do I start? Do you know? Actually, here we go. I think it's here. Are there any unambiguous videos of sex typical behavior experiments from babies or animals, you'd show to those who issue the notion of sex differences? I don't know I don't I don't keep track that with regard to videos. There's definitely there's solid research on babies, where male babies are more likely to focus their attention for longer on things and girl babies are more likely to focus their attention for longer on faces.

**Bret** 54:48

So is this about human babies I mean, animals is the person looking for examples of sex differences in baby animals that would allow people to understand

**Heather** 55:00

No I don't think it's baby had babies or other animals

**Bret** 55:03

Oh is the idea for other animals? Yeah

**Heather** 55:06

I mean I think really like any nature video like anything that Attenborough has voiced over practically shows sex differences I mean just look at Bower birds or moose or anything anything yeah yeah. Not a banana slug okay

**Bret** 55:22

the differences are small even you know monogamous creatures Gibbons for example. Yeah have substantial difference

**Heather** 55:28

Yeah. And also you know look to you know, long term pair bonded monogamous organisms like, like Gibbons, like swans and and yes, still see sex differences, even though they look alike, they sound alike, but they don't look entirely like they don't sound entirely alike. So, you know, with regard to animals, just about, you know, anything. And then there's solid research out there with regard to babies, I don't know if the videos are out there. And there's tremendous cross cultural evidence as well from you know, pre industrial cultures that there are differences, and that it's not a weird, you know, Western, educated, industrialized, rich democratic society construct. It's just not just not, okay. Why? Next question, are Asians so flexible? This is going to be about physical flexibility? Must women within hips be flexible to give birth? are men flexible as a consequence of female evolution? Why do Asians have thin hips are hip width and flexibility correlated in all humans? So this I happen to know is from someone who herself is Asian? I'm just going to say that less people get furious with us for answering this question. I don't, it never occurred to me that Asians were particularly flexible. So I'm going to take that, take that as a as a as a given here.

**Bret** 56:52

If the assumption of the question is accurate. Yeah, then

**Heather** 56:56

is that it's, it's fascinating, as always, right? Is there a correlation between flexibility and thin hips? The questioner hypothesizes that thin hips and women will make it more difficult to give birth. And that flexibility would be a basically an adaptive response to that difficulty. I think it's a fascinating hypothesis that never occurred to me before. I think it's likely and I don't know how, I mean, you could definitely find the correlation, find out if it's true or not. I don't know if it's true across other populations, right, then have some flexibility. But then how even if you found that to be true, across so you look at eight distinct enough populations of humans and you find that there is the thinner the hips, the more flexible the people in general, how would you if that were true, then test the hypothesis that the flexibility came after the hip width? And was about ease of giving birth?

**Bret** 58:07

Yeah, I'm not sure. I'm not sure either. But, yeah, it's worth thinking about. But I don't I don't have it offhand. All right.

**Heather** 58:18

What do you folks think about the injection of identity politics into the environmental movement? We regularly discussed this at Green route, podcast, dotnet, green rod, I don't know green route podcast dotnet. I will look into it. I'm I am excited at the idea that there is a ongoing discussion about identity politics, about the problem of identity politics, in the environmental movement, because that's, that's what it is. It's just it's getting in the way of so many important things. And, you know, we saw this just a little bit. I mean, I, it's a problem as the short answer. But I remember in advance of our study abroad trip in 2017, where we were doing a year long program. And so we had all of our students in 20, Fall of 2016, who were getting to know, and just little glimmers from a couple of students who were in this program about, you know, evolution, tropical biology and animal behavior and statistics and all of these things, and you'll go into the Amazon Galapagos and, and such, you'd get occasional offhand comments like, you can't focus on the environment until you solve problems of social justice. And that this was never, I remember two of these, and it never happened in class. But it was sort of offhand comments on field trips before we were abroad, over dinner or something, and, and I engaged them. And I think I think you overheard one or two of these as well. And it turns out to have been just this it was just a talking point, right? There was there was no real conviction or investigation behind these things. And frankly, in both cases, the students were surprised to explain against any pushback at all, because they'd become accustomed to being able to see this in, you know, among their, among their people, among their, you know, activist groups or whatever they were, and not have any pushback and so for me to say, Yeah, I don't, I don't, I don't see how you can make that claim. And at the very least, we have different positions that we will be fighting for. And saying that no one can fight for anything until we solve this other thing is going to mean a lot of a lot fewer people are fighting the good fight. Yeah,

**Bret** 1:00:31

in fact, it's the opposite of true. And it is, let's put it this way, it is a strategic claim. And it is either hostage taking where the idea is, we won't let you solve your environmental problem unless we solve this other thing first. So you better get on board with this other thing, first, or it is an attempt at coalition formation. But the problem is, first of all, we are arriving at a point in history where we have a dire ecological problem. If it was true, that the social problems that we have were intractable, but the environmental problem was solvable and needed to be solved, you would have to solve it. And if it took us another 100 years of major human social injustice where we had fixed the planet, so that we could continue to live here, that would be frankly, a small price to pay the fact of the, we have an existential threat that comes from the unsustainability of the way we live on the earth. Whereas there's a justice concern, which clearly, we can persist even in the state of injustice. So these things are not even of the same magnitude with respect to their import. But more importantly, the fact is, any bigotry at all, is bad for functionality, right? To the extent that you have biases at all, that interfere with your ability to find the best possible person to do the job. Your bigotry will make you less competitive. And so to the extent that there is a job to be done with respect to solving our environment, environmental problems, we want those with the most powerful arguments and the deepest insight about it to be leading the charge. And to the extent that you want to correct social justice, social injustice, is that you think exists inside of that movement before it can even move, you're decreasing the chances that we will fix the earth problem, and you have no right to do. So. Yeah, it's a nasty little connection that has been drawn and really is not logical. Yeah,

**Heather** 1:02:40

very much. So. Given your interest in the idea of evolutionary medicine, have you read nestea Williams book, why we get sick, the new science of Darwinian medicine? If so, what did you think of it? That's terrific. We've talked about it before here. We cite it in our book that we are finishing now. And it just it needs an update. It was what 93 I think something like that. 9390, mid 90s. It's absolutely fabulous. I don't think it's been a while since I've gone back and read it cover to cover, but I don't think anything in it as been any big claims are demonstrably wrong. But there was a lot more that we know like this was before anyone was talking about, for instance, epigenetics, things like that. Right. So it's, it's dated in that. It is, it doesn't say as much as it could. But it was a much needed first foray into a field that unfortunately has almost nothing as important as it to follow it.

**Bret** 1:03:37

Yeah. It's a very important founding book for the field.

**Heather** 1:03:43

I mean, we were lucky to randiness he was in our middle you at Michigan, we were in seminars with him and such. Yeah. And took us on, you know, he was not in your command is

**Bret** 1:03:52

not but I took his seminar on the book after it had come. Oh, ah, so anyway, that was that was good. We also knew George Williams, who died Not long after. But in any case, yes, it's very important. We do need a 2.0 version of that book, or a much larger series of books that deal with the full breadth of the problem. But yeah, it's the right idea.

**Heather** 1:04:13

Absolutely. Heather, I suspect Brett will disagree with it. But I would love to hear your evaluation of rands introduction to objectivist epistemology be well so there's going to be an around and and I never know exactly how to pronounce it but i think that's too Germanic. Anyway, I you know, I've read a little I didn't read that but I read either I didn't finish it I read either part of Atlas Shrugged or, or one of the other tones when I was in high school or college, and I honestly just couldn't get very far with it. And I've tried to delve a little bit but I don't I just I don't quite buy it. And there's not much more I can say about this because I haven't read this particular thing.

**Bret** 1:04:58

Yeah, yeah. You You're correct. I will. But I will say, prototype. It's Yeah, it's a it's it's foolish to try to implement this thinking or to think of it as very high quality because it isn't. But she was the first does it? Yeah, you're down a road that we might need to travel. Yes. And you know, I would say the objectivist philosophy has a piece of the truth. I would say, utilitarianism has a piece of the truth. Both of these things are wrong, but I'm fixing

**Heather** 1:05:31

to pursue with you how utilitarianism is wrong, we'd be not now given that we're old because

**Bret** 1:05:36

slavery is bad things like that. You know, it's just if you apply it. Oh, yeah, right. Okay. Yeah, but the point is, okay, can you fix it once Yeah, spot that hazard and you know, slavery to stands in for everything else that it will do incorrectly. But once you spot that, can you fix it? So you accomplish the thing that it thinks it's doing without the hazard of what ultimately happens if you just implement it too directly?

**Heather** 1:06:02

without introducing so many epicycles that it resembles its origin story? Not at all? And why are you calling it the same thing,

**Bret** 1:06:08

right? Or, you know, it takes you to the place, you've got to go to figure out what you're really trying to do. So maybe it doesn't look like it's

**Heather** 1:06:14

credited. But it's not still the same thing? Yeah, yeah. Do you retain anything in your waking life conscious from listening to something in your sleep subconscious regularly? I think this is asking a personal question to each of us, as opposed to whether people can is I think, you know, people, people can, you know, I make a point of not listening to things in my sleep. You know, I like dark and quiet for sleep. And so No, because I haven't, I haven't tried.

**Bret** 1:06:47

So I have one violation of that. I also don't want to be listening to stuff as I sleep. The one. She's been so long, it seems but you know, we were traveling a ton, right? flying all over the place, given talks and stuff like this. It was fun. It was fun. But the plane rides weren't necessarily fun. No, they're not. And you know, a lot of them a short trip, it was red eyes. And so I would very frequently put on my headphones and try to sleep

**Heather** 1:07:14

with music or with audio with like, or no music,

**Bret** 1:07:17

but which is only okay. wouldn't work with with spoken word audible or something. Yeah, yeah. And so did I retain anything? Well, here, here's the story you're looking for. But

**Heather** 1:07:27

hold on. You were never listening to music you've never heard before,

**Bret** 1:07:30

correct? Well, no, that's not true. Okay. I'd be listening in general to Pandora, which in general would be songs that I had heard before, but every so often, it throws you something you've never heard, okay. Okay, so I don't know what effect it has. But here's the here's the thing. First of all, I think we we are all quite different in this regard. And I don't know how many categories we fit into. But back when I was a tyke, when I was in college, I that's funny story has a lot of tendrils. But I was in this terrible biology course the intro biology course, I didn't really fucking need it, because I had already studied a lot of biology and was pretty deeply ensconced in it. And so I was like, in danger of failing this course. Because it was like it was the it was the weed out course designed to get rid of all the people who thought they were going to be doctors. And I didn't need to be weeded out because I was going to be a doctor. And this course was not interesting was taught by Robert reckless.

**Heather** 1:08:21

So yeah, this is a pen. No, yeah, a pen.

**Bret** 1:08:25

And actually at some point, I went up and I was like, I need Dr. Atlas, I need you to sign me out of this course. I need you to free me from it. Because we were past the drop date that I needed to get out. And he asked me, Why do you want out and I was like, it's killing me. I love biology. And this is terrible. And he was like, Oh, yeah, you definitely need out and he signed on the dotted line. But anyway, before that happened, I would fall asleep in this course, it was so deadly bad, right. And I noticed the pattern as I was sitting there trying to stay awake. And, you know, I was just, it just was so soporific that my I would close my eyelids, I think, okay, that's all right. I can close the mic and listen, right? And then there was a point before actual sleep set in, but the sequence was okay, eyelids close. And then I'm listening, and then the sound cuts out. Right, and the, the room goes silent. And that was like the moment, you know, 15 seconds before sleep would set. And so anyway, what I know is that for me, my auditory cortex cuts off input from my ears, presumably because I'm pretty auditory. And it's borrowing that resource for dream stuff. And so anyway,

**Heather** 1:09:43

Oh, that's interesting, right? So that's, that's very interesting. I suspect that you and I are very different in this regard right back to being so much monitoring me being so much more visual and that actually I am. I am more sensitive to auditory disturbances in my sleep. environment that I think you are and this would this would fit with that

**Bret** 1:10:03

right and it also fits with the fact that if I am doing something thought wise if I seem to be doing nothing but I'm deeply engaged in thought I'm doing it auditorily right so my ears are off I've noticed yeah I know you have completely maddening right but i mean it's like literally it's not like oh I'm not tuned into that channel it's like no actually there's a there's a cut off and yeah that that gate has been flipped

**Heather** 1:10:30

yeah no man this people will imagine this is like this is just what you know men or women do have been married for a while like no not like I'm sure there's some of that but but there is he does a different mode be like wow, you didn't hear those last three things and it's true that sometimes you can give a response you can give a response even from within your state but it does it has a different it has a different tone I feel like in retrospect and I'm be like right you just weren't you just weren't even in the room right your body was

**Bret** 1:11:03

working but here's the thing is if you do get my attention right I've been lost in thought my mind has been doing stuff in an auditory way and my ears have been off and you trigger me to hear there's like a buffer of 510 seconds worth of what has been said that I can actually recover Yeah, yeah at

**Heather** 1:11:27

which point it would sometimes in a way feel to be like well then you were just ignoring me right you were listening

**Bret** 1:11:35

or I'm glad we've had this little talk sooner or later this was gonna result in divorce if we hadn't discussed this but no, this is absolutely real. Yeah,

**Heather** 1:11:45

no, I know I mean, we have we have had this conversation a little bit. Yep. Okay, a couple more. One working hypothesis masquerading by both sides distancing minimal interaction will result in lower exposure and therefore less severe non obvious effects versus deaths infection resulting in a higher positive v test right but negative v mortality implications question mark what's what's what does that positive v me and you know positive V and negative v feel like it's a known thing that I just don't recognize? Do you know Zack?

**Bret** 1:12:23

I'm still having trouble parsing this question working hypothesis mask wearing on both sides both people distancing with minimal interaction will result in lower exposure

**Heather** 1:12:35

So far, so good, and therefore less severe infection

**Bret** 1:12:39

possible that fits with stuff that we talked about a lot in the early live streams

**Heather** 1:12:43

density dependent and its density dependent both in terms of are you likely to get it and if you do get it how severe is it likely to be? But I don't so I think that's a hypothesis that we've proposed I think I don't know. I don't know what the V test rate is. Yeah, I'm not sure what more to say about this except that i think i think what you've described is pretty accurate and the dog is telling us we have been here for too long long too long

**Bret** 1:13:12

time to pay attention to the dog

**Heather** 1:13:14

Yes. Finally things out. Okay, that's fine. I think this is an option live in China debt free. All debt absorbed, able to practice unfettered in your field and reverse Operation Paperclip, or state woke us.

**Bret** 1:13:39

God. Yeah, that's a rough one.

**Heather** 1:13:43

Reverse Operation Paperclip. Yeah, boy. Yeah. I don't

**Bret** 1:13:53

I don't know. Can we go to the Bahamas instead? Yeah.

**Heather** 1:14:01

Okay, let me let me find

**Bret** 1:14:05

state woke us that doesn't sound like fun. But you know, the problem is, the problem is you've set up a lose lose. situation that I'm going to try to forget you ever mentioned as soon as the broadcast is over. Okay, we're gonna

**Heather** 1:14:27

finish on this question. Yeah. Did you know that the earth is flat and dinosaurs never existed? Yes. That didn't result in much. Okay.

**Bret** 1:14:39

Yes, the Earth is the earth is both bumpy and also round. And dinosaurs did exist, and they still do. So I'm not really sure where you're coming from.

**Heather** 1:14:54

Okay, we're gonna finish here. This is the last question a question just came in. And we'll return Do a few of these next time. Post lockdown study in Wuhan, China shows there were no infections from asymptomatic people and published in Nature magazine are masks and lockdowns, pointless to people with no symptoms if it is true. So I think this is a I think this is a reference to a paper that I saw and didn't get to spend much time with. But the description is, is very much like this. I wasn't sure that it was. No, it was China, that they did such a complete track and trace that they found that asymptomatic people who were nonetheless positive, we're not not giving the giving the man in the virus. Yeah, but but but I believe that what they could not see with this study, and I can I'd have to spend more time with it is that the a highly infectious period for people who do end up being quite sick from it is very early in the infection. And when those people who will become symptomatic are still asymptomatic, and those people who are temporarily asymptomatic, but will become symptomatic, are not included in this list of asymptomatic people. So what we have is two different kinds of asymptomatic. And at any moment that you are asymptomatic, you don't know, if you you know, maybe you're just not infected, maybe you're asymptomatic, and you always will be and you're one of these people who gets it. And it seems to mean very little, hopefully there aren't long term effects, who knows. And maybe you're one of these people who is asymptomatic at the moment and will become highly, very sick. And in which case you're asymptomatic thing right now is probably correlated with high infection, right? So I mean that from if I'm, if I'm thinking about the same paper, I have to spend more time with the paper, that's a really important distinction as being missed. In the assessment of this study that asymptomatic is not one thing, and only one kind of asymptomatic is what this paper is talking about.

**Bret** 1:17:00

Yeah, this is what I was gonna guess here. And I think, at least in some of the neurology community, I've seen this point made about pre symptomatic versus asymptomatic, right, but

**Heather** 1:17:10

it looks You know, when you don't know which it is you're looking at, you might use that term asymptomatic as an umbrella term with asymptomatic and pre symptomatic as terms of art. But one of the term of art terms of art and one of the umbrella and the umbrella term are the same. And that just makes communication nearly impossible. Right.

**Bret** 1:17:27

But from the point of view of this question, the answer is then masks are useful, even in the case of people who don't have symptoms, because some of them are pre symptomatic and likely to be infectious before they know they're sick. Right.

**Heather** 1:17:38

But, you know, good, really good testing, and really widespread testing and really rapid testing would solve this problem. We'd be able to get there.

**Bret** 1:17:51

But really good testing key. Yes. Because cruddy testing, beginning to be concerned about credit testing being widespread and creating whole different problems.

**Heather** 1:18:01

No, you're not. You and I were both concerned about that in April.

**Bret** 1:18:05

I think we may have a new version of the problem. But anyway, we'll, we'll return there later.

**Heather** 1:18:10

Okay. All right. I think we will stop there today. It's been a while we've been on for a while. So join our Patreon. I will be, like I said, opening up that window for questions to be that we will be answering in our q&a not tomorrow. But next Sunday, shortly on my Patreon, look at the clips channel. Check out various things, check

**Bret** 1:18:35

out various things and have a fantastic Thanksgiving and yes, not American, it doesn't matter. It's a perfectly excellent idea to have a holiday based on thankfulness. And as much as this has been a really truly sucky year in many different ways. We have a lot to be grateful for. And

**Heather** 1:18:57

we do get through it. And if you can, if you can enjoy good food and be aware of the people you love and who love you, even if you can't be with them. That is a blessing.

**Bret** 1:19:09

Yep. All right. Well, everyone, see you next time.