Your Questions Answered - Bret and Heather 91st DarkHorse Po...

Sat, 10/9 12:10PM • 1:10:33

**SUMMARY KEYWORDS**

people, question, vaccine, sunglasses, problem, evidence, suggests, vaccinated, disease, thinking, point, case, true, regard, cytoplasm, mutation, tend, selective pressure, female, long

**SPEAKERS**

Bret, Heather

**Bret** 00:09

Hey folks, welcome back to the 91 Dark Horse live stream pod cast q&a. Yeah, I said 91. Yeah, you did? Yep, I did.

**Heather** 00:20

That's fine. That's fine. You're

**Bret** 00:21

good about it. Do you know, but it'll do? It'll do you know, it conveys the message. That's what language is about. first pass? Yeah. broad brush. Yeah, sure.

**Heather** 00:33

Okay, I believe that we forwarded this question from last week. I am a white male, US high school biology teacher in an urban predominantly black area. CRT is encroaching here. How can I battle this to ensure the best education for my students?

**Bret** 00:52

Right.

**Heather** 00:56

I think it depends. I don't think we know enough. Right? I think it depends on what else is true of the environment, that if if the rest of the school if the rest of the teachers and administrators are into CRT, and especially if they are also black, it's going to be hard. It's going to be very hard to resist. If If you have colleagues, any color doesn't matter, who see this as something to be resistant, then I would I would start there. Rather than you know, for with regard to high school. I don't think you start with the students. I think that's that's riskier.

**Bret** 01:43

Yeah. I also think one needs to play a longer game and recognize that you are doing anyone a service who recognizes that there is something amiss in the arguments used to advance the team. And that, you know, planting seeds that may mature a year from now or two years from now while it doesn't seem to solve the problem in the way that one might like to there's a reason that this problem continues to, to march forward. And that's because it is very difficult to deal with. So planting seeds may be the best option you have available. But certainly don't feel bad about the fact that it isn't obvious to you about what you might do, because nobody's figured out the solution on this one yet.

**Heather** 02:33

Yeah. It's raining, raining. Interesting. Yeah. All right. I'm going to read the next question, then I'm going to cameras gonna go on you and I'm going to go have Toby pull some stuff inside, because it's raining. Yeah, I like to see that coming. Alright. This is just just came in. I have not seen this question yet. Regarding the finding that people with high anxiety or increased risk of suffering severe illness from COVID-19? Could it be that are more anxious ancestors who are good at avoiding transmissible disease due to their anxiety, at the cost of producing offspring that never required the mechanisms needed to fight these diseases?

**Bret** 03:21

Yeah, this is a this is a tough one. I think I understand what you're getting at. If I understand correctly, what you're suggesting is that anxiety might be a mechanism of disease resistance that would then leave a vulnerability at a more mechanistic level. But there's something oddly circular here, which is to say, why would SARS COBie to be dealing with be interfacing differently with that system? In other words, either anxiety is generally protective, in which case you would expect it to be protected for serves coffee too, as well. Or it's not generally protective. And it comes with a vulnerability. And then you would see that pattern rather than it's good for avoiding diseases except this one. Now, you mean, you could make an argument that certain diseases, yes, certain diseases, no, and you would have a trade off, which might have some predictable pattern, which would allow us to test the hypothesis, but it's a little a little hard to see, whereas we know, I mean, you know, we, back to the discussion we were having earlier about the fact that there's a adaptive version of things, and then there's a malignant version of things. Yeah, anxiety is clearly such a thing. Anxiety serves you, right? your anxieties will keep you alive, if they're well tuned. I think that's where this question is emerging from, right, right. But But my point would be the what we call anxiety is pathological anxiety. Logical anxiety is very hard on the body for various reasons. And so it wouldn't be surprising if it rendered you vulnerable to disease which is not the same thing. Saying anxiety does it's like saying pathological anxiety is one of the comorbidities right and yet we we allied the pathological part. That's what I that'd be my best guess

**Heather** 05:09

alive. Yes. Oh, that's good. I like that. Friends. So I don't I'm not familiar enough with the reference to know what to make of this. friends have compared the anti unvaccinated movement to Invasion of the Body Snatchers. I just don't it's been forever since I had any interface with Invasion of the Body Snatchers. Do you think this is an adverse reaction of the vaccine? reasonably intelligent people losing their ability to recognize truth? Love The Fog of War Machine reference. And I'm sorry to hear about Moxie. I'm a cat lover too. You know, I've joked I've joked to this effect.

**Bret** 05:52

Yes, you

**Heather** 05:54

may be certain certain people are experiencing like post vaccine syndrome. But But I don't think at large No. But that is what is going on. That's what is what is explaining the the increasing tribalism and pointing fingers at some portion of population as degenerates and dirty and horrible. I don't think that's a post vaccine syndrome.

**Bret** 06:22

thing. Yeah, I think it is something that is being cultivated. Yeah. And it is resulting in people's worst, least humane impulses governing their style of, of interaction. And, you know, I forget where it was recently said, but there's something about your Oh, I know, it was recently said it was reasonably said in the Patreon discussion that I had with my supporters this morning. a psychologist pointed out that there's this embattled state that causes people not to be in their clearest mind. And there's no question about that if one feels threatened or embattled. One is dealing with a much more limited set of tools. And I just have the sense that all these smart people are fighting from this limited set of tools. And what I don't know for sure, but I suspect they're being induced to use those tools to keep them from thinking because thinking would result in, you know, lots of questions about the many elephants in the room.

**Heather** 07:34

Yeah, no, and I think I mean, I think I referred also to the sort of generalized stress response a couple of episodes ago. And, you know, there's a reason that acute stress that acute, acute problem, acute trauma creates a situation a set of responses that do make people want to just be like, no, don't ask questions like, we need to get this done. We'd like this is this is life or death here right now. And that itself, you know, that response is adaptive, but not when it becomes chronic? Right? Like and that's that's what we're experiencing. Now. We've we're like a year and a half in. And people have sort of adopted as a chronic position, what, what needs to have been an acute response?

**Bret** 08:14

Yeah. And, you know, it's funny how frequently people deploy arguments to me privately, arguments that we have, in fact made. So there's no reason to deploy these arguments, because at the very least, you know, it's you're not bringing something new, you're making an argument that we have made, right, for example, the the game theoretic problem that causes a vaccination campaign to be endangered by those who might wish to have the benefit of the vaccine. Without the riders, the free rider issue, right? People will bring that in to say, you know, as if, as if this is News, as if we weren't talking about this, frankly, before COVID. Right. So there is a defaulting to an assumption about what is being said, What are the blind spots of the person making the argument? And what comes back is some sort of generic wall of arguments deployed in no coherent fashion. Yeah. And I just wish there was some mechanism to get the people who, under ordinary circumstances understand how to sort through a puzzle like this one, to get them to stop. Think about what they're saying, asked, Is it possible I am missing a side of the story. And the thing is that that's really what stopping it is. There can be nothing on the other side, that would be reasonable. Therefore, I'm not going to worry about whether I've missed anything because what would I have missed? And the answer is, boy, you've missed a

**Heather** 09:45

lot. It's it's the conclusion driven thinking. Yep. Again, yes. I was hoping you were gonna say stop, drop and roll. But he didn't.

**Bret** 09:54

No, no. I mean, were you on fire? I would have would have recommended that Yes. Good. Very, very, very minutes on a very short list of useful remedies in that situation at

**Heather** 10:05

least useful words to use on a person. Right? Yeah. You might have gathered supplies

**Bret** 10:12

right and sink right there is a sink it's hooked up. I you know, there is a part of me that would have taken a moment to sort between Stop, drop and roll and duck and cover.

**Heather** 10:23

Really which,

**Bret** 10:25

you know, we're someone on fire that was a particular hazard to planet earth. there'd be some momentary question about which of those to deploy but and you think that describes me? No, no, no, in your case, it was it stopped dropping role that I would be looking for. And yeah, I would I would, I'd say it right away as soon as I figured out what was going on. Yeah.

**Heather** 10:46

relieved, I guess. Okay, what evidence for ivermectin as prophylaxis is available other than the Argentina study. I was about to get j&j A month ago, I came across your podcast and the toxicity of the spike protein. I followed Tesla as well. It sounds reasonable, but many MBAs reject the observational data. What is your tech? So we did. There's a section on this, and it's not exhaustive. But we go through four different types of evidence in the piece that that we posted on my substack, the driving saris, Coby to extinct. So there's the meta analysis, which Yes, only has two papers in it at this point. There's the Argentina study. There's the evidence out of Africa, in which many, many countries in Africa are already using chemo prophylaxis for other things for non COVID things. And so two different groups of researchers thought to compare COVID rates in those countries that already were giving their people ivermectin as opposed to those countries that were not. And indeed, they found both both studies independently found, there are much lower rates of COVID in those countries in which people already taking ivermectin and then there's a looser evidence done by this data analyst Juan Jaime, I think that's Jamie, uh, not sure how to pronounce his last name largely out of a number of Indian States and Mexico as well. And there's also a Mexico study that is not in there. That's, that's got some really strong evidence. So you know, there's, there's a lot, and I'm sorry, but anyone who says many MDS reject, you know, rejected the observational data, like, you can certainly say like, I reject that data, in part because it's observational, but if you say, I reject observational data, then you don't understand what science is, and you're not doing your patients any any favors. You can test a hypothesis with experiment, you can test it with observation, you can't test all hypotheses, with either experiment or observation, some can only be tested one way or the other. And indeed, over an animal behavior space where I've spent the most time is one of the fields in which you're most likely to be able to say, okay, given that I have this, these hypotheses on the table, I could do this with a carefully designed observational study or an experiment, which would also have to be carefully designed. But the idea that evidence shall never come in the form of observational study is frankly anti scientific and suggests that the person saying it has not thought through what evidence

**Bret** 13:19

is, and it also just violates the history of science, and especially medical science and all of the interventions that have been discovered observationally It's a way to shut down discussion, right? It's a it's a straw man.

**Heather** 13:34

Again, you can say, I don't don't think that observational data, that observational evidence is strong evidence, in part because it is observational. But if that's the only reason that you disparage it, then that's not an argument. Yep. Do you believe that Geert vandenbosch has predictions regarding viral immune escape are coming true to a proof have it intuition? Do you have any intuition as to how virulent COVID may become to the vaccinated implications on society if it's severe? Okay, that's like four questions right there. We can focus on one or two. Let's put

**Bret** 14:08

it this way. It is not proven. There are arguments one could deploy to suggest that what Vanden bush predicted is not happening. But Vanden Bush's predictions appear to be matching what is happening far better than any other predictions I've seen. So I think the point is, predictive power is the coin of the realm when somebody tells you something that you don't know. And it turns out to be true. You have to give the benefit of the doubt, which doesn't mean we couldn't discover that there is some other explanation for the pattern other than the one Phantom Bush has put forward. But I think, frankly, the prediction stands up so far, and that that that ought to give us pause about where we are in this process. Then what might be coming next?

**Heather** 15:01

Yep, I agree. And I would say just to the question about any intuition as to how virulent COVID may become to the vaccinated, at least with regard to delta, it looks like it's becoming more transmissible but less heinous, like, you know, it seems to do, it seems to send fewer people to the hospital and to their deaths. But it transmits more easily, which is indeed, absent, you know, all else being equal, what you tend to expect of a virus as it evolves. With with the host and the host, in this case, humans. Yep. gender dysphoria is no longer classified as a mental and behavioral disorder, according to the who, which kind of disorder is it then, and how is it different from body integrity, identity disorder and other mental disorders? So I don't know what body integrity identity disorder is, but yeah, the the idea that we're taking away, you know, the stigmatizing terms. Yeah. Is again, you know, indication of capture and of confusion. And you know, I mentioned this book. Last week, Ellen, Joyce's trans and I, I still haven't read all of it. I've been reading other stuff. But I was listening to her being interviewed by Julian Vigo on Julian's podcast, savage minds, which is a terrific conversation. And, you know, and she, like we, Helen Joyce, makes this explicit distinction between trans people, the extremely rare people who are actually trans, and the trans activists. And, you know, the, the idea that the way that so many of us so many of us, you know, well intention, you know, liberals and otherwise, we're sort of hijacked early on and to be like, Oh, well, look, yeah, of course, like, if you if you say so sure. And it's become, it's become something that's unfalsifiable. About what you're not allowed to ask questions. And now that it's, you know, if it's, if it's not to be considered something that's in any way unusual to, you know, to deny the biological reality of sex? Well, you know, all bets are off. Like, what, what, what hope is there for for a sensible conversation,

**Bret** 17:16

right. And at some level, this is just verging into absurdity with respect to people sensitivity, right? Even if the terms aren't precise, they serve a purpose. And it does seem to be a disorder, what are the you know, what are the chances that your perception of your gender and your body morphology, being out of sync with each other is not some sort of a disorder, right? That's not a judgment, right? It's just saying, There's something about these two things, that is not a match. That's not the way nature typically works. And, frankly, it's as good justification as anything else. For rights and remedies and

**Heather** 18:00

gender, gender follows sex, gender inherently will tend to be a Mac a match for sex, when it isn't, there's going to be a problem. And the idea that that's not a disorder, well, then are you saying sex isn't real? Like, what actually are you saying? And yeah, it's just like, it's like Martin Bailey's all the way down to so you know, we've got two things. tangled, okay. It's more than that. But what are the two? There are these two things? Okay.

**Bret** 18:24

One is you and I agree that there is some there's evidence of ancient transmis. There is also almost certainly modern transmis that is the result of some kind of novel influence could be anything, it could be hormone disruptors, it could be advertisers, it could be any, at any level, there could be some developmental interference that results in mismatches. And in any case, well,

**Heather** 18:57

then, then there's also the very much larger population than either of those of people who are declaring themselves trans who are not, who wouldn't be recognized as such by

**Bret** 19:12

appear to be taking advantage of or fooled

**Heather** 19:14

themselves, right, whether whether or not they are actively, either consciously or unconsciously there's, you know, fooled themselves into into becoming, you know, prey to an ideology.

**Bret** 19:25

Yeah. In any case, we have to be able to talk about things that idea that we're going to append all of our language around sensitivities is what it amounts to. Right, right. You know, the UGC language doesn't even work this way. Right? You know, I mean, as a, as we pointed out before, black people aren't black, white people aren't white, right? These terms are not precise descriptions of anything. But, you know, if you suddenly can't say, white, because, you know, because White is pink, right? We're not able to have a conversation in which we can even convey Meaning like do you really want to destroy your ability to convey meaning? It's really one of the things that makes humans special.

**Heather** 20:06

Yeah. Does the disaster of Merricks disease and chickens due to leaky vaccines relate to COVID? vaccines in any way? Would this have been prevented if they didn't vaccinate the chickens?

**Bret** 20:23

Yes, we don't know whether it relates to our COVID situation. It's too early to tell. Right?

**Heather** 20:30

I mean, we talked about it. We talked about the paper that did that research from, like, 2015, I think, both on the podcast and in the paper in our paper with regard to providing some empirical evidence that this, this is understood to be an outcome, at least sometimes when you mass vaccinate with a leaky vaccine, when a disease is in this case, I think endemic rather than pandemic, but the distinction may be not important here. would this have been prevented if they didn't vaccinate the chickens? And I think, you know, the difference between American disease and COVID is that as terrible as COVID is the you know, the fatality rate, the case fatality rate is not nearly as high like marriage to see is just like wipes through populations, as I understand that, I think well,

**Bret** 21:23

with a caveat. Okay. caveat being these were domestic chickens. Yeah. And domestic chickens are a unique critter among other things. They have had their telomeres elongated.

**Heather** 21:39

By Of course, they must have but do you know that? Yeah, I

**Bret** 21:43

do. Okay. But it's it's like says,

**Heather** 21:45

just by the same breeding protocol is a longer the telomeres at the lab mice? Right. Presumably,

**Bret** 21:49

it's the same thing. We don't know for sure. But yeah, that we don't know. But so Merricks disease is a neoplastic virus, a rare virus that causes cancers. These creatures are likely to be cancer prone.

**Heather** 22:06

No, I didn't know I was neoplastic. Right. So anyway,

**Bret** 22:09

the point is, with the caveat, that chickens are not a good model for anything by virtue of their distortion. Yeah, through their breeding process. Who knows. But the idea that we are dealing with an issue of driving escape mutants with leaky vaccines possible ad II, you know, these things are on the table. And what Merricks disease has to tell us is, proceed with caution, because Welcome to complex systems,

**Heather** 22:36

yeah. Yeah, and just I mean, just let's be clear. So you know, in the first our first hour and a half, you were talking about the way that Joe Rogan has been strong and and sad to say things that he didn't say. And I think the quote that you read or suggested that he said that vaccinations create mutants,

**Bret** 22:55

right cause mutation,

**Heather** 22:57

cause me what He did not say, which I see that cause mutation could be equivalent equalized, to create mutants. And the selective pressure, which you just said correctly, but could be misunderstood by those who weren't paying careful attention who wanted to misconstrue don't get the difference? Or let's just like who don't, you know, it's it's a little subtle, right? That there will be all these viruses are are replicating, and they've all got variation in them. Right, right. And so the mutations are happening regardless. And if you've got a VAT, if you've got a selective pressure in the form of vaccine that's now coming in and going home, on some number of them, you know, those those things that already exist, those mutants, those mutations that already exist in the population, that for whatever reason, aren't, you know, aren't coverable by the vaccine will be more likely to thrive? It's not that the vaccine created them, they already existed, but they will grow in abundance relative to the other strains, if they are not susceptible to the selective pressure, which is the vaccine, right.

**Bret** 24:04

But from the point of view of what Joe Rogan said, he said, and he was just reading a paper, but the point was the vaccines select for these things, right? that's

**Heather** 24:13

neither here there were like, I just thought that this was an important thing. Obviously, Joe Rogan didn't say the thing that they said, and you didn't say the thing that people will miss read is you just having said, I think it's important for us to as many times as possible, be very clear about what is actually meant, because, you know, there's no papers out that seem to say this with regard to COVID, in which some of the authors of those papers even are like, Oh, no, no, you know, definitely there won't be any selective pressure and you hear them talking. You think you don't, you don't actually understand how evolution works. Yeah. And we, I just this this wasn't about Joe Rogan. It was just like reminding I

**Bret** 24:50

know, but I'm, I'm involved in that exact discussion at this moment. And it is important to be clear, it's the selection. That is the consequence of the Vax

**Heather** 25:01

so why don't you again so I've just said it clearly Why don't you again say it clearly just didn't have it as many times as possible.

**Bret** 25:07

The hypothesis is that the vaccines create immunity that then select for some variance, right? So mutation makes changes in selects for creates, right? Presumably, mutation is random. It doesn't have to be. But that's the presumption of almost every model. And selection exerted by the immune system on a leaky vaccine, a, on a breakthrough case that results from a leaky vaccine will be for those variants that are most invisible to the immune system, which will then likely be invisible to the next vaccinated person's immune system to because it's the same immunity that is induced.

**Heather** 25:50

Good. So this one refers to a question from last week. And I'm not sure I remember the question from last week well enough to understand this clarification, but we'll try anyway. Okay. My placebo question from last week was meant more, do you remember the placebo question? No. was meant more to ask if the job is safer than we think and break through cases less likely? If people are erroneous, Lee self reported as being bakst. In How might various data be affected?

**Bret** 26:26

I think I get the question.

**Heather** 26:27

Yeah.

**Bret** 26:30

It's hard for me to imagine how somebody who isn't vaccinated, but reports that they are ends up in the various database if they have a breakthrough case? I don't see it.

**Heather** 26:46

Well, I mean, it you know, the the resistance to theirs, is that anyone can enter their information. Yeah. And, you know, I've cited a paper here a few times that says, you know, at least wouldn't these were the people who were looking at 250 deaths that have been reported in various to see how it is they were recorded, at least some of them were clearly vaccine related, but they were all reported as COVID deaths, right? It's that paper. And part of the work that those authors did was also carefully look at the sources of the of the various reports. And what they found was and I'm somewhat imprecise in remembering the numbers was something more than 70% or 100%, configurable as either health professionals or pharmaceutical professionals. So you know, the number of people who could be self reporting, and you know, and just trying to mess up the signal and vaers isn't, you know, isn't the majority, and it's probably a tiny, tiny minority?

**Bret** 27:44

I'm still just thoroughly confused by the question, because, so Okay, you've got professionals who will not be tricked by somebody who's falsely reporting that they're vaccinated. I don't see why somebody, if somebody is going to report false stuff into the various system, why does it matter, that any event at all has happened? So the question suggests that people falsely reporting that they're vaccinated, but correctly reporting that they've come down with COVID, or something, are showing up in the system. And I think the thing is malevolent people who are trying to put bad data into the system, you expire, the other

**Heather** 28:21

the opposite pattern,

**Bret** 28:22

you don't you don't expect any event at all to be necessary. People putting bad data into a system to mess up that system don't have to have had a case of COVID they don't have to have had an adverse event. So I don't I don't understand why.

**Heather** 28:36

There's just yeah, there's a lot of ways it could go. So it's not clear which way the pattern pattern would run. And unfortunately, if somehow the question is disappeared, so I can't go back and look at it. Is tribalism a necessary social glue, thus always going to undermine science and collective sense making? Or will science always undermine tribalism? And its glue benefits? little a little bit of I mean, there's the there's a tension and you know, what we need what we need is the tension and sort of going back and forth a little bit, maybe, or maybe we don't need that maybe we mostly need a lot more focus on science, but tribalism has, you know, group membership has benefits.

**Bret** 29:20

I think this is a culture consciousness question. And the problem is that we don't quite have a coherent culture, we have a start on a coherent culture. And so in some sense, the novelty of the modern era. And the absence of an ancestral culture that is coherent, because it's many cultures effectively condemns us to have to accept the bias in the direction of the conscious mode, which in this case, would be a scientific enlightened mode.

**Heather** 29:51

Well, and you know, and then the problem over on the science side, you said, Well, the problem over and culture side is not coherent, and so the culture side isn't isn't working. But the problem over on the consciousness side is that probably all science always, but especially modern science, with its perverse incentives with regard to market forces has become one of preserving the status quo making it more cultural than conscious right?

**Bret** 30:17

Instead of science. What we have is science tm now with more science.

**Heather** 30:21

Now with more follow the science now with more

**Bret** 30:25

follows with even more follows that same great follow the science now new packaging, all new packaging. Yeah,

**Heather** 30:33

yeah, the color scheme. Gotta love it. I don't think we know these people, but read the question. Have you heard about the lexica learning model by Dr. Dawson and Dr. Stein? About how to become good educators like yourselves in today's world?

**Bret** 30:52

Nope, nope. Interested? But

**Heather** 30:58

I both your pan dynamic got me thinking. Is it fair to say that women generally more skillfully wielded disapproval and anger in relationships?

**Heather** 31:12

I think as with almost everything, that there will be male, typical and female, typical ways of doing things. So yeah, the male typical way of wielding anger is more likely to be physical, frankly. And the female typical way of wielding anger is more likely to be social or linguistic. And, you know, within a functioning relationship, you hope that there's not very much anger at all, and certainly no physicality that isn't wanted by both sides. So yeah, I don't know from skillfully, right, I think there are skillful ways of wielding disapproval that are male, typical, and there are skillful ways of wielding disapproval, there are female typical, but given that puns seem more likely to be a male inflicted form of humor,

**Bret** 32:07

like did not inflected Yeah.

**Heather** 32:09

That, that the females who are in the receiving end are more likely to wield the disapproval in perhaps female typical ways.

**Bret** 32:20

Not quite sure what to say about this. I mean, I do feel like there is a you know, this is it's clearly another instance of there's an adaptive form of the phenomenon. And then there is the malignant form.

**Heather** 32:36

Are we talking about puns now or disapproval?

**Bret** 32:39

No, the pons. The ability to call it really

**Heather** 32:42

the disagreement is whether or not it has crossed over. Right, the punster is right is going to be less likely to see that there has been a crossover event and the risk person on the receiving end is more likely to see in both probably both of them are being a little bit too generous with their own perspectives.

**Bret** 33:00

Right. But you have to understand what the purpose of planning is in order to even evaluate whether or not it's gone. Yeah, I think you do, right. And the problem is, it's it's, it's a, it's a tricky problem, because a really, properly functioning causes a great deal of suffering, but no actual harm to the victims, right. Whereas malignant pawn does do a kind of permanent harm. And you no one wants to tread right up to that line without crossing it. That's, that's the ideal, is it? Well played, huh. Wow. You didn't know how diabolical it was? Did you

**Heather** 33:44

know I didn't know you do? What are your thoughts on the legal battle between Odyssey and the SEC, worrying or not?

**Bret** 33:53

We don't know a ton about it. We know that it exists. Yeah. And we know sort of roughly the realm that there's an issue especially with these smaller cryptocurrencies about whether one is engaged in something tantamount to currency manipulation. But I know nothing about the history of loans. what and where it came from. Yeah,

**Heather** 34:23

I suspect now. We'll leave it there. Yeah. Can animals sleepwalk? My cat seems to display this behavior. Thank you.

**Bret** 34:38

I see no reason why.

**Heather** 34:39

They seem I guess I see no reason why not as well. I see. I definitely don't think I've ever observed a cat sleepwalking. I'm sure I would have paid attention.

**Bret** 34:50

Right. I think it should be very rare by virtue of the fact that creatures that do this, probably don't leave as many descendants As those that don't. And so in some sense, it may be that humans, you know,

**Heather** 35:07

maybe developmental entirely rather than rather than in the genetic layer and given that we're talking about domesticated animals. Well, I guess the question wasn't inherently about domesticated animals. But once we're talking about our pets, most of which are genetic that ends, because we've had them sterilized most of us, then assuming it's developmental, it wouldn't necessarily Stop it Stop happening at the population level.

**Bret** 35:34

Right? I'm just thinking that there would be a very strong bias against. So basically, what you have is a failure of sleep paralysis. Yeah. And that the fail safes on the sleep paralysis would be substantial, and any creature that would live late would be liable to end up walking into the mouth of a predator or off a cliff. Yeah.

**Heather** 36:00

I mean, I guess most people with dogs have noticed the sleep running. Yeah, they just tend to do it while lying on their sides. But I also wonder if what would be required to get that dog to like, go 90 degrees and do their sleep reading? Well, actually,

**Bret** 36:14

what you need is a platform with a hinge. And yeah, but I wonder actually, if the dog isn't the exception that proves the rule. In other words, you might predict that domestic dogs would do far more sleep, running and gobbling and whatever else they do, then the girls,

**Heather** 36:33

if they got more opportunity in real life,

**Bret** 36:35

know that the long the fact that dogs have this extremely long history in captivity would put them more in the human situation where, you know, sleep activity would be less dangerous, because you know, they're hanging out with people and people are protective. And anyway, if you compared domestic dogs, okay, to wolves, I would imagine that wolves would be more like every other creature and domestic dogs would be more like people.

**Heather** 37:06

Yeah, I like that. That's good. What are your thoughts on eating moldy food after removing the moldy parts? I feel very I feel wary about doing so. But so far, I've never had any issues. It's interesting, right? I mean, it depends on what the food is. For one thing. So you know, I've, I've said for decades, you know, cheese. And when we've said this here, and I think we say it in their book, you know, maybe we don't say

**Bret** 37:30

in the book. No, it's there is no.

**Heather** 37:35

You slice off the moldy parts, and you eat the good stuff underneath and you're fine. And, you know, bread, moldy bread. At least some of the mold that grows on bread turns out to be, you know, productive. It's, it's penicillin. And so that, you know, that this is the reason that before we had an understanding of antibiotics, it was the poor people who couldn't afford fresh bread. And Gosh, it's going to happen again, England. I don't know. I don't know my history well enough. But there's some particular historical story of the aristocrats who only ever ate totally fresh bread, who were more likely to succumb to whatever it was that people were then succumbing to that could have been treated with penicillin, but instead of pill form, it came in the form of the actual, the actual, I guess. Yeah, yeah. Aspergillus Penicillium, did I make that up? I probably made that up. Right. Okay. So you know, it depends but on the other hand, you find mold growing on your meat, do not eat and and you know, my sense has always been I actually haven't pursued this but like, just don't don't touch any of that. Even if it's like ground meat and you can like no, because the hyphy of the fungus it seems like I don't know, there's just some the fungus that grows on meat is more likely to be toxic.

**Bret** 38:51

Well, I would guess that rule of thumb level, how bad it stinks would be a decent indicator of how hazardous how hazardous it is. You've got the rare cases of fungie that could leave a chemical trace sufficient to be dangerous, but my guess is in general. The the foodborne stuff is not liable to be so bad. You know, I wouldn't necessarily recommend it. But yeah, in terms of whether there's any particular reason to avoid it, I would say avoid the obviously fun fungus infested stuff and yeah, I mean

**Heather** 39:34

maybe because as meat begins to go off, it smells regardless. Like you know, the meat with fungus always has a smell. And so just like you know, put it away. You know, get get rid of it. Yeah, do not eat.

**Bret** 39:48

I believe there's some I have to look into it. There's some exception to this, but I'm not sure what it's With some food stuff anyway, I'll see if I can't figure out what it is.

**Heather** 40:02

Okay. Do you have thoughts? Do you have any thoughts on the CDC study that natural immunity is less likely to protect them vaccine? I don't know this study we've talked about and put on in the show notes and into that paper. Yeah, into that paper that we posted a couple of studies that that show that natural immunity provides really excellent protection. And one of those papers specifically compares it to the protection afforded by the vaccines and finds that natural immunity is better. Right. So I don't I'd like to know, I'd like a reference on what study this is. But I know that there are been studies that suggest the opposite, at least one study that explicitly suggests the opposite. And another that suggests specifically suggests very long lasting natural immunity from the disease. In the same moment that we are being told that maybe six month boosters are going to be required ad infinitum.

**Bret** 40:59

Right. And we haven't seen the pattern of people who were infected earlier in the pandemic, having no apparent immunity left. So the waning immunity hasn't shown up, right. Also, in principle, there's the simple fact that the virus itself carries many antigens and the vaccine specifically, only one. So there's a question about what the basis the breadth of the immunity certainly should be greater from for the pathogen itself. There's the remote possibility that you could engineer a vaccine that would be so effective, that it would create longer lasting immunity. But as you point out the record of the booster recommendations, don't suggest that this is what's going on. So anyway, I guess I would say I remain to be convinced by any such paper. And I'd be interested to look into the Methods section in particular and see if there's not some lurking there. Yep,

**Heather** 41:53

totally. It takes time to lose weight, and many are hundreds of pounds overweight, it's not reasonable that they can lose enough to be safe from COVID. Well, yes, there are people who are morbidly obese and beyond morbidly obese. That's not most people who are overweight. And anything that you can do to start taking control of your own health is helpful. Yep, totally. And it because because safe from COVID note, no one is safe from COVID. Yep, you know, even even young, healthy children have died. And that's extraordinarily rare. So no one is safe, regardless of how many boxes you tick in terms of being apparently relatively more safe than you could be. But presumably, and I haven't seen data to this effect, but presumably being 100 pounds overweight is safer from COVID than being 200 pounds overweight. So it's not it's not binary. Love Your Work Dark Horse numbers one to 91 highlight of my week, from Somerset, UK. Awesome. I have a thought about paddleboarding. And using sunglasses and sunscreen is that much exposure to the sun, a bug of modernity that makes these necessary. I would say sunglasses and sunscreen are two different things. And it's possible that something will emerge that suggests that actually protecting our eyes with sunglasses is also causing some kind of problems. And I remember my field assistant in Madagascar, Jessica, who was was British, who'd grown up. She's a daughter of a diplomat and had grown up in countries in Africa and also Madagascar. But she's British by birth. And she used to marvel that I wear sunglasses when we emerged from the field in the forest onto the, onto the beach of the little island that we were working on off the coast of Madagascar, just like you Americans and your sunglasses. Like you know, we're practically on the equator here and I've got the sun beaming down from the sky and glinting off the water. Why wouldn't I wear sunglasses? And it was really just a cultural difference here. It's like we Brits don't wear sunglasses on like I said, only because it's cloudy where you're from, and you should be wearing sunglasses now. Right?

**Bret** 44:10

They keep a stiff upper eyelid.

**Heather** 44:13

That's right. So I have never avoided sunglasses, when it felt like you know, I was squinting otherwise, to protect my eyes and you know, I think that's what we do. We behaviorally protect our eyes. Whereas sunscreen, you know, we can behaviorally protect our skin, too. You know, if we can if if the sun is so bright, you don't have sunglasses and you're squinting in order not to not to feel that your eyes are hurting. That is a behavioral modification. And if you're out in the sun, and it's not just that you feel hot, but your skin begins to feel hot. You need to behaviorally modify if you possibly can, and and get out of the sun and I you know I don't I don't wear sunscreen. I do very very very occasionally but I have So far this year I applied any sunscreen. I tend to go paddleboarding in the early morning. So not between the hours of 10. And two, largely I was I did get a late start one morning this week and was out, came off the water close to noon. And it was hot. And not only was it hot, but it really had felt like there was no escape. And so I tend to I'm, you know, I'm paddleboarding mostly in the Willamette. And there are some islands that I like to go to and you know, you get on an island and you can go except it you know, the very peak of the day and you can get into some shade. And that's what I tend to do. And this wasn't possible. I did feel like it was pushing a little bit much I was a little bit too much exposure with no possible reprieve.

**Bret** 45:43

You know, I don't know what you're gonna think about this. You probably weren't dressed for it. But you could also get in the water and use the shadow of your paddleboard as a proof.

**Heather** 45:53

Yeah, true. Yeah, it wasn't. I wasn't wearing a swimsuit. I probably shouldn't be at this point. It's just the wetness the weather for it. But

**Bret** 46:01

yeah, I totally would. I was doing it. Because then you go for a swim and get back on your board. Yeah. So anyway, I wanted to point out something about the sunglasses issue. Yeah. Which is that in some sense, the sunglasses may be a negative, they may well be a negative. In some circumstances, there's also stuff that we do that requires them. There's a road here, that is absolutely undriveable for a month or so as the sun sets because the sun, it's a hill, you're looking right into the sun, you just cannot see what is ahead of you unless you are wearing them. So there's that there's the case of Inupiat using sunglasses made I think they're made a bone with the slats little louvers in them. Oh, yeah, it's a it's a, it's a cool looking device. Yeah. But anyway, it suggests there's kind of an ancient history of tinkering in an environment that's unusually bright. That's cool. Um, there's also the fact many of us have experienced careless skiing and sun burning our retinas. That's not fun. It's not fun. Yeah. But

**Heather** 47:08

what do you what do you do about that?

**Bret** 47:11

suffer a lot and wait for it to heal. I can't closing your eyes

**Heather** 47:15

make it worse or better.

**Bret** 47:18

You see stuff when you do that, and you close your eyes a long time. It's been decades since I had any. And I didn't have a very serious case. But yeah, so anyway, point is unusual environments require some intervention. Unusual technologies like driving require some intervention, it may be that we overuse sunglasses, it may be, especially since eyes don't typically get cancer, they do tend to wear out, they're one of those tissues, that's all the way over on that side of the spectrum, it may be that we are protecting them from damage, that we're effectively slowing their aging by blocking a certain amount of the photons coming in. It's effectively a neutral density filter, which is a, you know, a fine technology blocks at random, some fraction of the photons. But anyway, there's a question to be answered. Is there a harm to sunglasses? I don't know. But it's possible.

**Heather** 48:15

Do you still read the New York Times for the bizarre entertainment? I admit that every once in a while I watch alex jones scream about black helicopters. I think it's Alex Jones is just as Jones the bizarre entertainment. Yeah, you know, I just haven't been able to convince myself to lose this or lose the subs or lose the subscription yet. Right. And I do. And because I pay to have it. Arrive once a week. I do try to look at it. And then you know, when I do, this happens.

**Bret** 48:45

Well, I mean, there's also something to be said for just knowing what some large demographic is thinking. Absolutely. is a pretty good window. Yep. To a certain style of thought. True.

**Heather** 48:57

True. True. Let's see. What are we at timewise? Zack? All right, so we're gonna we're gonna try to keep this to an hour.

**Heather** 49:07

today. Any more information about the lipid nanoparticles collecting in the body? I've seen nothing. I've seen nothing. Yeah, some of these questions. We just I don't know. Why did Robert Malone take the maternal vaccine after you'd already had COVID?

**Bret** 49:26

Oh, I think Anyway, I hope I'm not telling tales out of school, but I think the answer is that he had some long COVID sin syndrome, and that there was an indication that vaccination was somewhat helpful. I think that's right if I've got it wrong, it's just because I've missed remembered something but I think that was that was it. Okay.

**Heather** 49:47

Do you anticipate the development of newer and improved vaccines however great, our early attempts may have been I would expect as with many inventions and technologies that it can be improved with additional attempts and time. I certainly hope so. And I have begun On to look just a little bit into Novavax and you know, who knows what we can actually see and what we're being told, but I am hopeful.

**Bret** 50:06

I'm worried I've heard murmurs about Novavax, potentially not being properly formulated, but the idea it could be potentially better. And frankly, there could be something a lot better. And it would be great if we had a non leaky vaccine built on a traditional platform. I worry what Yes, amazing what? What is the alternative to authorization? It is called approval. I am concerned about what approval of current vaccines will do to that process, maybe nothing, but I would like somebody to tell me what the implications are. If full approval occurs,

**Heather** 50:46

yeah. simplistic question. To these I'm just seeing for the first time, does x y, imply mutation given the regularity of x x? Would that make the female sex more ancient so chromosomal sex determination, the the, what mammals have and what also birds have? It's a separate evolution of chromosomal sex determination what also some groups of reptiles have but against separate evolutions of chromosomal sex determination in mammals except for that monotremes the duckbill platypus nakedness. We have the well known to us system of females being xx and males being x y. chromosomal sex determination is far more new than sex itself. And so the way that we that that that zygotes end up being, you know, being told being informed that they are either male or female is by in the case of humans, you know, the sex chromosomes, chromosomes of that 23rd position. I did see some different some different position in all the other mammals. But that comes long after there's already been sex and existence. So you know, x x, x y is newer than sex, that said, you know, what sex? Would we think of all the organisms being in a non sexually reproducing species? We think of them being female? Because what what females bring in their gametes and our gametes is cytoplasm? Is the myth that what do you need in order to achieve sexual reproduction, you need the DNA from? Yeah, the DNA from two different individuals to come together. And this is true of all plants, all animals, the DNA of two different individuals to come together, and, and join. But there's actually two other things that you need that are implied by that story, right? You need the other cellular machinery of the cell, you need the cytoplasm, you need things like mitochondria, and ribosomes, and someone's got to bring that. And if both players bring that they're going to argue over who's they get to use. And so we call the one who brings that the female and we call that gamete, the egg of the egg is the cytoplasm rich gamete. And then the other problem we need to solve is how do you find each other. And so you've got this really large by a cellular standard cell, that is the egg that's filled with cytoplasm. And now if it was going to move around, it'd be pretty slow, because it's laden with all this stuff. And so the other gamete The other type of gammy, which we call in plants, Paul and or we call an animal's sperm is stripped down, it has basically no cytoplasm, it's basically half a complement of DNA and a motor, and it's the one that zips around looking for eggs. So the egg solves the problem of what else do you need besides DNA in order to make a functional being, and the sperm solves the problem of how do you find the thing that you're going to combine with in order to make a functional being? And all of that well predates? chromosomal sex determination?

54:00

Also, is there any evidence that the x and the y are homologues? I rather suspect that they're not. I guess that's assumed in the in the question, isn't that? Does x y imply mutation given them? Right? I mean, like, to the question, wrestling,

**Heather** 54:25

I mean, I guess, you know, like all the other all the autosomes are x's, effectively? I mean, they look like x's. Right? So I guess, I guess I have assumed Yes, that y is a is a sort of a depauperate. x. And it's certainly a smaller than, but I don't know, I don't know if science knows. I don't know if we know

**Bret** 54:43

we should look into it. Yeah, because I think if it's not, then yeah, then the answer to the question is simply now and if it is, then you can't call it a mutation. But you could say right it is a devolved devolved ex.

**Heather** 55:07

Why does Brett constantly repeat that libertarian or voluntaryist are naive? I don't know what a voluntaryist is. I've not heard that. Yeah, but go with libertarian.

**Bret** 55:19

Well, let's put it this way there are people who have libertarian sympathies. I think I probably have substantial libertarian sympathies. But we're not libertarians ideologically, because of the many failures of game theory that are effectively guaranteed by libertarianism. And libertarians will frequently swear that this is not the case that they've solved the tragedy of the commons somehow, and then nothing useful follows. And you know, I think the most, the best defense you could make is that you can't solve the problem. So you're better off just paying the price because the solutions are worse than the disease. But that isn't right. The Elinor Ostrom work is an elegant demonstration that these problems are solvable that they have been solved under ancient circumstances, and that we need modern analogues for those ancient solutions, period, the end or we're gonna dive tragedy of the commons.

**Heather** 56:19

Let's say I just try to fly we got here we go. If it's true that the biggest increases in the recent in the last seven days, from wrona deaths by state, I want to try reading this in my language because it's a little bit, a lot of words here. If it is true that the biggest increases in the last seven days of Corona virus deaths by state are in the least vaccinated states, and vice versa. Meaning, well, vice versa could mean a couple of things here, but imagine that it means the lowest increases in deaths are in the most vaccinated states. Isn't that a case that the vaccine that the vaccine should be supported?

**Bret** 57:07

that nothing is so simple.

**Heather** 57:08

Yeah. So you know, of course, there's an if it's true thing at the beginning of this, which the question you know, posits as well, and there are your early in the pandemic, we were hearing from a lot of people about why are we having conflated, died from rather than died of copan

**Bret** 57:35

not died from and died with?

**Heather** 57:40

Yes, died from an up being the second so died from versus died with. And I paid scant attention to this at the time. I think, especially what we have now seen with regard to monkeying with the baseline with regard to, for instance, people post vaccination, who are being claimed to have died of COVID, even if they tested negative for COVID. has raised for me the specter of this rather significantly that I do not. I would like to see clean data with regard to COVID deaths. That wasn't created in service of some conclusion that already existed before the data existed. So that that is the sort of if it's true, like we don't even know if it's true. But then

**Bret** 58:33

then so that's the analysis is also, as is so much of the current analysis, overly focused on individual well being and instantaneous measures as the ultimate arbiter. And so what's missing from this is we don't know what the long term impacts are for vaccinated people. We don't know how many have been injured along the way and how severely but maybe more to the point we don't add is not off the table and vaccine escape mutants appear to be very much on the table. And so all of these things suggest some net analysis that it does not appear anybody is doing. Everybody is looking for a simple rubric. And it's not a simple problem. It's a complex systems problem. And it really needs wise, well informed people looking at high quality evidence without a conflict of interest. And we're like, nowhere near that list of things. Not even close. Yeah.

**Heather** 59:40

Okay, three more questions and then we'll stop unless sec or we had an hour. All right. So we'll do three more questions. One of which is just Hello Breton. Hi there I would like to call in. Which sort of just amuses me, we don't do Collins but It could be fun and ultimate

**Bret** 1:00:00

reference call it in. Bring it in, bring it. I don't know. Alright, it's late. That's clear.

**Heather** 1:00:10

That is clear. We're gonna have dinner later, right?

**Bret** 1:00:12

Thinking. Yeah,

**Heather** 1:00:14

I mean, you do as well though, for some of you it's well past dinnertime I imagine it's

**Bret** 1:00:18

for some it's nowhere near dinnertime. I mean, Hawaii.

**Heather** 1:00:24

So it's true. The three people in Hawaii who watch Yeah, it's the time in the podcast where Fairfax stretches and shows the back of his head. Okay, penultimate question. India's spike has disappeared. It's a mostly unvaccinated country. Could this be herd immunity? You know, what's going on India is is unclear. But certainly the one interpretation from some data analysts that we have been paying attention to, and that we have also put into our paper describing some of the evidence in support of ivermectin, this prophylaxis is that there are many states in India and even those that have not been using prophylaxis are beginning to you know, try to try to pressure the government's to allow them to that have been basically given giving, prophylactic practic packets to to their people. And I hope that's right. Well, I certainly

**Bret** 1:01:28

hope it's right, it's probably isn't right across all of India, there's Eisley an interaction between parts of India that do and parts of India that don't. And there's this maddening pattern that we've seen globe wide, where as the curve goes up, we enact measures, yes, the curve goes down, we lift the measures. And the fact is, as the curve goes down, what you want to do is everything you can to make sure it continues to go down because eventually it hits zero. Yeah, right. And so we were just so stupid about this game. And we're

**Heather** 1:02:05

like, an extended lock of Altera model with the virus is like, it's the overslept. Like we're acting like we're in some simple predator prey dynamic. And,

**Bret** 1:02:16

well, yeah, I mean, you know, the predator prey dynamic is nice, because it keeps the predator and prey alive indefinitely. And we're in a different dynamic where we would really like this thing to go extinct.

**Heather** 1:02:29

But it's, yeah, it just seems like the policies almost seemed designed to keep the virus alive. Yes. Which, obviously, there's no design and predator prey dynamics like that. But that's what the that's what the slightly offset sine curves look like. Final question. Can adults learn new skills just as well as kids, for instance, music as an example? No, but we can do, okay. But for many, many skills, we lose some of our plasticity. And there are four different skills, some particular periods, some some key periods, during which, if you are exposed, you're likely then you know, if, if you become bilingual, young, you're more, it'll be more, it'll be more easy. It'll be easier to pick up third, fourth, fifth languages later on, even as an adult because you've effectively primed yourself to have the plasticity early on. And I think the same will be true for musical instruments. With regard to language, there may be a trade off, you know, there may be a trade off to having lots of flexibility. And you know, speaking many, many languages, which isn't something that you know, really anyone is saying, but But yeah, getting at least some flexibility on board for some of these types of skills. The younger you are, is likely to make it easier later, but that doesn't mean that it's never too late.

**Bret** 1:03:55

Yeah, I would love to see this parsed Yeah, differently. And I'm sure there is evidence, and I just don't know it, but I wonder if language and music aren't exceptional. And for the very same reason. And other skills aren't so much like this, but there might be confounding patterns like, you know, is it easier to learn to skateboard as a kid, maybe not but falling off the board is a lot better. And so

**Heather** 1:04:25

so that so the, the risk of the the injury upon failure is so much lower, so it's better to learn it when you can afford the failures because you're going to be failing while you learn. Similarly, things that require really either gross or fine motor skills, especially fine motor skills. You know, are you're not going to be as good a woodworker at six. No matter right? You just use your judgment sucks your job. Well, the judgment sucks, but also so does your fine motor skills. Yeah, right. You just don't have it on board yet. So there's not going to be certainly not a single universal answer. But you know, just thinking about There are wordsmiths often persist being word Smithy into into old age, whereas other other kinds of thinking does seem to fall off. And obviously, we know that athletic athletic skill does to some degree, certainly things like burst speed, and raw strength.

**Bret** 1:05:22

Yeah, right. I certainly know in myself, that there were puzzles that I would have found easy to solve, like engineering puzzles that I would have found easy to solve at 15, that would be much harder. Now. On the other hand, the the wisdom side of it about what solutions tend to look like and how one finds them is enhanced. So there's sort of raw computing versus intuition. trade off, but I don't think it's simple.

**Heather** 1:05:55

Yeah, no, of course, it's not. And I think, you know, this is one of the reasons that having age mixed teams, regardless of where they're talking about kids, or adults, or both, it can be so so much, you know, it's going to be Messier, it's going to be less predictable, it's probably not going to go totally smoothly. And as you expect it and be the shortest time to completion. But it's likely to generate new kinds of wisdom in a way that having, you know, perfectly matched, you know, with it with the skills on board that you wanted in the room. That's just gonna, that's gonna produce answers that are more like the answers that have come before. And I'm thinking also of ultimate, ultimate frisbee, right? That at the point that we were playing, we were, we were mostly in our late 20s, mid late 20s and early 30s. And so we were not the youngest players on the field. But we were also nowhere near the oldest players on the field. Yeah. And, you know, there were some players in their 40s and 50s, who were extraordinary. And, you know, they weren't going to tend to be the one who were like them going long throw deep, because there was always some young buck on the field who was going to be able to beat them and get to the Frisbee first, right. But they were strategic, and they were able to place themselves where no one else had placed themselves and thus receive the Frisbee and throw it and no, it really is such a remarkable game in part because not just does co Ed work. But age. Age diversity works as well.

**Bret** 1:07:22

Yeah, I agree. There's something I think at some level, we artificially for the same dumb reason that our classrooms look like a bunch of chairs facing the cave wall. Be more interesting. We have age stratified education, right is different in some way. But it's probably really dumb. Oh, and

**Heather** 1:07:43

100% is now this I mean, I think it 100% isn't almost all I think of the alternative educational models, even in the weird world recognize that like, that's like the one of the first things to go, you know, the one room schoolhouse, which my father was raised, I was raised in a farmhouse with his family, but the one room schoolhouse run by nuns, Catholic nuns in Iowa, was, you know, all the grades together. Right? Right. And that's that's a classic from every, you know, every every moment until now, and I mean, I guess what Waldorf now does, age restricted, but, you know, Montessori, the school that Zack went to for one year before it before it disbanded, you know, the the schools that are really trying to provide agency to the children, and allow them to learn not only how to learn, but also how to teach, which is the most effective way to learn exactly has them with people who have skills that they can't yet attained, don't yet haven't yet attained because there's so much older than them. And also people with skills that are so much younger than them that they don't have that much to teach them. And also everything in between. Yeah. So that all of those, all of those interfaces are possible. Yep. So in two weeks, we'll be talking about school. Right? So next week, the chapter will be talking about his childhood and the week after that is school. So we'll come we'll come back to that. I feel just

**Bret** 1:09:08

slightly too cool for school.

**Heather** 1:09:11

I was gonna say you always have, but that really wasn't your situation. That was never nice. That was. That's not true. So I didn't say it. Yes. All right. I think we've come to the end. So as always, please consider sharing this video, liking it, subscribing to the channels on both YouTube and Odyssey going to our Patreon. Going to my substack natural selections. Consider some stuff at store dot Darkhorse podcast.org. And if you've been watching on YouTube, try it out on Odyssey. We'd love we'd love to send as many of our viewers to Odyssey as possible and be good to the ones you love and eat good food and get outside. Hello everyone.