Your Questions Answered - Bret and Heather 79th DarkHorse Po...

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**SPEAKERS**

Bret, Heather

**Bret** 00:13

Hey folks, welcome back to the Dark Horse podcast live stream q&a numbers number 79. So are there any questions this week?

**Heather** 00:23

There are a lot of questions this week, there are a lot of questions. And I love that we get so many questions. And I always feel a little bad because I know that means that there's a higher percentage of questions that we won't get to. And the sort that we do in real time is very rough. So often we miss questions that are great.

**Bret** 00:42

So I'm gonna turn over a new leaf and just talk faster and more succinctly and see how that goes. No, no, no, no. Well, it didn't last.

**Heather** 00:52

Go for it. I'll try to but I don't think it'll work. We'll see. We'll see. Okay, we'll begin with a few questions from last week. Can expensive low utility stuff like jewelry? And the expectation that men buys it Hold on.

**Heather** 01:13

What was that?

**Bret** 01:14

I don't know. The cat did something under the table.

**Heather** 01:17

Yeah, he's, he's sending us a message that our failure to give him treats during the break has been noticed. Hey, yes. Okay. I'm gonna I'm gonna start over. Can expensive low utility stuff like jewelry and the expectation that men buys it be explained as a hobby and costly signal of fitness or something else?

**Bret** 01:35

Yeah, you nailed it. It's the term the the idea goes back to Thorstein Veblen conspicuous consumption. And

**Heather** 01:44

the hobby doesn't say felt when does he? I don't.

**Bret** 01:48

I don't think Xavi does say Thorstein Veblen, but clearly conspicuous consumption is the right modality to think about it. However, I would say that, that the reason that the signal works is that it is not entirely unfavorable, but it is unshakable at a particular level. And so if you think about somebody drinking an expensive bottle of wine, it could be that they have spent their last 50 bucks on a $50 bottle of wine. But if you see somebody drinking a $50 bottle of wine, it's a lot more likely that they have 50 bucks to burn. And so anyway, especially if somebody engages in repeated signaling of that kind of tends to be indicative of resources. So yes.

**Heather** 02:35

Yeah, boy, there's just a lot more I want to say here. I had not actually ever put those two things explicitly together before. So this is, so I can just show quickly, this is the paper in question. You know, from which a lot of interesting sexual selection theory stemmed. zahavi from 1975 made selection selection for handicap. But I think you're right i just don't even know when I'm so much less familiar with like the social science literature. I don't know when veterans Mellon was was writing I think maybe decades earlier. Yep. Potentially.

**Bret** 03:07

much earlier. Maybe. Yeah. Maybe more than decades. But in any case, yeah, I actually did have this exact connection in the chapter of my dissertation that I was forced to remove. Oh, yeah. Yeah. So anyway, yes. But conspicuous consumption is the right neighborhood I should say, I'm a limited fan of zahavi. I don't believe the pure zahavi handicap principle is accurate, but I believe the reality of sexual displays is in the neighborhood of, of handicap.

**Heather** 03:41

Yeah, so apparently, it was in his inventions theory of the leisure class, where he introduced the concept of conspicuous consumption which was as you were maybe getting it published in 1899. There you go. t 99. Yeah, so surprising there. Anyway, that's all probably have no interest almost anyone but here we are. Okay, next question. A warm day in winter. Walking in woods, I follow an odd sound to a tree which about 70 squirrels were barking. Have you heard of such behavior?

**Bret** 04:15

Wait, what? 70 squirrels 71

**Heather** 04:18

certainly the the barking and sometimes, you know, several in nearby trees at one another, but 70 in one tree. I've never, never had them describe

**Bret** 04:27

the fungal environment around this area. Did you encounter any interesting mushrooms

**Heather** 04:36

that you or the squirrels ingested?

**Bret** 04:38

Right. Well, I think there's only one well, flying squirrels eat truffles. I don't think other squirrels eat mushrooms very, very regularly. But I do you think that this question suddenly squirrels in? Are you sure? I mean, that's awesome. That's awesome. That happened and I'd be

**Heather** 04:55

aware Yeah, so there's no indication here of of the location except that There's a forest and there's winter, which narrows it down somewhat, but not sufficiently.

**Bret** 05:06

Two bands

**Heather** 05:09

of latitude, but interest. lots of places in the temperate zone.

**Bret** 05:14

Yeah, that's true. That's true.

**Heather** 05:17

So no, in short, but fascinating. Bless you. I'm sorry. How do you think the null hypothesis works in regards to taking the COVID vaccine? I have a friend who thinks the null hypothesis would be that taking the vaccine has no long term effects?

**Heather** 05:34

I'm not sure. So I thought this was important to just try to respond to but I'm not even sure how to frame

**Bret** 05:43

the So first of all, you don't want to confuse the null hypothesis with a prescription for the course of action. Right? The null hypothesis is about the presumption of what is likely, right. The precautionary principle, I would say when you're talking about issues of health sits on top of that.

**Heather** 06:03

So maybe that's why I'm confused by the question that your null hypothesis and what should I do isn't the same kind of those two things don't interact? Yeah, you need a layer, you need like a moral layer or a judgment layer on top of the scientific layer in order to decide what to do.

**Bret** 06:19

Right, exactly. So I would say, with the question of null hypothesis painting with a broad brush, no hypothesis is a description of where the presumption ought to be. And the presumption of long term hazard ought to be that there isn't one unless the number of systems interacted with and similar influences are such that, you know, you know, the no hype, wouldn't be null hypothesis. But in any case, the precautionary principle says in the area of your health, you want to treat harm as presumed in order to protect yourself, it does not tell you to expect harm on the basis of it being most likely, right. It's so the point is, it is a it is a choice to air in a particular direction, so as to remain safe.

**Heather** 07:19

That That is true. That is about the precautionary principle, though not about the null hypothesis, I persist, in my sense that I'm not sure how to apply null hypothesis to a question of, you know, does the COVID vaccine have long term effects or not?

**Bret** 07:38

Well, I mean, I think it's clear at the level of null hypothesis, we assume it doesn't have long term effects until we've seen that it does, but we should behave as if it will, because that makes us safer, okay?

**Heather** 07:58

This is from the discord, this, this weak statement, manmade climate change resulting from increasing co2 content in the atmosphere is driven by man's use of fossil fuels. This is the existential problem of our time, and all of society needs to be radically restructured in order to prevent catastrophe. That was one part. What do you think about the so called scientific consensus on this notion? What does this say about the perversion of science as you see it in context of the hoard performance of science on COVID-19?

**Bret** 08:27

Okay, I would say, one, I don't trust scientific consensus, in some sense, scientific consensus, unless it has a very specific route that it arrived is an oxymoron. Right? So science, leaping to consensus on complex matters is evidence of something gone wrong. I do think the climate is changing as a result of anthropogenic activity, especially the release of these light, these energy trapping compounds into the atmosphere. In my case, I think in your case, we believe that because it does not depend on complex models, where the scientific consensus matters, it depends on very simple phenomena and very simple observations, which we can check. And so part of the confidence that this is a serious problem comes from Yes, not perfectly conclusive, but certainly very provocative observations about plumes of methane being released from the Arctic, for example. glacial melt, but I would say glacial melt is actually a really good indicator of where we are, because the most alarming proposals about where we were with respect to climate change would have suggested an ice free Arctic, you know, by last summer, for example. All right. I mean, I saw many But I certainly saw that projection and of course it failed. There are still glaciers on Mount Kilimanjaro, they have retreated substantially, there are glaciers and Glacier National Park, they have retreated substantially. And so what I would say is, something is clearly going on, it does appear to be anthropogenic, it's very dangerous in the long run, especially if you understand the amount of methane trapped in a frozen form in the Arctic, and the possibility that it will be released in a way that causes severe positive feedback, which could then cause human interference in the system to be a minor contributor. So anyway, there's every reason to take it seriously. But there's also every reason to imagine that those who take it seriously have enforced the kind of discipline on what can be said that has artificially silenced evidence that goes in the direction that it may not be going as fast as we think, or be as dangerous, etc. So I'm very concerned about the consensus. I'm also very concerned about global warming. And I think all of these cases, in which we see a rush to a scientific consensus, you know, the lab leak being a primary example, the fact that people circled the wagons around the idea that anybody who thought that this leaked from a lab was obviously unsophisticated biologically and didn't understand what goes on in the laboratory, or what technologies are at people's disposal. That turned out to be garbage, some of us could see very clearly that it was garbage from the beginning. And it required impossibly high levels of immunity and endurance to get through the stage right, now we can finally talk about it in public. What does that say about the hazard of vaccines, what we can't seem to discuss in public now is, you know, it's lagging the lab leak discussion, but we're headed in the same direction, we're now beginning to talk about the complexities of these technologies we don't understand. So okay, now you've got climate change, you've got the laboratory, possible laboratory origin of the virus, you've got vaccine safety. And if you keep going into these big fields that study complex phenomena, you will find this repeated again and again and again. So what it says is something about the mechanism has allowed too much politics or too much market force to influence the study that really requires insulation from those things in order to be done properly.

**Heather** 12:32

That's excellent. I guess the only thing I would have to add is that unfortunately, many of the scientists who are investigating these complex systems a are actually trained in reductionist science as opposed to in emergent science, and they're buying their own press that they, there seems to have been, and I suspect that it just happened as opposed to it was designed, but who knows? a, a conclusion that the American and maybe the entire world, but certainly the American populace is just too stupid, uninformed, uninterested, to understand complex scientific findings. And so we're not, not only Aren't we going to assume that you can, but we're not going to let you be exposed to the information at all. We're not we're not giving you go there, we're gonna tell you what you have to accept, and, and move on from there. And, you know, I do think, you know, as exactly this question suggests, as much as you know, you and I are in a very different place with regard to what we actually think is going on with regard to anthropogenic climate change. And, you know, in terms of we both have seen evidence that we find deeply compelling of anthropogenic climate change across many systems. Whereas for many months, the, the mainstream science that we were being told we needed to accept was exactly the mainstream science on COVID that, that we were arguing against, and yet the authoritarian methods by which we are told that we must accept it seem nearly identical. And I feel like that that toolkit just got sort of lifted and moved over, you know, from, from from climate change space to COVID space. And that's, that's appalling for Additionally, the reason that now we're going to have even more people questioning the legitimate results over and climate change space, and also the legitimate results over uncommon space like science remains this process that we need that is the best. It's you know, it's inefficient, but it remains the best method we have for getting to an understanding of what is true in the world. And we've got these inane hashtags, like trust the science and follow the science and people who hear that and hear the garbage coming out of people's mouths will go well, I will never trust the science or the scientists again. And like, no, everyone has Almost everyone on Earth has or has had the capacity to understand enough about how to understand what is true via the scientific method to assess some of these things on your own. And mostly, we're just not being allowed to even access the information.

**Bret** 15:14

Yes, and I think it is worth adding one, arguably more trivial instance to our list here, because it makes the point in one way, it makes the point more extremely than any of the others. This has to do with masks and the outside environment. And the reason I raised this is that one way to look at it is, you know, an abundance of caution causes you to wear a mask outdoors when you don't need it. And that's not a huge problem. It isn't a huge problem. But it is a problem, it does interfere with normal social interactions. And we have no idea how much of the breakdown of normal social interactions is being accelerated by such things. And it does interfere a little bit with the creation of vitamin D, which does protect you from COVID. And so it probably be good to have more skin exposed,

**Heather** 16:07

it's actually a huge problem. So you know, it makes people less likely to go outside because outside is now not that much different from inside. So the more likely to be in the side where they're more likely to get the damn disease in the first place where they're outside that might be actually exercising, where they're going to be healthier, they're going to become therefore more resistant to the disease and bad, bad ramifications of the disease. Everything about it is actually dangerous. And you know, they what, what's the harm? People remind me very much the like, if you don't have anything to hide, then you shouldn't care about privacy, like, Well, no, you're misunderstanding things that are really fundamental level,

**Bret** 16:40

I agree about this, I do think any individual instance of wearing a mask when you don't need one is trivial. The net effect of a year of wearing them when we didn't need them is anything but trivial. So there's some sort of conflict between those two things. But the thing that struck me as I was considering this particular puzzle was outside. Almost all of the world is outside. Right? It's 99% plus of the world is not indoors. And so a regime in which you imagine you're in jeopardy of COVID, anywhere you encounter a person makes 99% of the world that is actually probably plenty safe, threatening. So what kind of lie is it that takes that fraction of the world and causes you to fear what might happen to you there, when in fact, the useful thing at the point that COVID descended, and we lost our opportunity to control it. And there's a lot to be said about what might have been done back in March of last year, or whatever. But at the point, you've lost control of COVID, we needed to take a deep breath and say, Look, this is bad. But there are some things about it that are a lot better than they might be. Here's one, you don't have to worry about surfaces that makes the complexity of making yourself safe, that much less. Second, outdoors, you're almost perfectly safe. And we need to jealously guard these two things, right? We need to not give it a path to learn these tricks of being spreading on services or spreading outside or spreading to the young, which it is now seeming to learn. Right. But the point is we had these opportunities, we were robbed of a lot, but we were also given some opportunities and the consensus that lied about outside and is now not even acknowledging that that's what happened, but pretending that maybe it's time to lift the requirement on mass outside, when in fact it was always time to do that. Right?

**Heather** 18:48

Well, and specifically, it's being framed as if, you know, it's only safe if you're vaccinated.

**Bret** 18:52

Right? Yeah, another another one of these perks that's going to be offered in order to,

**Heather** 18:59

right, everybody just completely confused the logical discussion, you're in what? I can't even see my way to following the logic of you can be masked outside if you're not if you're vaccinated, but not if you're like, I don't see how that works. And frankly, I've seen now a couple of examples of schools who are treating masks as reward and punishment where like inside I won't be able to call it up right now. But you know, if some some group of kids if they won some competition, they got to go without a mask for 20 minutes. And if they came in second, they got to go without a mouse for 10 minutes like that. How about if we talk about seatbelts instead? Hey, hey honey, you want your baseball game so you get to ride home without your seatbelt? Like what kind of complete lack of recognition you know either This is simply performative, this is all theater, alright and they know it and and and those administrators at that school know at which they don't right Or this is actually providing safety in which case How dare you use it as a carrot and a stick for children who are trying to develop a sense of what to do and how to be in the world and will begin to see all rules as theater. Yeah, right. It you know, all rules aren't theater, some things actually provide safety and some things don't. And we should reduce the number of things in the second category and increase the number of things in the first category and not not conflate them and not be like, well, a rule is a rule. No, no, it's not.

**Bret** 20:30

So I guess the upshot of all of this is that where we can check, what we find is rampant use of the authoritative voice of science to spread stuff that's doing other things and it's driving some of us crazy and I think you and I are in the fortunate position, because we've been trained in science to offer some corrective but boy as the pushback incredible when you just try to say the obvious things. And so anyway, yes, it's it does diagnose the system.

**Heather** 21:04

Yeah. Now I will point out that you're opening top of the hour decision to be concise and fast as has not gone well so far. So we're like a half an hour. I

**Bret** 21:15

haven't started that part. I

**Heather** 21:16

see. Okay, well, now we're gonna do Okay, okay. I've sugar ants in my new Portland apartment. It breaks my heart to see them walk into traps and die. Do these small creatures have any self awareness or emotions? Are they conscious? Or are they basically machines? I still hate to see them die. And this from someone who identifies themselves as lefty, but not loony?

**Bret** 21:35

I appreciate Well, I'm going to work from what I know about sugar ants, which is that they are ants. Actually, I've never heard of sugar ants. Is that a special category of ant? Yeah, okay. All right. So

**Heather** 21:51

I don't know if it's, if it's a if it's a good group phylogenetically. But it's it's a term that people use. Alright,

**Bret** 21:55

so here's, here's what I suspect. And I think this, I've thought about this a lot, because there's there's a question about how to how to allocate your compassion. And I do not believe that there is any reason to suspect that arthropods which includes insects, which includes ants, have a subjective experience of the world that is not thinking that they have a subjective experience does not help us explain anything that we could observe about their behavior that we can't explain with automatic algorithms in neuro neuron form. So what that says is, we can't be certain that they don't have subjective experience. But we don't have a reason to believe that they do. And therefore, we should probably assume that they are little robots in the narrow sense which don't experience torment or pain, they have circuits that cause them to behave as if they do because those circuits work for the same reason that circuits that do allow you to have torment or pain work. So I would say, I wouldn't talk to these animals, because you can't be sure of that. But I wouldn't be too worried about the fact of causing them to expire, I would default to mechanisms that don't toxify your environment and don't torture them more than necessary. But I will say, all of those creatures are headed for death in one way or another, that that's what happens in nature. And you know, you can't, you can't let the mosquitoes in your house survive because you're afraid to do away with them. Likewise, you can't have ants raiding your pantry.

**Heather** 23:44

Okay, well, we need to move on. But I agree with everything you said, except the idea that they're all headed for death one way or another. That's that's a terrible argument. We're all headed for death one way or another. I think that's an absurd argument. Well, I'm

**Bret** 23:57

only making it in the context of the other argument I've made, which is that I don't think that their suffering is suffering. I can't be certain of them. But in terms of figuring

**Heather** 24:06

out that hasn't anything to do with the fact that they're going to die eventually, we're gonna die too. But we do suffer?

**Bret** 24:11

No, but in some sense, at the point that you establish a building, right? You are saying I'm going to reduce the amount of habitat and therefore I'm going to reduce the number of creatures that would live in this habitat by some amount, you're effectively signing creatures up for failing to exist. And so the only question then is, is the animal suffering in my eliminating it or am I just following through on the commitment I've already made by establishing that

**Heather** 24:36

makes sense? That makes sense. All right. A few weeks ago, you endorsed ExpressVPN they know everything about your internet usage. If someone hacks them or buys their company, then all of your activity will be exposed. Can you say something about why you are not worried about this?

**Bret** 24:53

Well, yeah, I can say that. I am in no position to know for certain But what I believe is present is a insulation of meaningful information from capture by somebody who would purchase the company. So in some sense, I think the assumption that all of this information is captured and therefore purchasable is an error. If that is wrong, I'd be very interested to know it because it's an obvious owner ability. So I'm open to input, but that is my that is my belief in why I'm comfortable with such an endorsement. Yep,

**Heather** 25:33

I agree with that. Do you have any thoughts on the roundup herbicide glyphosate, and predicted rising rates of autism in the coming decades? Is this just YouTube hysteria or something legitimate to pay attention to? I have not explicitly seen a connection made between glyphosate and autism. But I've seen a connection made between glyphosate and lots of other things, compellingly that we do not want. And I find glyphosate to be one of the horsemen of the apocalypse.

**Bret** 26:01

Yeah, I agree glyphosate is very dangerous. How dangerous? We don't know, in part because Monsanto spends such a huge sum shouting down anybody who attempts to raise proper alarm about it. And so anyway, yeah, I think this is one of these places where we scientists are supposed to say certain things about GMOs, right? GMOs are safe, that's supposed to be our line. And then we're supposed to explain that you in the public don't understand that gene genes have been modified in organisms by people for 1000s of years. And this really isn't any different. And the fact is, that's a nonsense analysis. And the public is not in a position necessarily to know why it's a nonsense analysis. But glyphosate is one such reason, right? The pairing of roundup with Roundup Ready crops, is really what the story of, of GMOs needs to engage. And so I can't say anything about autism, either. I don't know anything about that connection, have no reason to think it's a thing, but I would certainly be open to evidence that it was it wouldn't shock me. Welcome to complex systems. Yeah, you're intruding in a complex system with a novel molecule. But yeah, it's it's a, it's a dangerous game we're playing and just the simple amount of glyphosate that is being used in industrial farming is enough to cause really substantial worry.

**Heather** 27:30

Okay, next question. As a woman who truly believes in equality of opportunity, and not outcomes, can I in good conscience apply for a job, which I know is only open to female applicants? The job description is otherwise deeply appealing to me? I think so. But I guess I'm surprised. I didn't know. I didn't know that that was happening, that there were jobs specific. There's obviously a lot of this going on sort of behind the scenes, and some types of job positions that are being produced, they're being created out of thin air that are, you know, only for people of color, or for women and such, and it says it's open. But it's pretty clear that it would be very hard to get hired if you had a particular demographic marker, which should itself be against the law, of course. So I'm curious. I'm curious what kind of job this is. And frankly, if it's actually only open to female applicants, that being explicit, makes me feel better about it, then if it's this hidden thing, and everyone thinks that they can apply equally and then you don't, actually it was it was decided in advance that only a certain subset of you fulfilled certain demographic qualities would be able to get the job. You know, I would hope that you could do something to speak against such kinds of hiring practices in the future where you to get the job?

**Bret** 28:59

Yeah, I would say you need to be very careful to the extent that those who have values that would suggest this isn't a proper way to hire, don't take the job because they don't want to be sullied by it. It means that those who would make such decisions are empowered more.

**Heather** 29:20

Effects scenes work the way they're advertised in terms of granting immunity. Why would a vaccinated person ever have to worry about an unvaccinated person? Why still wear masks post backs if the receiver is vaccinated as well? It's going to be about breakthrough cases. I think I think the only the only thing that I can think of and I have given this some thought is that, you know, some number of people who get vaccinated still can get sick with the disease. That said, part of being vaccinated is obviously about actually not getting the disease and part of it is about being able to return to the life that you had before. So I don't know why we're being told that vaccinated people need to be worried about unvaccinated people. You know, so it's true at a tiny level, that you could get sick if you're vaccinated. But I think more to the point, this is once again, not science, but social control. This is about this is about messaging and narrative and reinforcing the, you know, like, the good people get vaccinated, and the bad people resist and you know, and we can keep going down and going down the lines of, you know, all of us will fall into at least one of these camps where suddenly we're not the good person anymore. And, and once that happens, once you recognize that you go like, wow, you're not actually using logic with me, you're just you've just decided that I'm not your tribe, and therefore you can hate me.

**Bret** 30:53

Yeah, I think it's about punishing independence. And it's also about making simple rules that do not force you to acknowledge a complexity. You know, the idea that people who have had COVID should obviously get the vaccine to add is anything but obvious. And the problem is, if you say, Well, actually, people who've had COVID, don't need the vaccine because they've effectively had a vaccine, and these vaccines are more dangerous than they should be, because we know nothing about their long term effect. So it's better to keep those people from having the extra risk. If you say that, you've what, there's risk, right? Yeah, you've done that. So instead, we're gonna expose lots of people to risk that they don't need to face.

**Heather** 31:39

I mean, this is part of what we tried to get out. I think a few weeks ago, when I was alarmed at the I don't remember it was Pfizer and Madonna. But one of the CEOs said, Yeah, actually, we think there's going to be need to be yearly boosters. And, you know, it is what it is you either either that's true that this is more like a flu vaccine than like a yellow fever vaccine or not. But if that's the case, then having had COVID is not, you know, it's not going to provide lifetime immunity. And it may, you know, is it yearly? Is it twice yearly? Is it once a year, every other year? You know, who Why did we just land on every year? Because that's easy to put on your calendar? In the case of flu, because it sees it all, but is COVID? seasonal? We kind of thought it might be but now I don't know, you know, it's really hard to tell that the tainted just or we're not being shown the data in a clear way. And so, you know, if the vaccines are everything that we hope they are, having had COVID doesn't provide lifetime immunity, it seems and therefore, in order to be protected, you Bo perhaps should should be expected to get vaccinated at some point. That said, increasingly now COVID vaccination is being required to do stuff, like go back to school. And, and people are saying, well, it's just like, you know, just like the MMR vaccine. It's like, well, the MMR vaccine is once as an adult, and maybe you get every 10 years, your titers, Jeff and I don't actually even remember if that's the case, but it may just be once as an adult. That's very different from if suddenly we were told, you're required to get a flu vaccine, and I'm not equating flu and COVID. I never have, but it's very different from being told you need to get a read up on a vaccine every single year.

**Bret** 33:30

Well, there are two things in play. One is the decay of your existing immunity, and the other is the evolution of the virus and its need for a new vaccine. That's up to date.

**Heather** 33:41

Yes. And you've made this clarification before and I confused? I didn't, I just didn't specify lump

**Bret** 33:47

them. Yeah. But the they're really very different. And which one of these are both that we're dealing with is important. And the fact is, we know very little right? We're learning a lot about how this thing is evolving. Now, how it's evolving in response to the vaccine is a very important question. And then there's another question, which is how long does your immunity last to the initial variant? You know, maybe it does last a lifetime. But that doesn't buy you. It doesn't get you out of boosters, if the thing is evolving at a rapid enough rate. Yeah,

**Heather** 34:19

yeah, that's right. mRNA vaccine particles can't self replicate so much less quantity of cells that can even produce spikes compared to a COVID. infection. Quality quantity matters. So vaccines are probably very safe by comparison. So it was it was hard to read. But I I I suspect this is right. Right. And this is what we talked about at length right. In the first hour. You know, comparatively, I suspect that the vaccines are safer than organic exposure to COVID.

**Bret** 34:53

Well, I think we can impart say that that's very likely based on just how devastating COVID turns out to be And over what a range of tissues and all of that it's almost certainly true. But it's it's the wrong comparison, right? Because the category that is safest from harm is no COVID no vaccine. Now, the other thing, and again, I think it's just the lurking concern that is not discussed with respect to these novel vaccines is what cells are taking them up, what fraction of the cells that are supposed to take them up, take them up in order to produce this immunity, right. So if they're highly effective at producing this immunity, but there's a wide variance in how many cells take them up, or what cells take them up, then what that means is that even at the low end of that they are producing immunity, which means some people may be getting these things in many more cells than they need in order to get the immunity. And those cells are going to be targeted by the immune system and killed. So tissue damage is going to be done. Is it better than COVID? Yep. If I had to pick between risking the vaccine, and risking COVID, I'd risk the vaccine. But given the ability, potentially, to dodge COVID, behaviorally, this is not such a clear question.

**Heather** 36:10

Yeah, I mean, I guess something that occurred to me while you're talking just then that is also true is that for many people who are on the fence, who are concerned about this particular vaccine, and in part because of the kind of analysis that that you just gave, if these are people who are also eating crap food, and taking over the counter drugs or on other pharmaceuticals, then there is a good chance that they're experiencing so much tissue damage, and, you know, early aging and risk of disease from the other stuff, you know, and not to mention the environmental stuff that many of us don't have control over that, you know, the poorer you are, the more likely you are to be inhaling crap just because of where you are living. That that, you know, compared to a lifestyle in which you have the, you know, the freedom and luxury to really not be taking in almost anything that isn't, you know, food. That is that it has some resemblance to the organism from which it came, and you're not taking over the counter stuff. And all of this, compared to that this risk is higher, because you're introducing it into a system that has far fewer such contaminants already, whereas most modern people are ingesting so many contaminants on a regular basis, that the risk is relatively smaller.

**Bret** 37:35

Agreed and in an adjacent place is I think the question or the assertion in this question, does not then notice the fact that the younger you are, the less destructive this disease seems to be? And so one possibility is that if the questioner is right, that there's some place where your apparent immunity to damage from COVID declines to the point that the damage that you risk with the vaccine is worthwhile. In other words, you can imagine two crossing curves, and there'd be some age at which this was a trade worth making. Right? That's easily conceivable, rather than a it's, it's better than the disease? Well, it's better than the disease. Imagine some, you know, coefficient, right, or a linear process where we have something else in evidence. So you know, let's get mean we can have that discussion. We've got all we've been having, we need to have that discussion more widely.

**Heather** 38:42

Yeah. Yeah, we got to get through a few more of these before we go to the next hour. I'd love to hear your thoughts about the idea that looks at cancer as a breakdown in the genetic regulatory system enforcing multicellular cooperation, or cancer cells act more like competitive unicellular organisms. I'm not familiar with this idea.

**Bret** 39:05

Well, you know, it's kind of right, there's some value in thinking of it this way, but because very few cancers are in a position to pass themselves on from one creature to the next. There's no long term adaptation towards this strategy, the strategy Yeah, almost always self defeating. And because it's almost always self defeating. This is a useful lens to look at it. Right, that effectively there is inevitable selection for cells that behave as if they were competing in the body, but it's largely an illusion. Right? So

**Heather** 39:42

that's good. Yeah, I think I think he did it. So this actually, I think we already addressed this, but evergreen also announced everyone required to be vaccinated. If you were still happily teaching there, would you comply? So I don't know but which job would you prefer? President of evergreen or mayor of Portland. At this point, Mayor of Portland Yeah, 100% I don't want either job. But yeah,

**Bret** 40:07

but Portland is probably savable. Yeah, I

**Heather** 40:09

think Portland to saveable. I don't you know, this, this makes me less sad with every passing week. And that itself makes me sad. But I don't think evergreen is capable at this point. I mean, given this news from this week, is that right? Yeah, no, they do. And

**Bret** 40:22

that's the only reason it still exists is that there have been huge infusions of cash cash to get it through lean times. And it's not behaving in a way that will get itself out of the ditch. Yeah. I forgot what the first part of that question,

**Heather** 40:37

would you would you comply with mandatory vaccination? I just seen this actually fought in the fall all staff, faculty and students are required to be vaccinated?

**Bret** 40:45

No, I would have come out publicly against my employer trying to force that. And we would have had many of the discussions that we've had on dark horse.

**Heather** 40:55

Well, and there's actually a nice, I think, at evergreen, I think some of these other places, too, they said, religious, medical or personal exemptions available, if I will. Okay. How about scientific exemptions? can we can we add scientific to religious exemptions? Come on? Right.

**Bret** 41:10

Yeah. So yeah. Smart of them to make an exemption thing, but then what is the policy mean?

**Heather** 41:19

You know, I mean, I think that sort of thing. I've never seen the word personal added to this. But this exists for for mandatory vaccinations for school aged children, right. I mean, our children were fully vaccinated. We waited as long as possible, as as one really would want to do. But we also knew people who pursued exemptions, and we didn't agree with that choice. But you know, there was there has for all of these, I think now, actually, I'm not sure for international travel, right? Like I never, I never had a student when I was leading students in the Amazon, or we needed yellow fever vaccinations. I did have a couple of say, What if I don't want it like, then you can't go? Like I'm not in a position to argue with the Ecuadorian military on this front, like sorry. And again, as I've said before, yellow fever vaccination is a decades old, you know, literally decades of safety and efficacy data. And it's not our right to go into a place where disease is endemic and risk putting the people who live there at risk, right. It's the different situation. But for all of those that have homegrown vaccine requirements, I think that there are always exemptions, religious and medical exemptions.

**Bret** 42:29

Well, so this raises the obvious question about vaccine passports and whether they're going to be exemptions there. I certainly hope so. But my expectation is absolutely not.

**Heather** 42:44

Can family members who got the COVID-19 shot, be sick with COVID unknowingly with mild or no symptoms and get other family members sick? Yes. Unfortunately, it's rare, presumably, but again, breakthrough cases.

**Bret** 42:55

So I would say well, so breakthrough cases, by breakthrough cases, you mean variance?

**Heather** 43:01

I mean, no, I mean, people that, again, the data are crap. But what I have seen reported in the media, yeah, is that some people who get vaccinated still get sick with COVID and can therefore pass it on because they when they do when vaccinated, people do get sick, they tend to be low symptomatic or asymptomatic. And so they might, I think, therefore, be slightly more likely to pass it on because not only are they non symptomatic, but because they're vaccinated they think they couldn't possibly have it.

**Bret** 43:31

Right. So non symptomatic or low symptomatic, they may be less contagious. But so I would point out again, here is there's a hidden dichotomy to because there are people who are fully vaccinated who are nonetheless sick and contagious at whatever level they are. And then there's the Garrett vandenbosch point, which is, people on the way to being immune are not fully immune, and they may be in danger of spreading a variant, or selecting for a variant that they could then pass on, which would be even more dangerous, because it would be, it would invade existing immunities from either having COVID already or from being vaccinated.

**Heather** 44:18

So the next question actually speaks to his argument as well. Is Bush's argument about vaccines similar to the concern over antibiotic resistant super bacteria, if other nations are going to over vaccinate anyway? Shouldn't we? tragedy of the commons? That's really two questions in there, but it does seem analogous to antibiotic resistance, yes,

**Bret** 44:38

in every way, but one and I want to think through the one very, very carefully, but antibiotic resistance, there's actually a solution for us at whatever point we get wise enough to decide to take it right, which is, if you want to take your antibiotics out of circulation for a long enough period of time time you can restore the utility of them. And that's because all of that antibiotic resistance has a cost. And if it's not paying back, because the antibiotic in question isn't in the environment, so it's not favoring the variants that have the resistance, it will go away. So you can reset that clock, I don't know, have an analogous mechanism that will allow you to reset COVID COVID appears to be like running on a treadmill, rather than some reason? Well,

**Heather** 45:31

it's Yeah, it's not actually really analogous in this way, because with antibiotic resistant super bacteria, in complete application of the antibiotics is allowing the bacteria to become resistant to them. So you take the antibiotics out of circulation entirely for say, 30 years, or whatever the amount of time would be. And then upon reintroduction, those bacteria that have since evolved many, many, many 1000s, hundreds of 1000s of generations, are now naive to those antibiotics, whereas there's no it's just not the same logic with vaccines and, and COVID. It's not about you don't, you don't want naivete? Well, let's

**Bret** 46:16

put it this way. Because regarding the virus virus, yeah, the calculus is very different, because the thing that causes the antibiotic resistance to disappear is that the bacteria or fungi are organisms. And that means that they have conservation laws that they are paying the price for things, but viruses borrow all of their physiology from the creature that they infect. And it's a very different calculus or not, that there's nothing analogous but I don't even know I know how to fix a antibiotic that's no longer working. I don't know how to do the same trick for for vaccines.

**Heather** 46:55

I agree. Exactly. Right. So that's actually interesting. Both of us at first were like, yeah, it kind of is and like, actually,

**Bret** 47:00

well, not it is to a point

**Heather** 47:03

and but then in terms of like, mechanistically how to deal with the problem, right? It's not

**Bret** 47:07

emotion wise, it's not but cause wise it is. The point is incomplete application of either a vaccine or an antibiotic causes the thing that you're trying to fight to evolve a sophistication that it doesn't currently have. So yes, yes, it's analogous to that point and then what you do about it, I think is not an elegant Yeah,

**Heather** 47:29

I agree. I think that's right. I'm half vaccinated and concerned Do you know anything about the common supplement and a see apparently can rescue tissue damage caused by Ace to downregulation love you both dearly saludos test a Pittsburgh? I don't know and I say I don't know I included it because I thought possibly I don't so I appreciate the support but we don't know anything about it. Really appreciate all your content especially introducing Garrett to the conversation good vibes. dears prefer professors. Thanks for fielding my fun question, Mark. UFO question last week. Hardly recommend Terry virts and Chris Mellon Convo on UFOs unity and attitudes toward science. UFO is rapidly becoming Dark Horse path the game be Oh, cool. Interesting. Yeah, I actually I forgot to pursue that I was working on a bunch other stuff this week. But I'm curious to see what was it the God that released some stuff about possibly UFOs? Fascinating.

**Bret** 48:26

Do you know I don't I mean, this stuff is happening regularly. I'm not even sure which revelation

**Heather** 48:31

Oh, there's some giant thing last week that we got this question about? Yeah, we didn't know anything about the

**Bret** 48:35

particular athlete if that one was the odd Yeah, I don't I don't remember.

**Heather** 48:40

Is there still time to tweak the title of your upcoming book to the hunter gatherers guide to the 21st century and Omar's to Douglas Adams. So I was on Greg Ellis is the respondent and we actually had this conversation back in March, but he just released it this week. And I was reminded that he actually when he asked me about the book, he said it reminded him of the title remind him of hunter gatherers good know of the

**Bret** 49:07

hunter Hitchhiker's Guide to the Galaxy, The Hitchhiker's

**Heather** 49:09

Guide to the Galaxy. And I said to him, Well, I literally had never occurred to me before the cadence like it just had never occurred to me, it's one of my favorite books ever. Don't

**Bret** 49:18

think that that's the case. I think when we initially discussed it, it was certainly certainly on my mind that connection, which I liked, because we're both huge fans of The Hitchhiker's Guide. I really don't think it has ever occurred to me, I'm sure we talked

**Heather** 49:31

about it. So why didn't you suggest the hunter gatherers get to try over a century then?

**Bret** 49:39

In part because I don't think it fits as well.

**Heather** 49:44

Maybe there'll be another one. All right, a second

**Bret** 49:47

one. Maybe somebody will write a competing one with that title. A better hunter gatherer. A Guide for better hunter gatherers now. It's different now.

**Heather** 50:00

I greatly appreciate these discussions guys. Thank you on a lighter note, are you watching David Attenborough's new Netflix series? Life in color? excellent program? No, I had I didn't I not know

**Bret** 50:11

I caught wind of this is there was something about done under COVID or something I think I can't remember what it was. But anyway, my curiosity was piqued but didn't look into it.

**Heather** 50:22

Okay, one more here, and then we'll go to the next hour here. There's an article posted on the Bulletin of Atomic Scientists. That mentions the possible us funding at the Wu Han lab and the virus being created artificially. Do you have a comment? I suspect this is the one that's referred to the Bulletin of Atomic Scientists. Yeah, for whatever reason. He's he did his on medium.

**Bret** 50:45

I know. I

**Heather** 50:46

okay, so there's there's a thing on Bulletin of Atomic Scientists from years ago that just basically predicts that there will be an outbreak that we talked about an early an early episode of Dark Horse. So you are talking about you're saying that Nicholas Wade's piece is also on Bulletin of Atomic Scientists. I

**Bret** 51:06

certainly believe that I saw it there. And that basically it was is totally news to take in for me. Yeah, if you go there, we'll answer this and I will. If it's not there, I guess I'll

**Heather** 51:17

and that's the one that we should link to medium, rather than the medium one. And that is Yep. Okay. All right. So Zack, you can show if you want. So this looks like exactly the same piece that we were that I read. Or no, we didn't read from but that we talked about in the first hour.

**Bret** 51:41

Yeah. And I will skip the brain scan.

**Heather** 51:43

Good. Yeah, it's expensive. lots of reasons to skip the brain scan. I need to find safaris act to do draw a line for me so I can find which Yes, you did. Is Bush's bush or Bosch? vandenbosch. I'm

**Bret** 52:01

gonna Gosh, Bosch. Yeah.

**Heather** 52:05

Yeah, sir. Access with bush is bushes concern about just sounds like we're talking about the former president or something, right? Is Bush's concern about over vaccination for COVID? Oh, wait. So that's that line isn't drawn in the right place? Well, I already we already Oh, they just asked the question twice. Okay. You said that racism might. So this is written in what my advisor Arnel Coogee, would have called telegraphic style. And I used to tell him, it was actually telepathic style is really anything a lot, but they need to know. So this is this is eco asks excellent questions, but I may need help. interpreting what this says, I'm gonna try it. You saw that racism might be software based. You also said your genes are wired for genocide. Is it to being wired force? I don't know. I don't know what it means.

**Bret** 53:04

Well, presumably, we are being asked about the conflict, the apparent conflict between these two assertions. And it isn't a real conflict because your genes can predispose

**Heather** 53:18

racism versus genocide?

**Bret** 53:20

Well, let's put it this way. genocide requires racism, I think that's fair. So the software dictates whether or not you pay heed to something that your genes predispose you to be able to notice. Right. So in other words, if and basically it works like this, there are multiple different bases on which cooperation evolves. The most ancient and deepest is Gene based cooperation, right, which manifests as kin selection, and I would argue lineage selection, in, in, in humans, actually, in all creatures, but especially elaborated in humans. The second is reciprocal altruism. And reciprocal altruism actually allows you to profit by collaborating with individuals to whom you are not closely related. And then there's an elaboration on top of that, which is indirect reciprocity. So the point is, one can train themselves to collaborate on the basis of these second two things and to ignore the implications of the first. And to a large extent, though, not completely, we should do that. Racism is bad. The productivity and camaraderie that come from putting race aside is excellent. And if we can get everybody on board with that plan, the world is better for it. So in any case, the point is because it's software, it's alterable. We know that that's the case. But it doesn't mean that the underlying genetic predisposition isn't there, which it clearly is and how could It not be on the basis that the whole game which I would argue we should sideline as soon as possible and as completely as possible, but the whole game is built out of genetic competition. That's what evolution is about.

**Heather** 55:17

What's your take on triggers honor killings analysis?

**Bret** 55:23

I don't I don't try and remember it.

**Heather** 55:24

I don't remember exactly what he what he argues.

**Bret** 55:30

I'm trying to remember I've had a conversation with David about this, but I don't remember to comment a lot of money. Yeah.

**Heather** 55:39

So regarding your hypothesis on the evolution of not straight sex, you've been teasing its release for over a year now saying it's not the right time. Can you please just rip the band aid off and share it? He's not going to

**Bret** 55:50

know I am going to but you know, you're not now. COVID? Is Yeah, he's not doing COVID is not making this easy. I do think it's time but no, need a proper venue?

**Heather** 56:02

Is our culture of instant gratification, a driving force behind the current calls for instant and radical change? Where previous generations perhaps more patient and more realistic and their expectations for societal change? Yes. Yeah. Hey, there, it's not the only one. I know not that. It's the it's the main one. But it's it's one of the driving forces. Yes,

**Bret** 56:22

yes. And it's downstream of a culture that has lost touch with doing physical stuff. Yes, people don't have a model system in which they can get realistic about what's actually accomplishable and what time period it would take to get to something of value. Basically, things are true. As soon as the powers that be accepted, they are and change the web page. So that's right. We become unrealistic.

**Heather** 56:48

The guy in the vehicle at the North Portland protests was beaten nearly to death by the armed protesters. And there's a there's a link. Yeah, I know. I know he's hospitalized. Still. That's a disaster. Yeah.

**Bret** 57:00

And actually, that is quite an omission. From what we said. I was not sure what his condition was. I still not sure. I didn't know that he's still hospitalized. So whatever happened was severe. But I think we should have said more about that, man. It just didn't get said, but we'll amend it here.

**Heather** 57:18

Caitlyn Jenner is running for governor against the current governor, and she's the reasonable one. Earth needs to destroy us and try dinosaurs again. We have dinosaurs, and they kill other dinosaurs babies.

**Bret** 57:30

As discussed in the first hour. Yes, exactly.

**Heather** 57:35

So but they aren't they don't seem to be confused about sex, though. No. So there's that. My second maderna shot is next week, I saw your coverage on the spike protein doing damage on its own now considering skipping it madona seems to have the worst highest incidence of side effects, what trade offs Am I looking at? So we are not going to advise any, any particular course of action. In general, I would say, starting starting something that is expected to have a have a, you know, have two parts and stopping in the middle is dangerous. You might be you know, partially partially protected. I just I feel like there are many, many possible risks to doing that.

**Bret** 58:22

Yeah, certainly you will get less of the benefit. So you have already in some sense, invested half well, presumably half the risk from the vaccine, and it will get only a fraction of the benefit if you don't complete the course. So

**Heather** 58:39

yeah, actually, I guess I think that if so what were the I lost? Now? What were the two things you said

**Bret** 58:49

that there that there's the the two categories of benefit of the immunity? And there's something the the risk?

**Heather** 59:00

Yeah, it was I thought that you thought you had a slightly different category here. But maybe the risk of one versus two shots is exactly half. It certainly seems like that is a reasonable assumption. Whereas it also seems like it's a reasonable assumption that the benefit from the vaccine is considerably less than half if you get one and not both have a have a two shot deal that has been described through you know, hopefully careful research as the two shots bring the benefit.

**Bret** 59:35

And then there is also the The other thing, which is you have it's always the other thing, yeah, it's always the other thing, but you've taken half the risk. Let's say it's half the risk, because we don't know that it's not and I think mechanistically it makes sense that it would be Yeah. But the benefit of being vaccinated, you know, I am not in favor. Have with these vaccines and these authorities and this disease, i'm not in favor of vaccine passports. But given that they are likely coming, and that there are other things below that threshold that will likely be controlled on this basis. There's also the question of, is it worth, you know, for half the risk? Is it worth completing? Yes,

**Heather** 1:00:24

yeah. And I actually, actually, the more I think about it, the more I feel like, maybe it's half the rest that you've already accepted. But actually, my guess would be that your body has now demonstrated an ability to accommodate. Right, and that's, that's not entirely true, right? Like, we know that there are a lot more side effects after the second dose and all of this, but as far as we can see, as far as we're being shown the data. It's not that all the serious stuff that happens very, very rarely, so far, is only after the second dose. So I think actually having taken the first dose, and having had a response to it, you already now have whatever, you know, possible long term side effects, they're gonna happen, you know, maybe half as much, maybe long term. But you have a much lower protection from the vaccine that you would have if you took both doses. So Well, I think I think my sense is really you should you should follow up.

**Bret** 1:01:26

And and I won't say what you should do, I would say in your shoes, even though I'm very cautious about the vaccines, I would probably get the second one, given the net, net net. But I, you know, I think partially what you should get out of this is that two people have some idea what this landscape looks like, and where the costs and benefits are likely to be are faced with what we don't want to be faced with, which is a welcome to complex systems, kind of an answer, which is, you know, look with respect to something like a long term autoimmunity problem, right. Maybe you've already paid the price with the first with respect to a tissue damage and decreased longevity, if you probably it's 5050 with between two shots of the same volume. And the reason I say that is, in this case, you've got the weird fact of the delivery mechanism, not displaying the antigen to the immune system. So the only way if I understand this correctly, the only way for that second shot, to have any value at all to have any effect on the system is for it to be taken up by new cells and transcribed into spike protein, which is then displayed and presumably reacted to more quickly. more quickly, and maybe more broadly. But you know, so anyway, you've got several different cat, you know, you've got autoimmunity, you've got tissue damage, and then you've got unknown other right, like, tumors and who knows what else. Yeah, right. And very hard to say. But on the other hand, it's not like the vaccines don't create substantial immunity to COVID, which is very dangerous.

**Heather** 1:03:13

Yeah. And that immunity appears to be highly protective. Yep. Yep. and effective.

**Bret** 1:03:18

least for now.

**Heather** 1:03:23

You talked previously about the evolution of hugs. What about romantic mouth to mouth? Kisses? Oh, to kiss. It's simple,

**Bret** 1:03:32

sir. That those can be romantic mouth to mouth resuscitation, which I've never heard of.

**Heather** 1:03:38

Because just trying to Yeah,

**Bret** 1:03:42

they're awesome. I mean, what's the question? You know what the question is,

**Heather** 1:03:47

what's the what's the evolution? I'm just trying to think. Chimpsky is actually kind of, kind of, they kind of do actually, they definitely hug. I think they guess bonobos do everything. So he just gotta leave them out. Yes. Analysis. I don't know. You're the next gorilla.

**Bret** 1:04:07

I wonder in the case of chimps, whether chimps normally kissers only after they get internet access, and you think it's porn related to porn? I was thinking of higher quality stuff. I figured khimsar probably more discerning than that. But

**Heather** 1:04:24

you haven't met chimps? I guess I haven't. But that's maybe Gibbons to be more discerning than that. I wonder if Gibbons hug or kiss. They certainly have the arms for it. Yep, totally.

**Bret** 1:04:39

Oh, absolutely. You know, I've wondered about this a little bit and there's the obvious

**Heather** 1:04:45

you've wondered about whether or not Gibbons kiss

**Bret** 1:04:50

now i have i didn't get very far but alright. Yeah, I've wondered about the evolution of kissing Of course, and you know, so is everybody because there was of course

**Heather** 1:05:00

Does everybody know everybody has not kind of

**Bret** 1:05:03

they have because you know because there are these apocryphal I believe stories about in you it's rubbing noses and slipping and you know, stuff like that. So

**Heather** 1:05:12

never heard this never heard like the accidental discovery of kissing. Yeah. Oh, come on. Exactly.

**Bret** 1:05:18

Exactly. So anyway, I do think everybody's given this some thought at some point and then abandoned it and I probably gave it a little more

**Heather** 1:05:25

fictional 19th century anthropologists who made up those stories.

**Bret** 1:05:29

Right? Well anyway, I did. I do wonder if there's not a you know, it obviously caught causes the exchange of gut flora, but mouth Flora

**Heather** 1:05:46

Give me the logical information.

**Bret** 1:05:48

Yeah, potentially. But you know, there's there is some possibility that you

**Heather** 1:05:51

can smell someone's MHC You Can you taste it. Yeah, something

**Bret** 1:05:54

like that, or anything like that, possibly. So anyway, there there's something to be said for the possibility that there is something actually chemically important, or bacteria logically important that goes on, I would say, you know, the null hypothesis is that no, that's not what it's about, but and that, therefore, what it's about is the tactile thing, but But anyway, yeah, I would say I would say it's a it's a good it's a good question.

**Heather** 1:06:29

Oh, boy. We're not going to click on this link now. But check out science Friday's bumbling of the trans legislation coverage.

**Bret** 1:06:37

Of course, I did check out science Friday's bumbling of the trans legislation

**Heather** 1:06:42

coverage. And then the question is which media outlets will talk honestly about this topic? Yeah, not many. And I can't heal. Sarah Silverman came out on the wrong side of this this week. Like, I just feel like this is one of the most obvious This is one of the most obvious issues that we are contending with as a society right now.

**Bret** 1:07:05

Well, actually, a number of the things that we have talked about today, remind me of this basic principle, which is that certain stories diagnose the system. Right? Right. The fact that the New York Times and actually the mainstream press couldn't figure out what to do with the Evergreen story diagnosed the problem, right? If all you had to do was diagnose the problem with the media, right? All you didn't know was what actually happened, which is fascinating. You would expect the media to be all over it, because they like fascinating stuff, right? They weren't all over it. Oh, so there's something going on there that makes this story impossible to report. Okay. So that tells you what's going on. And the trans story is exactly this, right? You have a genuine and very broadly fared desire to be compassionate, that then quickly runs into trade offs, right? And am I compassionate with people who genuinely find themselves feeling that they are trapped in the wrong body and want to transition? I very much want to help such a person, I get what that would be like, and it would not be easy, right? On the other hand, do I want women protected from predatory men who want to avail themselves of a protected status? Yes, I do. And there are more of them. But it's a more generic story. So the point is, you can see how people who have some simple heuristic tripped over this and find themselves saying something in order to defend one or the other category, and they can't see the nuance and

**Heather** 1:08:35

but I mean, it's also, this feels even simpler. Like, to me, men who self identify as women without even any requirement for hormones or, or surgery, and therefore get to go into women's crisis centers and, and prisons is really obvious. Lee a problem. But, you know, some number of those men are just looking for a better, a better situation. And some number of them really do suddenly realize that they feel like women, whatever. This one seems even simpler, like the trans legislation. thing that is being talked about, I assume, although I haven't seen this particular coverage is about trans women in women's sports, it's about sports, which you just have to have been on the planet for, I don't know through puberty, to recognize that men and women are different. And you know, maybe you need to have thought about it a tiny bit to recognize that actually all that stuff that has been making the male pathway and the female pathway pathway different since literally since fertilization is not reversible with a simple switch, a simple toggle of you know, some puberty blockers and some hormones and even some surgery. No, not reversible. It doesn't work that

**Bret** 1:09:56

way. Well, okay. This is obvious to us. And I won't be hopefully obvious to anybody who's paid attention to what we've said on this topic for any length of time. But you can imagine, the problem is heuristics, right? Yeah. People are used to navigating by heuristics. And the fact is, people do it because your mistakes are in general, so frickin useful, right? But in the case that let's imagine you were having a dinner party, right? 100 people and some of those big party, yeah, sorry.

**Heather** 1:10:28

Hypothetically, you're not gonna have to do 100 people dinner parties in this century. I don't think that's not a dinner party. Right? That's like a wedding.

**Bret** 1:10:34

You're right. There's All right. Let's suppose you're having a dinner party with three people.

**Heather** 1:10:42

It's more my style. Yeah.

**Bret** 1:10:43

No, totally. It is more your style. Yeah. Now let's, let's imagine it's 20 people, okay, you're having a dinner party, right? I'm having a dinner party. 20 people, I'm invited. And I may come, okay, it's barbecue, because I can do that. But Alright, so the point is, there's a dinner party, and every one of your guests, save to my guests save two are totally on board with treating our trans friend who will be present. Exactly as they would hope to be treated. Right? And then did I say to friends, or exceptions, he did. And we have two friends who are overly fond of, you know, the kind of Ben Shapiro approach to this where they're, you know, aggressive about pointing out the ways in which transmits is not a complete transformation, etc. Okay, right. And the point is, you can imagine a desire to get everybody on board with the majority in that case, and their willingness to behave kindly

**Heather** 1:11:54

towards your guest. Being nice actually gets us where we need to go in the situation, the right thing

**Bret** 1:11:58

to do, right. And so the point is, okay, we can see the situation.

**Heather** 1:12:02

Also, our bathrooms are already co Ed spaces.

**Bret** 1:12:06

They're really single person space.

**Heather** 1:12:07

Well, this is the point like if these things don't scale, so people imagine your dinner party, and then they're like, well, right, so that will just work.

**Bret** 1:12:13

It happens. We don't have a prison, our bathrooms, work for either sex, it doesn't you don't even have to tell us what sex you identify as when you

**Heather** 1:12:24

go in No, no signs on the door. Right? Exactly.

**Bret** 1:12:26

This is all very simple. It's just a matter of getting everybody to behave in the same courteous way. Okay, then you build a heuristic from that. And the point is, look, treat people how they want to be treated, it's the right thing to do, right? It's a good heuristic until you get to sports prisons, and all of the other things that force you to actually engage deeper question. What's going on with Sarah Silverman, she wrote a heuristic, right? That heuristic has now been gamed. And

**Heather** 1:12:51

well, but she also and maybe maybe this just came after the heuristic. You may be exactly right. But I think I just saw it, like a 32nd clip of her going off on this this week in exactly the wrong position. You know, she says, Well, you know, why don't we separate sex by height? Okay, you are, I think that there's a conflation of individual versus population level stuff. But if you're really arguing that we shouldn't be segregating sex, I mean, sport by sex. And that is just as artificial as segregating sport by height. I think I may have misspoke last time. Then you're arguing for all COVID sports, which is the end of women in sport, at least at the professional level, right? Like you know, because because with a very few exceptions, like maybe long distance running like super long distance running like paper, long distance running 100 miles, men will out compete women in in feats of real raw power and speed and strength. They just will. And you know, like, why don't we segregate sports by height? Well, like, you know, some some sports effectively do you know, like basketball effectively done a

**Bret** 1:14:01

sideline, everybody basketball sidelines, everybody who hasn't tall and boxing does segregate by weight? Yep. Right.

**Heather** 1:14:07

Right. And so it depends. It depends on the sport. But in every case, again, with the maybe maybe possible exception of extreme long distance running. There's just there's differences. And if you don't segregate by sex, and that's the end of women's sports, and is that really what you want? Well,

**Bret** 1:14:23

I can't remember where it happened. It may have been in one of the Patreon discussions or it may have been on dark horse maybe in a q&a. But I actually believe that this topic is going to bring about the end of sport as we know it because these questions actually are difficult to write. So if you know if you in the original case, you have a genetic lottery, you get whatever endowment you have genetically, then you make whatever you can have it you get good at things you develop. skills, you innovate new techniques, whatever. And that is exciting to see play out on a soccer field or whatever, right? Who's really good at this game? Who knows something other people don't know who's you know better at intuiting, the dynamics on the field, whatever it is, right? But and then you get to doping, right? Oh, I can take what I was genetically ordered. And then I can augment it in this way I can borrow from my future self. And I can enrich myself in the present by doing it literally in red. Right? And so I can basically cheat. And then there's a arms race about can you cheat in such a way that we can't see that that's what you're doing. But it you know, the point is, we're not in Kansas anymore at the point that that takes over your sport. And then you get into questions about Well, why don't we have height classes and have four basketball leagues? is a game of short people playing against, you know, on a court with short baskets less exciting, what if they're more talented? That could be really interesting, right? And so the point is, you get into this never ending sequence of like, well, what really is athletic talent. And the point is, Well, one thing it is at the point you're parsing, how much of it is genes and how much of it is economics incentives and all of these things, it's just a lot less fun. So I wonder if it isn't all going to come apart as a result of this. And if you know, I don't think that means it's the end of athleticism. I think what it means is, athleticism will be reborn in probably a more interesting way, and I would put on the table, you know, Olympic Gymnastics, those are really talented people doing something really boring, right? It's like sort of exciting to see that a person can do that. But it's very hard to distinguish one routine from the next that subtlety is, you have to be an expert to detect most of them, right. And so the point is, well, the,

**Heather** 1:16:53

the, the sorry, the distinction we've made before is between that and and watching a great parkour routine

**Bret** 1:17:01

exact right? And the point is, you can't compare to parkour routines in the same way it's subjective, but once you sign up for Okay, I accept that it's subjective. It's much more interesting and very demanding.

**Heather** 1:17:14

I mean, this, we should do a whole episode on this or more. But you know, there's a difference between sport and athleticism. Right? Because athleticism isn't inherently competitive. And sport is and so like athleticism plus competition gets you to sport. And some of the things that we have in the Olympics, for instance, have seemed to many of us for a long time, and you know, we're hardly the first people to point out like, is that really sport? Like does competition really belong there? And if so, like, On what basis is it being judged? And you know, maybe it just you know, I, we went to, was it like the X Games, though? It's called once not the X Games. That's wrong. The the, like, the games once, with a lot of like, it was hardcore, and it was BMX bikers and skateboarders and, you know, outside of San Francisco once many years ago, kimmer what they're called, this is obvious, but anyway, yes, they were being judged it was there's no simple metric, right? Like this is the Blitz with regard to competition. The world wants a simple metric a simple linear variable speed you know, speed down the hill number, you know, speed down the hill, or speed through the thing in combination with this many jumps or this much time in the air. Like they're, you know, you just add metric after metric after metric. But at the end of the day, it's like, okay, those four guys are just did that roll awesome. And for me, watching those, like, I never care about, like, who is declared the winner, but of course, in order for the market to work, and for there to be a game for us to go see a competition rustico See, there has to be someone who's declared the winner. Whereas your basketball with an established height, which know isn't three feet lower, for a shorter view, I don't know how much you would have to be lowering your foot and a half lower for shorter people would be a different game could be could be an interesting game, but then, then you have to start imposing height limits, right? Yes. And so you know, there really is a difference between play and sport, and sport and athleticism, and we conflate them all. And the fact is that men and women are going to have different facilities and yes, some sports really give themselves to co Ed. me. I have talked before about ultimate how much we both love playing ultimate and like I specifically haven't played competitively on women's teams and watched at those same tournaments, a lot of men's teams and played a lot of CO Ed always preferred the CO Ed games. They were just more interesting to be part of always

**Bret** 1:19:51

and structured to work structure for the men don't dominate the women in those games, even though the usual athletic comparison still applies.

**Heather** 1:19:59

Yes. Yes, exactly. But some some games, some kinds of sport, some kinds of games won't work that way. Yeah,

**Bret** 1:20:05

no, most don't. Most don't. I will say just my last contribution here is that I do think we have kind of a societal pathology surrounding what you were discussing with respect to our desire to have a metric that we can exactly compare. Yeah, and you actually see this in lots of places, you know, if you follow cameras, and you watch the absurd, there are certain its production dominate, right? But that, you know, I realized in teaching, specifically, because evergreen freed us to do whatever we needed to do in order to get the job done. That actually, there was a, a world open to us, once you accept the subjectivity of evaluation. And the fact is, I don't think what I was doing was any more subjective than what mostly gets done. But people have this pseudo quantification mechanism, where you know, you're going to turn in an essay, and then I'm going to give you, you know, points out of 100. And then I'm going to put the number in my book, and then at the end of the term, we're going to count those numbers. And the point is,

**Heather** 1:21:11

I don't know if most people use numbers for essays, but whatever they

**Bret** 1:21:15

do, it amounts to pseudo quantification. And the point is, as long as you got a layer in there that subjective, your thing is subjective. Yeah. Now, if you don't own up to that,

**Heather** 1:21:26

yeah, right. This is huge. I mean, this is a second, vastly important topic, one of pseudo quantification, and one in which I think the more innumerate you are, the more easily you are fooled when numbers are presented to you. And so the more likely you are to think when you get presented with like, here's a ranking. Here's the answers. Here's what the data say. And you're like, oh, wow, there's numbers, this must be the truth. Like actually, often, though, none of none of that was legitimate, because there was some trick somewhere in there. And sometimes it's intentional, as soon as it's not. Often people just don't have any idea that you can't you. You can't turn those subjective things over there into numbers and then and pretend that it was quantitative all the time, the whole time, right.

**Bret** 1:22:13

And the thing is, you know, basketball is kind of objective. If you've got referees, it's all done in public, the referees judge the rules, the rules are known to everybody. And how many times you know within the rules, the bat, the ball goes through the basket dictates the number of points. So that isn't one of these things, but so many fun baseball or soccer or football, right, right. So those those things are not of this nature. But the number of things that are subjective and pretend to be something else by virtue of some hand waving argument for making them objective is shocking. Yeah. And the degree to which things get more interesting once you say, okay, subjectivity, that's part of this one. Yeah. It doesn't it doesn't make Park more or less interesting to watch. Right? Right. It's subjective. But why are those people talented? And that's some pretty amazing stuff. You wouldn't think you could do? Yeah.

**Heather** 1:23:04

Oh, all right. So many questions. We must be over an hour at this point. sack Yes. Okay, let me just find one or two more here. To wrap it up.

**Heather** 1:23:22

By 2040. Here's one by 2040. This is a four part question. So I'll get to these because we were gonna have to come back to this next week anyway. But 2040 plant based and cultured meats are set to account for 60% of the market. The industry is expected to be ready for mass production and massively decrease animal meat as early as 2025.

**Bret** 1:23:43

Go back plant based and what else mean cultured. So lab mate? Yeah, I've got it.

**Heather** 1:23:50

coincide. I don't have we talked about lab mate here. I'm not sure we have. Okay, we both feel strongly about it. Yeah, we have an opinion about lab meat. But I'll just start over by 2040. plant based and cultured meats are set to account for 60% of the market. The industry is expected to be ready for mass production and massively decrease animal meat as early as 2025. Coincidentally, Bill Gates is heavily invested in alternate technologies and is now the single largest owner of farmland in the US with 14,000 acres. Combine this with the Biden tax and climate plans. And well, that may be all she wrote for the American farmer. I wish more people would look into this have a restful Mother's Day so long, and thanks for all the fish. The PS here's a farmer explaining the business end of this. There's a YouTube video. I do I do worry for the future of farming and farmers. One of the things this is not exactly responsive. I have no idea about Bill Gates and his involvement here. I just can't speak to that. I have heard that there's a few tech billionaires buying up a lot of farmland and what does it mean, on I'm concerned about that, but one of the things that we were lucky enough to see and sort of be proud Word of when we were at evergreen was that there was an ag there was an organic farm and there was an active agriculture and sustainable agriculture program and a food program and we had students who were chefs and farmers and growers and producers and you know and and ferment producers and all sorts of things and you know

**Bret** 1:25:21

keep talking look up something relevant while we're at this

**Heather** 1:25:27

crazy looks off camera and you know we arrived in Olympia already being interested in buying as much of our food from direct with as few middlemen as possible and we just get there as here we had a piece of property that had almost no sun because had so much trees so we couldn't grow our own but we grew from the farmers when we could and you know and would occasionally for instance buy half a cow and you know, keep it in our freezer haven't been butchered appropriately and and ate that way and it was marvelous to see and also heartbreaking to hear the stories as you know even even there you started to see the encouragement you know how what what slim profit margins these these guys were working on. And the encroachment by in the case of Olympia was mostly not you know, it wasn't big ag it was it was development You know, it was just the demand for the for the land in order to put houses on it as opposed to grow strawberries was huge. And you know this I've been thinking about this to some degree since I was a kid because my dad grew up on a farm in Iowa and you know, that farm in northeastern Iowa and that farm like all the rest around them have now been subsumed into giant corporate pig farms basically. And it is it is not it is not good for the consumers of the food and it's not good long term for the American economy as well and it's not good for the animals because the animals it's not good for the soil it's not good for the environment. It's it's

**Bret** 1:27:03

a disaster the scale of the thing is incredible and dangerous and completely inhumane and unacceptable.

**Heather** 1:27:08

Yeah. What was your Did you find what you were looking for?

**Bret** 1:27:10

Yes, I did. I just wanted to point out that we have a follower who is expert in this realm, and I wanted to make sure that I had our last name right Arielle Greenwood who anyway I've been in periodic touch with over a number of a number of years anyway, she is a sustainable farmer of means who I'm sure would have interesting things to say about this very thing and perhaps we could find out what she does have to say. I will say I don't like seeing plant meat and cultured meat grouped because I don't think there's anything inherently wrong with making a hamburger patty out of black beans and whatever. Yeah, I think that's fine. Yeah, I'm not sure that the best way to think of it is as this is neat, right? But whatever, you know, it's plant based food. Yeah. On the other hand, I think this lab meat thing is going to be awful and that the way it is being sold is you know, predictable, but it's going to be gross and it's going to be bad for you worse than meat and frankly, I don't think meat is inherently especially bad for you unless you eat too much of it but

**Heather** 1:28:26

or it was eating it was fed a lot of antibiotics and glyphosate written grass and all this right

**Bret** 1:28:31

or Yeah, it was eating the wrong thing. So they probably not grass, it was physiologically stressed or whatever. But anyway, I do think there's a way to do meat that is humane and healthy. And there's a way to overdo it with any meat but

**Heather** 1:28:45

and it's hard to do it to scale given how many people want meat well,

**Bret** 1:28:49

but I mean you know, that's the thing is we have to recognize that actually meat should be more expensive because each animal deserves to have a decent life until its life is over. And that has costs and that should result in us eating less meat and that it's not the same thing as saying it has to be zero or it's inhumane or whatever. Yep. But

**Heather** 1:29:11

But yeah, why don't we so maybe this is where we should Excuse me. This is we should where we should stop but let us spell out a little bit what exactly the objection to lab meat as you said you think it's going to be unpalatable and dangerous. Well,

**Bret** 1:29:24

I take back the unpalatable thing slightly because I have the sense that whatever it is that makes you know a Burger King hamburger tastes good without actually being a defensible production mode can probably be done here too. In other words, the the supply chain issue with something like a fast food hamburger results in a gray flavorless Patty, by virtue of the long route that it's taken, yada yada yada so what do they do they enhance the flavor. in other ways, and the point is actually they get to something that does simulate the taste of meat. So I'm not sure that they can't do that with lab meat. But it's not the same thing as Oh, lab meat tastes just as good as a steak. And in fact, it's effectively guaranteed not to right, because the fact is part of what makes a steak a steak. It's not just the genes that make the cells that make the steak. It's the fact that the steak walked around and did stuff. And right,

**Heather** 1:30:26

that's exactly right. I I'm actually shocked at how few people seem to get this right, well, but now we're going to get when that steak was walking around doing stuff, we call it a cow. But that part where it was a cow was actually really important to what it tastes like when it's on your plate, right? Well, it was

**Bret** 1:30:41

doing stuff. Yeah. And you know, game tastes different than then be from a cow, right? And that's because it does different stuff in large measure. But so if they're people halfway through, they're angry email to us about the fact that the lab meat, people know this, and they've got exercise regime.

**Heather** 1:31:00

Yeah, they're prodding it with electrodes to get the electrical impulses to go through it as if they were running through the landscape, right?

**Bret** 1:31:06

So anyway, Mark, my words might taste good, but it'll taste good for reasons that have nothing to do with the lab meat itself, somebody should do a taste test with the actual lab meat in order to see what that tastes like. And that will be gross. And it will also be bad for you. And it may take a while to get there. But you can see it coming decades ahead. You can just see it coming. And you can imagine the papers that will ultimately be written about the shocking discovery that actually this isn't so good for you and all of the people who are returning to traditional meat and the farms that are starting up because people have discovered that that whole trend was in the end. Not a good idea. That's all coming. Right. If we get that far, right, yes, except for the fact that the future may have been canceled. But other than that, it's coming. Yeah, well, this

**Heather** 1:31:56

has been helpful.

**Bret** 1:31:58

As always,

**Heather** 1:32:00

yeah. As always. Oh, so here's what we'll end on. Here is $20 because I asked two questions in one.

**Bret** 1:32:08

There we go. Nice. Thank

**Heather** 1:32:09

you. I don't remember what your questions were but appreciated.

**Bret** 1:32:14

I feel that they were ethical questions to be sure. Person obviously.

**Heather** 1:32:18

Has has that those

**Bret** 1:32:20

Yes. Has ethos will travel. Yes.

**Heather** 1:32:25

Well, this has been weird.

**Bret** 1:32:28

I would like to think I played no role.

**Heather** 1:32:31

This has been weird today. But here we are. We will be back next week. In the meantime, please subscribe, like go to the clips channel. Subscribe, Like there. Join us at one of our Patreon consider buying yourself a dark horse t shirt. We may at some point have some new merchandise out. I hope so. Yes.

**Bret** 1:32:48

And limit yourself to one cup of lab meat a week until the data is in. data are the data are in. Oh god. I'm never living that down.

**Heather** 1:33:00

Never Never. So by all means, love, love the people who you love and eat good food. Not a couple of me and get outside

**Bret** 1:33:13

while everyone