Your Questions Answered - Bret and Heather 50th DarkHorse Po...

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**SPEAKERS**

Bret, Heather

**Bret** 00:11

Hey folks, welcome back to the Dark Horse podcast live stream Q and A section with cats drinking stuff. All right, it is time to answer your super chat questions. I feel prepared to you. Pretty prepared. Yeah, good,

**Heather** 00:27

even though that was a long conversation we just had. But we're gonna do

**Bret** 00:32

it. That's the thing you don't want to you don't want to give totalitarianism short shrift.

**Heather** 00:36

You don't want to be underprepared for totalitarianism.

**Bret** 00:39

No, you also don't want to offend it. Like I might. Okay. Yeah, fair enough.

**Heather** 00:44

All right, a lot. So I'm going to start with a few questions from Episode 49. That we got a question that comes in from the discord server once a week and then embark on the questions from last hour before coming to the questions from this hour. Last time, we spent a fair bit of time talking about helium as one does. And someone commented, I read a good book about helium could not put it down.

**Bret** 01:07

Yep, I get it. I like it. Yeah, I like it. I think that's pretty good. Yeah, yep.

**Heather** 01:12

Okay. Another comment rather than question from Episode 49, the woke left and conspiracy theory, right, both suffer from the same affliction apophenia, finding fake patterns of evil and events where none exist.

**Bret** 01:27

Fake patterns of evil in events where none exists. So it's, this is an argument for a superstition. I agree. There's something sort of in search of Boogeyman of various kinds. Yeah,

**Heather** 01:43

yeah. And I think you know, that's what when people talk about someone being a conspiracy theorist, that is, the savvy version of that, I think, is trying to get at like, God, you're you're, excuse me, you're gonna find pattern where none exists? You're being a verification test. You're looking for Boogeyman, etc. Yep. All right. Well, we have a third cat calling from the other room wondering where his milk is. Excuse me? Could male homosexuality emerge as an adaptive response in populations with patrilineal transfer of material resources, less male offspring with offspring. Less male offspring with offspring means less competition over inheritance, which means maximum status for the eldest. So fewer male offspring without spraying means less competition over inheritance, which means maximum status for eldest question mark.

**Bret** 02:37

Yep, I'm still hoping the world goes back to normal and we can rent a hall and we can have this discussion flat out, but I will say, as a first pass, yes, I think you're in the right neighborhood. The older brother right hand rule, which says that the more older brothers you have, the more likely you are to be gay, but only if you're right handed actually fits the the pattern you're proposing here. And we will go more deeply into it later, with a proper Hall, rented goddamnit.

**Heather** 03:10

Next question, do you to think, do you to think that things classified as mental illness or adaptive mechanisms which might have been used for survival and reproduction in the ancestral past, but manifest deleteriously? In the present environment? Depends Which ones? Yeah, exactly. So your mental illness is a bad category, some, some of them are going to be mismatch mismatch, so called mismatch diseases, which are, our current environment is so out of whack with our ancestral environment, that we are not adapted appropriately to what is going on now. But some iment There are also mental illnesses that are entirely novel themselves. And then there are others that are called illness which, you know, shouldn't shouldn't be considered illness at all are just representative of the range of you know, call it neuro diversity that actually has existed historically, and should continue to exist now without being medicalized or drugged into submission.

**Bret** 04:11

Yep. So I would I would agree with this on I would say even the ones that are real disorders, though, are in general malfunctions of adaptive patterns. So there's a question about is the pattern itself of a pathology? And is the manifestation also, you know, the manifestation will be pathological in many cases, but if it's built of adaptive stuff, and you know, there's good stuff on this, like, Randy, NASA's work on depression, which suggests it's an adaptation out of place, all worth considering.

**Heather** 04:47

It's good. Why are dolphins and whales seemingly actually altruistic, such as swimming around humans in the presence of sharks? Is there an evolutionary element, always an evolutionary element, I am simply going to make the phylogenetic comment which otherwise you would make to let you match up the altruism question, which is the dolphins or whales. So saying dolphins and whales is fine. But it's like saying, humans and monkeys are humans and mammals, we It is true that we are a distinct piece of that group. But just like dolphins evolved from whales and are therefore still part of their original group. So so it is true for us in primates and mammals and invertebrates and all these things.

**Bret** 05:32

But if you say whales, including dolphins, then people like us, we'll know that you're in on the the phylogenetic reality of the thing.

**Heather** 05:41

And it doesn't really matter that much for most questions. No, it does,

**Bret** 05:45

it does. Because if you if you just simply sign up for the phylogenetic interpretation of this stuff, and you say, you know, whales, including dolphins, that's one level of insight that you get just from simply having understood that that is a nested set. But then you can say stuff like dolphins including orcas, right. And the point is, each of these things tells you something really cool about the evolution of these creatures. So anyway, what was the question though about altruism? Why

**Heather** 06:18

are they do they seem to be altruistic, like when they swim around humans in the presence of sharks? Are they What's going on?

**Bret** 06:26

Yeah, well, first of all, you're talking about some among the toothed whales, which is I think what you're talking about, you're talking about highly intelligent creatures, who have certainly noticed that we humans seem to control a good deal of stuff surrounding their well being so it is possible

**Heather** 06:43

so let's just just as long as we're on phylogenetically you said today so basically, you've got veiling whales whales, is a good group that evolves from

**Bret** 06:54

hippos. Yeah. So

**Heather** 06:56

what's the what's the big group called? I can't think of what the including group in Latin is called. Anyways, something cetacea

**Bret** 07:05

said already

**Heather** 07:06

started axles, yes. So, having gone back into the ocean, you've now got whales and they're grouped into Balian and toothed whales and the toothed whales and basically all those things that we know of as dolphins, including orcas. And then there's one, one big bodied whale that's toothed. Oh, sperm whale, sperm whale. Yeah, but everything else is really well and there. They don't tend to engage in this sort of thing. So you're probably pretty much talking about 212 and maybe not even all toothed whales, not even

**Bret** 07:34

all two. Yeah, first of all, there's a whole group of toothed whales that are bizarre and little known because they're pelagic. The,

**Heather** 07:42

it's bigger than what I just said that includes more than the believe

**Bret** 07:46

beaked whales is a sub clade of toothed whales. sperm whales is a sub clade of toothed whales, dolphins, what else? Anything else in there, the dolphins and porpoises, I believe together inside of toothed whales. In any case. So there's a question about whether it's altruism, whether it is reciprocal altruism. In other words, does doing well by humans result in some kind of benefit sometimes, is it a misplaced adaptation. So for example, when people have been seen to be drowning and dolphins have come to their rescue, it is possible that as a dolphin responding to a sense of a fellow traveler in need, or it could be that it has a reflex to to take adara to preserve a drowning member of its pod by putting them up to the surface and that it's misdirected. My guess is that dolphins are too smart for it to be an accident.

**Heather** 08:59

That that confused about that not being a dolphin who's drowning if it's a person.

**Bret** 09:04

Yeah, I mean, you know, there are lots of reflexive things that even a smart creature can get involved in, but this seems awfully complex. Yeah. So I don't know. Yeah, probably not altruism, but cooperativism,

**Heather** 09:17

collaborative ism, a kind of reciprocal altruism. And yeah, I mean, dolphins are, like us, extremely social and long lived. And they have generational overlap. And yes, they live in extended family groups, and they, you know, they care for members of their group, but group both kin and not and the idea of expanding that sense of family of group to, to include someone, not even up their species is something that, you know, frankly, most humans couldn't manage. It seems, but, but maybe many dolphins can and actually I'm not sure that's even fair what I just said because there are a lot of people who may not be able to see the value You in say, preserving wild animals who still love their dogs? Yep, for instance,

**Bret** 10:06

I would agree with that. I am concerned though you give a long list of similarities between us and dolphins and you did not do the work of the balancing list of differences.

**Heather** 10:16

Oh no. Yes, I did not. I did go for it, do it.

**Bret** 10:20

So I studied whales for a time in college. I was in a marine mammals program and I did learn that they are aquatic. That's one major difference. They are very I didn't even know quickie. And they have flippers.

**Heather** 10:32

Well, it's the squeaking. This is probably I can have all the saltwater. They probably just need more grease.

**Bret** 10:37

Nope. Because freshwater dolphins are also squeaking.

**Heather** 10:40

They are you've heard this or you've just read in a book.

**Bret** 10:44

I prefer not to. Alright, we've gotten silly because we've been in front of a camera for too many consecutive minutes. That's right.

**Heather** 10:54

That's right. Okay. This question from the discord server where once a week, people pose questions, and they vote on which question they'd like us to answer. And this week, the question they would like us to answer always big questions that we can't even begin to fully answer, but they've always been good so far as well. is, what are your thoughts on birth control methods, particularly any possible long term effects of hormonal types? If you had girls, how would you advise them on the matter? God had so many questions, and there's It's so good. And, you know, just to start with the final one first part of part of why feminism, when it has made sense as looked the way it has in the past, and why modern feminism often doesn't look like it makes sense, is actually based on the correct recognition that be female, and to be male is different. And that effectively contraception, effective contraception with you know, one large exception, you know, the condom basically falls falls to women. And this is, you know, is it fair? No. Is it true? Yes. And is there any way around it? It doesn't seem to be not yet. You know, it would it would be great if there was work on possible modes of contraception for men that didn't involve condoms, and I'm sure there's some, but there's not nearly as much. But that's

**Bret** 12:23

also physiologically harder to get it to work, which may be why there's not as much.

**Heather** 12:28

I believe that that is true. Yes.

**Bret** 12:31

for reasons that are interesting, which may we'll come back to us. Yeah,

**Heather** 12:34

yeah. Moo. So yeah, hormonal birth control is, is not perfect. You know, when when the pill was first introduced, it was at much higher doses than it has been for a long time. I was certainly on, you know, very, very low dose pill for many, many, many, many years. And at some point decided that basically, I hadn't been an adult without having exogenous hormones that were working as contraception. And that didn't strike me as a particularly good idea, much, you know, it is it is certainly less worrisome to me than allowing children and, and teenagers to take cross sex hormones, which is currently all the rage among some medical professionals. But it is also there is no reason to think that is totally harmless, even at very low doses. That said, there is a way to mitigate the harm the potential harm of hormonal birth control for women that is mostly not done, but could basically not necessarily mitigate the harm but provide a adaptive advantage. That was never imagined when the pill was first on the market. That could actually help which is to say that in a hunter gatherers, most females, girls and women experience something less than I'm making up a number here, and it's going to vary across hunter gatherer societies. But something less than 15 men sees like bleeding events, menstrual cycles in their entire lifetime, in their entire lifetime. And this is because it's not that they are pregnant their entire lives. But that the combination of being pregnant during what you have amenorrhea you're not you're not menstruating. And then when you are breastfeeding, at least on demand and more and with greater than a frequency of I don't remember what it is every six or eight hours or something. You have what's called lactational amenorrhea. You don't you don't mean straight. Due to the effectively the competing hormones are producing milk, in which you know the adaptive Reason being if your body is producing milk for an extent baby or toddler, then it is not yet the time to get pregnant again because you are still working to feed a child The combination of

**Bret** 15:02

the missed one. Yep. So there's lactational amenorrhea, there is just a gestational, and there is starvation, although I don't know if that's what. But you know, if you female marathon runners, for example, are often so lean that they don't men straight. So basically the body has all of these protections against getting pregnant when having the resources to raise a child is not evident. Yep. And so anyway, those you're saying, in principle could be borrowed as a

**Heather** 15:38

well, specifically, it seems that so rarely in human history until post Industrial Revolution, have women had so many periods that there is decent reason to think and not enough research yet. That having so many periods actually can cause long term health effects, like for instance, anemia, that that much loss of blood over that, you know, that that reliably, can cause things like iron deficiency. And so you know, why not, if you are taking a very low dose, hormonal contraception, take it not 21 out of 28 days, but 20 out of 28 days and and don't maintain demonstration so you know, originally the dude who invented it, imagine that ministration was an absolutely necessary thing. You know, and there were all sorts of weird ideas around cleanliness and dirtiness and and women's reproductive health not being this is something that was being considered as carefully as it might have been, as it probably would be now. But if you know if if the pill instead allowed for so you know, one menstrual cycle in a year, as opposed to 13 of them, that would have only a slightly greater effect with regard to the exogenous hormones. But it might actually have a positive effect in the other direction of not having the women who were on them have whatever negative health effects there are from having so many Menzies

**Bret** 17:16

and it would almost certainly preserve fertility. For

**Heather** 17:20

longer. This is probably true.

**Bret** 17:22

So anyway, we can argue about the various costs and benefits of that, but But anyway, that's probably probably the case.

**Heather** 17:29

Yeah, but yeah, I mean, very, very low level. hormonal birth control is not perfect. There's nothing there's nothing that is Oh, no, lesbianism

**Bret** 17:39

works like a charm.

**Heather** 17:42

Yeah, okay.

**Bret** 17:46

All right. Just thought I'd mentioned it is very effective.

**Heather** 17:50

So I've heard Yes, yeah. Yeah. I mean, there's, yeah, you know, there's, there's stuff that is that some people really don't abide things like the copper IUD, which is apparently extremely painful for some people. And the hormonal IUD is not recommended. If you are not past your desire to have any, any more or any children. diaphragms are messy, but effective. If it's, it's, there's not a perfect solution. And the hormonal ones are, by far the most set and forget and easiest, but there are potential long term effects.

**Bret** 18:33

Yep. Alright, so just a word on why it is harder to generate male birth control? Yeah. If you think about it, males, because they have two reproductive strategies, one of them does not involve investment. Males are basically built with a strong bias in favor of fertilizing females, irrespective of the wisdom of that. Because basically, if a man is not intending to stick around, then though the offspring he may produce is very costly, the cost doesn't fall to him, and therefore might as well sort of like seeds falling from a tree might as well germinate even if they land in bad soil, because the alternative is no, no functional offspring. So anyway, the idea is female bodies are much more reluctant to produce offspring, because the cost is so damn high that they only want to produce offspring when conditions are hospitable. And therefore it is easier to interrupt that system because that system is looking out for all sorts of conditions that say it's not a good time to reproduce. Yeah. So anyway, that bias is not inflicted by the patriarchy. The patriarchy may find it convenient but nonetheless,

**Heather** 19:48

that's that's actually the thing that a lot of a lot of what gets put on the patriarchy is bill the patriarchy you may have been using opportunistically but wasn't actually its invention.

**Bret** 19:57

That's right. Mostly we in the patron We're just very, very lucky. We did not set this up. We would not have thought of it. We would not have had the dedication to make it work. We just lucked into it. And we're sorry.

**Heather** 20:13

Are you though? Yeah, sometimes a little bit. A little bit. Mr. White. So this was a huge Super Chat. donation. Thank you and what it the thing that comes to the Super Chat donation is a is a video and it reads Mr. Weinstein, consider this donation request review this video I've produced which combines Yuri Deegan. Diagon. Never get it right big date. Dagens findings with the findings of a YouTuber named laowai 86 is that I believe proves conclusively the lab leak hypothesis. The video is designed to be understandable to the layman as well, so the general public will understand. So

**Bret** 20:56

I'm excited to look at this. I can't promise I'll spend the whole couple hours. Unless it seems like you've cracked the case in which case I will.

**Heather** 21:06

All right, good. Next question, How confident are you that generations who are overly affected by social media and in turn are much less able to concentrate will still be able to produce great doctors, scientists, pilots, etc. careers that require a special kind of person?

**Bret** 21:25

Well, I'm not confident in the general ability, but I am confident that every generation has its misfits and that misfits are capable of weird stuff by virtue of the odd path they've traveled. And so there will be good doctors, scientists, pilots, etc. What you don't want is a system that's inhospitable to them because they are ill mannered.

**Heather** 21:56

Yeah, so with without without all the social graces,

**Bret** 22:00

right, yeah, prone to say awkward stuff, that sort of thing. So anyway, yes. preserve your misfits and they can carry you through tough times.

**Heather** 22:14

Yeah. And keep the children off social media as long as as long as you can.

**Bret** 22:18

And the pets

**Heather** 22:20

keep the children off the pets

**Bret** 22:21

now, the pets off the social media.

**Heather** 22:25

I feel like if we had the pets on social media and kept the children up, things might be better. Even more cat videos,

**Bret** 22:30

I both senses of the term maybe the cats would put up child videos. That'd be weird

**Heather** 22:36

now. I'm gonna try this conducted in depth research regarding this situation. I wonder if there's another question from this person. Hold on. Oh, no, this is actually coming right after the previous question,

**Bret** 23:00

I think

**Heather** 23:02

conducted in depth research regarding the situation. I believe it's a decade's long track toward unipolar global governance. And who New World Order New World Order, build back better slogan shared by the UN and others equals destroy nation states and then build back better. Please comment on your view of this.

**Bret** 23:22

There's only one respectable view of that. What could possibly go wrong? Yeah, no idea whether this is the planet does sound like the kind of thing that could be ideally or not. So ideally, invented in certain circles where people have the sense of what might be possible and do not appreciate the danger of unintended consequences, falls squarely afoul of the principle of subsidiarity which I think any wise non utopian. Person attempting to build bigger and more effective systems would have to subscribe to substitute out principle of subsidiarity principle of subsidiarity, which weirdly, comes out of Catholicism, and I have never delved far enough to find out how exactly that works, but subsidiarity means that everything should be governed at the lowest effective level, right? So this idea that what we need is global governance and top down stuff is going to be a disaster because there's lots of stuff that you don't want regulated at that level. On the other hand, there are some stuff you will need regulated that have to somebody's got to protect the oceans and the atmosphere and, you know, police certain kinds of incursions and ultimately the you'll have to build things at that level too. So how do you do it? Well, the ideas figure out which is the lowest level that you can effectively govern something and that's the level that it should be governed and then only those things that have to be governed globally get governed that way. So anyway, I hope you're not right. This is somebody's plan to place nation states with something higher up because It will of course and disaster.

**Heather** 25:05

I need advice. I'm a crack addict, but I got a cushy no show job because my dad is a big shot. He's running for Senate. Should I give my incriminating laptop to Rudy Giuliani. But seriously, what do you guys dressing up for as for Halloween? That's eloquent. He writes in reliably.

**Bret** 25:23

Interesting. Yes. I think here's the thing. I know that it's a bad idea drop

**Heather** 25:29

into an accent No, no. Okay. My

**Bret** 25:31

own okay. I think it's Halloween is canceled kids. It has to be it's too too soon between the end of Halloween and the beginning of Election Day. And I just think there's, there's too much danger of people spooking each other.

**Heather** 25:49

Okay, well, three things obviously COVID changes. Halloween for children quite a lot, and presumably for adults to speak only for me, but like, I just never really got Halloween, my mother and actually my mother and sometimes her best friend and business partner contributed as well made me the most amazing elaborate costumes when I was when I was little. And they were gorgeous. And I enjoyed enjoyed that one night of sort of living in some other space. But I never got I never dreamt of it. I didn't I didn't look forward to like I get to I get to be in this liminal space, I get to be pretending to be someone else. I just that wasn't that wasn't a fantasy that I had in my in my life in general that I do. I have, since long before the current madness wondered, What is it about? Some people who was adults really crave the dressing up and the changing the personality and excuse to act in ways that you wouldn't normally at you know, that said, I say that at the same time that I honor and am truly intrigued by the liminality that is experienced by people that karneval and you know, the the the breakout celebration that happens in advance of Lent. So I don't I don't really don't get the American version of it. And I think it too often reveals a deficit in people's lives. But Third thing, Halloween this year is on the full moon. Which means that you know if the weather's nice, where you're at the very least if you know if people are going to be worn if you enjoy seeing people wandering around and interesting in different clothes than just being outside on the night of Halloween could be actually it's today. I guess it's I guess it's two weeks from today. But it's it's an actual full moon this year, which is which is fun.

**Bret** 27:48

I had not realized that. Of course, it is not surprising that you would have realized that. And I am wondering if there's not some deal to be struck. It's probably too late for this. The moon? No, no, no, that's not gonna work. No, it doesn't. It's not a it's not a good listener. No, no, it's an excellent listener. It just doesn't act on the basis of it. Here's the deal. I'm wondering if we can strike perhaps for next year. All right. You and I will dress up and we will spare no expense. We will go all out for next year's Halloween. If everybody else will stop scaring the shit out of us on the other 364 days a year. Okay. All right. Yeah, it just seems like then we get out of the scaring each other game totally. And then we go all in for one night. That seems better. Absolutely. All right. All right.

**Heather** 28:40

There has been so much noise about stimulus to fix lockdowns what an income tax refund of 2019 taxes up to say the first $100,000 of income tax to be a simple effective solution. Nothing to corporations or free riders. That first pass that seems like a potentially decent approach.

**Bret** 29:03

Well, I'm wondering if it isn't. If it isn't a tad regressive. In fact, it may be very regressive. Those who need it most are likely to have paid least those who would get the most

**Heather** 29:21

well so I was gonna say maybe up to you know, maybe that up to 100,000 is too high. Right, like so maybe up to 50,000 of income. And then if you know, if you only made if you made at the poverty line or less than you get double your refund or something like this.

**Bret** 29:38

Well wait a second that was $100,000 in tax or 100,000. Income income income. Is it clear from the question? Yeah,

**Heather** 29:45

it says under 1000 income. Oh, so it is clear from the question, in fact, spelled out in English in English.

**Bret** 29:51

Well done. Yeah. All right. Well, still, I think it is inherently a bit regressive, but it's not to say that you couldn't fix it yet.

**Heather** 29:59

I Think it's fixable and you know nothing to corporations are free riders. Yeah, I think there's some I think there's something there. Yeah. So we had three three Super Chat questions asking where are the podcasts? And then podcasts and then my last five bucks to get to the podcasts thanks everyone at Dark Horse for your time and effort to construct and convey thoughts that are passionate You're welcome and also You're welcome for the podcasts

**Bret** 30:29

Yeah, I don't know where they are yeah up to no good would be my guess.

**Heather** 30:32

No doubt shoe again. vermilyea ads again, I imagine okay. Greetings from THX is that Phoenix? I think that's Phoenix. I'm not sure. You both married maintain your last names and your children together? How did you hash out whose last name your kids would take pro and con analysis two different approaches? Question mark. So there's, there's, at first thought there's, there's kind of three possibilities, right? Like if we're gonna keep our own names, which, which we didn't, we were just always going to do. At the point we have kids, the kids could have Brett's name, they could have my name or we could hyphenate their names. hyphenating names isn't sustainable beyond one generation and and you could combine names to I guess, which in our case, would have produced the windings which would have been terrible. So in part, me not taking your name, Brett was the slightly unusual thing, not at all unusual in our sphere in our circle. And there was never, I never imagined, you know, at any point in my life, that I would end up taking my husband's name because, you know, I am, I am, who I am. And love you dearly and hope to be with you forever. But I am not my identity isn't your identity, despite what occasional people who mail us may think, with regard to you know, Mr. And Mrs. Brett Weinstein, really, now, you're not going to get any money from me if you send me that piece of mail. But because we happen to have a patrilineal society, which is different from patriarchal and different from patron, local patrilineal is anthropological term, which just identifies that, that names and sometimes the other stuff like property and such go along with it, are tracked through the father's line, as opposed to the mother's line, which we matrilineal in general, children, so in general, women take their husbands names when they marry, and the children there thereafter have the Father's name as well. And that's a patrilineal society. Having a rule in society that is either patrilineal or matrilineal makes good sense. And I don't find one particularly oppressive, right? I didn't take your name simply because I am who I am. And I don't need to subsume identity to you but but having the children fit into the model that is dominant society makes sense? It's it adds clarity. And specifically, why would there be a rule of Petra linearity, Petra, linearity, rather, it is that because in mammals, and we are mammals, certainty of paternity is never 100%, whereas certainty of maternity is, you know exactly what I'm saying. So even though you and I and our children are all 100%, confident that those children are your children as they are my children. society does can't cannot know that with the same certainty. And so whereas I know for sure that those are my children, and it doesn't plague me to have them walking around with your last name. You being their father, and having them be them have my last name inherently raises questions in people's minds that there's just no reason to rise. Yep. Right. So I don't we never we actually I don't think even ever had the conversation. I know, we just sort of understood all of that between us as evolutionary biologists who are also trying to live in the world with kindness and generosity.

**Bret** 34:15

Yeah, no, I think that the, if I can just encapsulate that, please. We're the kids to have your last name and not mine, it would suggest something about where those kids came from. That was in fact, not true. So it would mislead. And so in any case, this seemed like the best of a bad set of choices, because truly none of the choices are all that great from the point of view of a world in which women do have their own identities and somebody either loses their identity or you mean to maintain two identities and then you you know, you hyphen, hyphen, hyphen or you don't hyphen and you solve it for one generation. So there's really there's no perfect solution.

**Heather** 34:57

Yeah, right like it you know, it wouldn't be easy. If we all had the same last name, as as was true in both of the Natal homes from which we came, right, but but, you know, we were born in a different era when that wasn't understood to be the thing that needed to happen and and it's a little bit messier. Yep. But this seems like the least messy while getting the most value from being able to, you know, fully retain the identity of the adults going into the relationship while still allowing the children's names to reflect reality. with care.

**Bret** 35:36

Yep. Now of course, there's a, there's a trade off built in. If the children have the Father's name, then it's more or less clear where the children came from. But the father does not have plausible deniability, if the children turn out bad. I'm just pointing it out. Yeah, putting it out there. You know, something I don't know, so far, the kids have been great. But you know, you never know. You never know what sort of kids you've got until they've grown old, I guess.

**Heather** 36:09

So this, thank you for taking the time to discuss three years. Book, I'm glad to have brought to your attention. I hope your listeners appreciate its content. So this is the person who pointed out last last week. Thank you, Ethan, thank you for pointing it out to us. Yes, indeed. Next question, could non rival risk coordination be a prerequisite for societies to survive the technological development necessary? For interstellar travel? Would the selection pressure mean any et species we encounter is all but guaranteed to be peaceful?

**Bret** 36:44

That's a good one. That's a really good question.

**Heather** 36:46

Yeah, it really is.

**Bret** 36:49

Um, well, I think you

**Heather** 36:52

think it's necessary. Unfortunately, it would be cool if it

**Bret** 36:55

were. So here's the thing. You got to remember that human beings cooperate to compete. We can now globalize that we can say any collaborative species collaborates. That is there's collaboration within the species, not that the whole species collaborates. Any species in which there is collaboration will have that same explanation.

**Heather** 37:18

Can you can you? Can you sort of expand the idea of competition to a biotic things like you're competing against the, you know, Darwin's hostile forces that he never knew, which is how do you get superluminal? travel?

**Bret** 37:35

I don't I don't see that in the question. I think. No, I

**Heather** 37:37

just I'm to your point. If we cooperate to compete as humans, in general, what we mean when we say that is that we are cooperating with others like us to compete with others like us? Could you could we expand could that metaphorically be extended to we are going to cooperate to compete against this problem of this, you know, this a biotic problem of how do we how are we going to travel beyond the speed of light? For instance,

**Bret** 38:04

right? Well, I think the answer to your question is that compete involves two kinds of competition. So there's the obvious kind of competition, which would be called interference competition, which involves disrupting your antagonists ability to do stuff. And then there's exploitation competition in which you just simply use a resource. And therefore there's less of it available to your competitors. And in the case of a biotic forces, basically, the point is, you can be perfectly peaceful and expand to fill some niche. And you're still competing, right? And so I think what I see in this question is, you, you there are certain things you don't want to bring on the spacecraft, like your instinct to get into a bar fight. Right? And so if bar fight is sort of the, you know, the height of poor judgment with respect to the worthwhile pneus of fighting, right, you want to back that instinct way off for anybody who was going to be on a ship with you for a long period of time. And so barring hibernation, should we expect extraterrestrials when they get off the ship to be very collaborative? And then should we expect them to come from very collaborative species? I can sort of see it, but I don't think it's a requirement for the same reason. you point out a we would expect any creature that had attained that capacity to have been a ferociously good competitor. That's how you get those capacities. And so I guess, I would expect very powerful, very competitively competent critters that are very good at keeping a lid on it. All right. So no bar fights, I would not.

**Heather** 39:56

You don't expect when the aliens do in fact, land on the planet to find evidence of bar fights in their spaceship This is your position

**Bret** 40:04

Yes, this is how this is my position Yeah.

**Heather** 40:09

I am learning physics Do you know what can you

**Bret** 40:14

probably says? Perth Washington but I don't know is there a Perth watch?

**Heather** 40:18

This is my question. It seems like Perth is in Australia, or at least it was not in Washington. So I'm just going to I'm learning physics in perhaps Perth, Washington, with a class called integrating indigenous science and stem. Like Brett mentally I must resist their consistent illiteracy, acknowledgments of country etc. How can I fight back safely? Please give me a reference to catch 22 which I heard from a couple of podcasts ago.

**Bret** 40:49

The ways you can fight back are innumerable the way they play they'll fight back safely are probably an empty set at this

**Heather** 40:59

oh well, I know I know you got to be

**Bret** 41:03

safe I mean it's not it's one that's

**Heather** 41:05

and that's part of you know, there's so much more in this book that we just spent a long time talking from this live not by lies but you don't always need to be taking aggressive action against the idiocy that is coming your way but there is no end of resistance that is possible. Right? And almost none of it is totally safe.

**Bret** 41:29

I would say the safest approach is humor and charm. And that is unlikely to work on your woke detractors who are humorless and insensitive to charm as a trout

**Heather** 41:51

but up but you could practice by trying to term trout salmon trout Yeah, and if you can charm trout you might be able to charm the whelk teacher in front of the room

**Bret** 42:01

actually am i right now that no I think I might be okay that fly fishermen effectively charm trout

**Heather** 42:07

they totally do so charm your work teacher with a hook no wait it's fly fisherman

**Bret** 42:14

right now. Yeah. But yeah, I think the answer is you would the thing that you can do that will protect you best is to cause yourself to be well liked amongst those who aren't committed to this particular revolution. Will that make you safe No,

**Heather** 42:35

no but make it look like fun to be where you are. Yeah, make it look like a good choice. Right don't like especially given that the the Webster's seem so intent on being dour and humorless, and music less and just filled of filled with outrage and hatred. Try filling your life with other things and, and making it visible, right, like laughing and smiling. And it may even just that the the amount of distance that a smile at someone you don't know can go is is huge. And even now even now in COVID times with I don't know if you're doing this by zoom, but if you're in the same room, and if you're masked, a smile with your eyes is actually revealing of of actual tenderness that that must be will respond to could silence ever be compromised to the degree that would be required to debunk evolution should interfere with the wider global agenda?

**Bret** 43:35

Boy, I mean, we're seeing this right now. Yeah, you know, can it continue to go that way? I think the one the one saving grace here is that whatever it is, that doesn't allow it science to be corrupted will immediately start out competing, whatever it is that allows it science to be corrupted. Yeah. And therefore the fools can do whatever they want, arguing that, you know, sex is a construct, and,

**Heather** 44:05

yeah, man, it's all tools of the patriarchy. Right? But I mean, I mean, already the evolutionary biologists are distrusted and maligned by many in the social sciences. I was, someone saw that I'm an evolutionary biologist in my Twitter bio and told me I must be a social Darwinist. Which is insane, like, you know, in a eugenicist, right, like No, those aren't the same thing. That's a bastardization of evolutionary thinking. That's not what evolutionary thinking gets you. But this, people aren't educated at this point enough to know So could it get worse? Yeah,

**Bret** 44:42

it can get worse. Now, on the other hand, Darwinism has made itself vulnerable. It needs to get better and fast. So let that be a warning to you.

**Heather** 44:54

Okay, let's do three more here. And we'll come back to some of these next time and then go to the sours question. What are your thoughts on totalitarian government control and the ensuing division it is causing as it relates to COVID-19, especially in the face of inconclusive and uncertain scientific findings.

**Bret** 45:11

is the question How are totalitarian regimes doing relative?

**Heather** 45:15

No, I think and I apologize if I'm misreading the question, but I think that the question posits without claiming that it's positing that things like lockdown and mandatory mass requirements is itself totalitarian.

**Bret** 45:28

Yeah, I think this is, this is a tough one. Because in effect, we are now dealing with technological realities like airplanes that make epidemics and the possibility of generating endemic pathogens that follow us around and things. These things are now very serious realities with major human consequences. The fact that we may have to be somewhat totalitarian to deal with pathogens is not to me a sign of something having gone wrong, it's a sign of our Novel World requiring us to suspend certain sensibilities with respect to things like pathogens, however,

**Heather** 46:14

I would just say I don't think totalitarian authoritarian a bit, but I think totalitarian is a step beyond and that this is a value judgment that is is not right here.

**Bret** 46:25

That's kind of what I'm saying. Because that effectively, you know, is, are the laws that presumably surround the hand washing and other protections in an operating theatre? Is that totalitarian? Right. I don't think it is totalitarian, I think, smart.

**Heather** 46:51

Are pilots being required to check in with, with air? Who's in the tower?

**Bret** 46:59

What do they call air traffic control,

**Heather** 47:00

traffic control? Is that, you know, is that authoritarian? No, that's, that's regulation upon which we all depend if we're going to be flying or, or going into the knife.

**Bret** 47:09

Yeah. So anyway, there are those protections are necessary. That said, the novelty of this situation with COVID does open the door to governments taking advantage of fears, both real and unjustified? Yeah, in order to do other things. And so at some level, we got to get control over our governments so that they don't abuse these powers so that when they actually have to utilize these powers, we can trust that they're doing it for the right reason.

**Heather** 47:38

Yeah. I guess I would just add, quickly are I told you, I was in conversation with one of our good friends from grad school, who I won't name here, because I didn't ask her in advance if I could, but she's been living in Sweden for many years with her partner, and they're probably going to stay there. And well, a, quite apart from this question. She is actually reading Hannah around on totalitarianism right now. And, and seeing some scary things in it. But she also I asked her, you know, what, what? What has it been like there and it looks, it seemed like Sweden was doing something strange and not appropriately responsive, early on. And then death rate was lower for a while, and then maybe it's getting worse again, what's going on? And she said, you know, actually, people here really trust and respect to the government. And our death rate continues to not not be as high as almost anyone outside of Sweden was expecting. And the thing that really surprised me was she said, there are no mask mandates, and most people are not wearing them. And my sense, our friend says is that this is because the government that good, it hasn't been deemed necessary yet. But the government has the sense that if they make it a mandate, everyone will comply, because the government is trusted. And so there's this distinction of we don't we don't we don't apply these rules, haphazardly or casually, such that when we do apply rules, when we do make new rules, we know that we will have compliance because the people know that we don't take them lightly. Interesting. This Yeah, this struck me is very interesting. I haven't really followed up yet, but super interesting. I just want to note that I feel like I'm hearing mice in our walls. Yeah, because there's no cats back there at this point. And I think we have mice.

**Bret** 49:40

Fair enough.

**Heather** 49:40

Yeah. Would you mind telling me about how cellular memory works, please? Is that a Kashuk record possible or measurable? I don't know what the second part of the question means

**Bret** 49:53

at all know what the first part means versus immunological memory. I

**Heather** 49:57

don't know if there's a thing out there called cellular memory. It's nothing I've exactly, I've not heard it in those terms. All right,

**Bret** 50:05

so I'm going to assume that what you mean is immunological memory cells. And what happens is, when you get sick, you have let's go before I get sick you got when you are in utero, oh, that's really well before you get sick well before you it's even difficult to get second that you have a diversity of cells in your immune system that are predisposed to react to different configurations of electromagnetic charge on the surface of things, you have effectively every possible combination at some low level of resolution. And then those cells that have these capacities, that react to your own tissues disappear from the set, they kill themselves off and leave no descendants, what you have is a system that is prone to react to anything that could enter your body that doesn't match your own formulas, right? Now you get sick. And the pathogen has a unique signature. It's not like you. And so it triggers some subset of the cells very tiny subset, that subset then goes through a process of clonal selection where it produces offspring cells that have not exactly the same formula. So it produces a diversity of offspring cells, that subset that is most reactive then produces another generation. And so over time, it discovers the formula to nail that pathogen. At the point that you've destroyed the pathogen, you get the triggering of the production of memory cells, which are basically a subset of cells that remembers the precise formula necessary to counteract that pathogen. And then those things can last I don't know what it is that causes some of these memory cells to last different periods of time. In other words, some kinds of immunities you have for life, some kinds of immunities you have for a period of time and then you need to be revaccinated could be that that is because the pathogen is changing at some rate. And so your memory cells to start up to date firmware update essentially. Of course you did. Yeah, of course I did. But in any case, that's basically the idea is is a process called clonal selection in which evolution inside your immune system hones in on the formula. And then having found the formula, a subset of cells that are long lived, is retained after that army that was built up to fight the the infection is gone.

**Heather** 52:38

Excellent. Okay, one more question from here. And then we'll switch to this hours questions. You said that Bernie and Yang were asking the right questions, but you weren't sure about their solutions. What do you think is the solution for wage stagnation?

**Bret** 52:54

Well, I think we have to rethink our entire approach to, to training and work for a world in which we're automating jobs out of existence and leaving people with, you know, a massive service industry that doesn't justify the kinds of salaries that would allow them to raise children. So anyway, I think the point is, you can Band Aid stuff. I think there are arguments to be made for things like UBI. I've argued before that something like participation, income might be better. Because it lacks the perverse incentive and implied in UBI. But, I mean, let's just face it, we've got a obvious crisis on our hands, we have huge numbers of homeless people who didn't find anything useful to do. Now, some people were homeless 10 years ago, so maybe there are people who just couldn't have done anything, but the fact that we have an increase in the number of homeless people, obviously means that people who were finding something useful to do aren't finding it now. So we've got to build a system that actually protects against that ebb and flow and anyway, doesn't mean we shouldn't engage in processes that address this to some extent. But, you know, this is why I say I'm a radical as I actually believe that the flaws are so deep that they need a very substantial rewrite in spite of the risk of unintended consequences. We need to do it carefully, but it needs to be done.

**Heather** 54:27

Okay, starting at the top of this hour is questions while at the playground with my two year old. We noticed the swings are no longer tied together. Her response was that means the Coronavirus went away. Should I report her for spreading false information? Yes,

**Bret** 54:42

absolutely. Yeah, get her transport released. Oh, yeah. Yeah, yeah.

**Heather** 54:48

Great. Next question. Is there some biological truth to astrological personality traits can factors like amount of sunlight exposure in the womb and mother's seasonal guidance The development of embryo at different stages create personality patterns linked to the birth period. This is a terrific question. And we actually speak a little bit to this and one of the chapters of our book if, and this is a huge if you control for where you were born, and not just when, then yes, you absolutely should predict. And in fact, there are some extremely large scale studies that show that birth month when you control for birth place are predictive of being susceptible to for instance, certain types of diseases. Absolutely, as you would expect, but the vast majority of astrology is doesn't doesn't in any way control for where and could not possibly be predictive of anything if, if you know if being born on June 17 in imagine there's a Perth, Washington in Perth, Washington versus Perth, Australia. Totally different experiences you would expect. In fact, the opposite. actually don't know exactly where Perth is and Australia but doesn't matter still the opposite? Well, it's it's the opposite in terms of seasonality, but I don't know how seasonal it is there. Right. Right. So but you would expect something like the opposite. In terms of what diseases are more likely, depending on what month you were born in.

**Bret** 56:26

Yep. So I will just say it's obvious that these things that astrology can't have any general utility, because to the extent that your annual cycle of seasonality is particular to where you are and that that might have implications to the extent that you have

**Heather** 56:45

astrology absent birthplace information, right but

**Bret** 56:49

astrology effectively never has birthplace information. So the point is, well, I

**Heather** 56:53

mean, no, that's not actually true. Right? So like, you know, that the pop the pop astrology that everyone is familiar with has none of that. Yeah. But I don't know about originally but that but there are people who, when they you know, want to you know, read your science, but I don't know the language of it, but will not do so without taking down information about where it was that you were born as well. And they and they and they build their understanding of what you will be like based on that now, I think then they will tend to build a whole lot of additional things that they can't they can't possibly be known or predicted from time and place yeah, of birth. But you know, the the pop, the pop astrology is clearly without any merit. But once you include the other thing, which apparently non pop, astrology often does, there is the potential for some for some predictive power on some on some fronts, like disease risk, and even maybe some personalities.

**Bret** 57:58

I'm not buying that astrologers do this? I am I agree with you, of course, that that A intersection between the time of your birth and the place of your birth means that you sit somewhere in the seasonality of your weather of the harvest of all of these things. And that that could have predicted me often your mother could be outside with you. Right, right, all sorts of stuff that could manifest in personality in particular ways. I, I'll be very surprised if there is an astrological tradition that is global in the sense of soliciting information about where it was that you were born, and when, and that would also need to know how long you remain there. Since we don't remain the same place for life. In order to know what the effects were, there would have to be some sort of a theoretical basis for understanding that a person born in mid winter, you know, is going to have these personality traits. So it doesn't need to be theoretical, it could be strictly empirical. Well, but the problem is, in order for an astrologer to do this, they would have to get this information and then extrapolate. In other words, Oh, you were born in, you know, in Los Angeles in April of 1969. But you immediately moved to New Guinea,

**Heather** 59:12

right? That would have been an interesting different life trajectory for

**Bret** 59:15

me Yes, it would have been a very different but the point is you will need to make that correction and therefore you would need to have some sort of model in which the point was okay, yes, born at time and place has implication that implication decays based on how quickly you moved on from there.

**Heather** 59:34

So there is I mean, it does raise some interesting questions around like, how long will it matter, I would think it would matter only for maybe the first year of life, right? Like you mean that the pattern or the effect the actual effect of being born a particular time in a particular place, thus allowing accurate prediction, accurate astrological prediction that includes the all important place information and not just the date of birth. But the but the but the place of birth information as well. By the time you're two, I think it's certainly by the time you're three or four, the seasonality isn't going to matter. It's really it's the very early stuff, you know, we're born effectively still still, we still should be in the womb, but our pelvises can't accommodate giving birth to babies that are any bigger than they are. And so those first six months of life are effectively still, you know, like unborn babies and whether or not it's winter, and therefore you're spending time inside and therefore more susceptible to getting say colds and flus. As opposed to it's summer, and you're more likely to be outside and getting more exposure to sunlight and vitamin D is going to be really important, I would think for the first six months year maybe. And I would think after a year, it shouldn't, it shouldn't matter if I had in fact moved to New Guinea in April of 1970, a year after I was born from Los Angeles. I don't think that would have had any effect on a savvy astrologers ability to predict my personality.

**Bret** 1:01:04

Well, no, I would say it goes on longer than that. Okay, potentially. And that basically, if you think about the massive revolution that is constantly going on and young children like you know, up to the age of five, that a pattern of simplicity that starts at a particular place is going to have Okay, different impacts based on you know, your first summer and your second summer and all of these things. Yeah. In any case, it is also possible that part of what astrology is is a miss application of local traditions that once were tuned into something, right yeah. So that you know that people were very convinced that it was real because it you know, people, you know, astrologers, whatever they were, were tracking local phenomena that were real. And then the point is, oh, this works, right? For some reason where the stars are, which tells you when in the year you are,

**Heather** 1:02:04

and you already know where you are, because that was controlled,

**Bret** 1:02:07

blind in the fact that people weren't moving very far. Right. So anyway, all of those things are possible. That said, I think there's just no reason to think modern astrology that is either global or going to be arbitrarily local is tracking anything.

**Heather** 1:02:25

Well, I have anecdotes to suggest otherwise, but we won't go into those here. Okay. So apparently Wk stands for Western Australia. Oh, okay. course it does. Sorry. Okay. So that was Perth, Western Australia, not Perth. Washington. struck us as odd that we'd never heard of Perth, Washington, but we ran with it. Yep. Okay. We have to answer at least a few more of these. We've only gotten two so far this hour. So do you have thoughts on Pelosi, his daughter and the twittersphere accusing Andrew Yang of sexism? YouTube generally swings the other way. What about these platforms explains the reliable difference in opinion? I don't have any idea what this is about. Do you know?

**Bret** 1:03:10

No. Okay. Yeah,

**Heather** 1:03:14

so no, I don't have thoughts because I have no idea what it's about. Yeah, sorry. Love you guys. You seem to have way more in common with Jordan Peterson than most No, maybe even yourselves. IRC What does IRC stand for? Zack, what's IRC? You said you didn't read his first book. And it takes it takes it a long way to bridging gaps I suggest to read or listen. PS, when is your book coming? Currently? Recall or remember? Correct, good. So if I recall correctly, you said you didn't read his first book. And it takes a long way to bridging gaps? Yes, that's true. I've read the 12 rules and not and not the first one. I can't remember what it's called maps of meaning. That's right. No, and it's not it's not for lack of interest. It's just that there are so many, so many things to read.

**Bret** 1:04:12

Yeah, I will say the diagram on the cover of maps of meaning comes very close to a diagram that I made when I was working on frontiers. And basically game theory, really. So I've always wondered whether that's because we were on to related topics.

**Heather** 1:04:34

Your stuff on frontiers in game theory, would have come later maps of meetings from the 90s.

**Bret** 1:04:40

Doesn't matter. Yeah, I didn't know anything about it. Yeah. And so anyway, my stuff on frontiers involves a diagram that looks like this. So the question is, is some topic in that book I mean, a maybe cover art is just abstract, but it's not abstract is the topic that he's on there. What's in that diagram? In some way related? Yeah, frontier stuff. analogous. Yeah. Or is it just happenstance?

**Heather** 1:05:08

No. And I mean, I'm, I'm, I would say I'm flattered. And I think it's true that that we have. We have in many ways, very simpatico understandings of the world in many regards to Jordans. Yeah. And also, when is your book coming? It seems that printers are having lag times due to COVID, as well. And so it looks at this point like it's going to be somewhat later than it was supposed to be more like the very end of summer, next year, very beginning of fall, which is disappointing, but hopefully the world still exists then. And this is the publishers hoping to do a big enough print run, that they have to be thinking about actually being able to get enough copies printed. That's all very strange, honestly. Jordan Peterson. Next question. Positive the gender identity confusions may be a downstream effect of proper play and development, deficit and childhood. It compensatory acting out. Does Arrested Development contribute to crowd madness? Love You, too. That's interesting. I hadn't hadn't heard of that. Exactly. But um, deficits of play. And childhood will have a huge number of effects, as we've talked about. And might some of those be gender identity confusion. Yeah. Just even not being allowed to play without adults overseeing you with members of both the same and opposite sex and doing little exploration. Yeah,

**Bret** 1:06:45

yeah, absolutely, clearly. So I would go back to my favorite aphorism good judgment comes from experience experience comes from bad judgment. Right? So play is a landscape of relative safety, low stakes,

**Heather** 1:06:59

bad judgment.

**Bret** 1:07:01

Yes, low stakes bad judgment, where you can try stuff out that sounds pretty right and find out why it isn't. And to the extent that your play has been moved on to a screen where some corporation is generated a compelling visual landscape that has nothing to do with reality, and only loosely involves other people, and so you stopped skinning your knee and your forebrain and all the other things that you might skin, get outside skin, your skin, your forebrain get it get it over with now I can still recover. So yeah, almost no doubt that a lot of this stuff where people are saying patently ridiculous things that they haven't apparently discovered are false, would have been covered by a proper play environment where Yeah, we perhaps didn't interrupt them while they were skateboarding without safety equipment.

**Heather** 1:07:55

Yes. Hi, guys. Do you think the right the right do you think the rise of mercenary armies like Blackwater could be the result of living in an increasingly post national world?

**Bret** 1:08:09

Yeah, globally capitalist world in which such things can be bought, anything can be bought. I mean, there's also a lot of other stuff like, you know, nations trying to evade their own rules with respect to conducting military operations. So contracts Yep, have greater liberty and offers plausible deniability to the nations in question. So there's lots of terrible reasons for it. But

**Heather** 1:08:37

yeah, and wealth inequality between nations, so post national ish, too, but wealth inequality between nations such that you can hire mercenary armies from poorer nations, because people are more desperate for work. Yeah. Yeah. We're either few born with a palmaris longus tendon. I wasn't I think it is an interesting evolutionary vestige.

**Bret** 1:09:01

Yes, I was not born with one I was able to source one on eBay. Some actually don't know what it is. I don't either. Okay. No idea. How would we know? Probably,

**Heather** 1:09:11

you would have been told because something that other people with a palmaris longus tendon can do? You cannot? Or? or some such? I don't know. Zack, what do you look about up? palmaris 44 palmaris longus tendon just look at pomares longest and tell us where it is? I'm thinking it's gonna be ankle. But I don't know. How does one differentiate between adaptive traits and maladaptive traits nested in larger more adaptive packages?

**Bret** 1:09:47

Well, so we've talked about the Adaptive Test before if not, I have a video on it somewhere and my youtube channel but let's put it this way. The adapt Test works at any scale, it basically says, a complex phenomenon that is made out of materials or involves energetic expense or involves risk in which there's variation in the amount of expense. And the amount of expense does not go down over time is adaptive. So if you had a trait, you know, let's say that you had an appendage, let's say we're talking about the wing of a bird, and it has a lump on the leading edge, right? Well, that lump is made out of stuff, if the lump does not go away over time than just paying its way. Now, that is different than what seems to be hinted at in your question that you can have a trade off where something that is not ministerial, is nonetheless preserved, though it is costly because of some larger benefit that it produces. And so that's a distinct phenomenon where the Adaptive Test is not relevant, because basically, it will come up positive as presumably adaptive. And the reason it will come up positive is because the net effect is positive.

**Heather** 1:11:14

Good. Okay, we're gonna go back to palmaris longus tendon for a moment, SEC is pulled up the Wikipedia. It was no, we're good. This is calling it a muscle visibles, a small tendon. Basically, in the wrist where if you touch the pad of your fourth finger to your thumb, and then flex you should you should see it visible? And if you don't, you don't have the like, I haven't. Yeah, I think you don't I think I doubt. And you I want it. Didn't you say you sourcepoint? on eBay?

**Bret** 1:11:49

That was a joke. Really? Yes. Sometimes I just don't know. You just don't

**Heather** 1:11:52

know. So yeah, given that neither of us had heard of this before, it's hard to say. The we've spoken before about the use of the term vestigial organs is often an excuse, meaning, we don't know what this is for yet. So we're going to assume it's useless. But given that there appears to be according to what what Zack pulled up on Wikipedia, anyway, a lot of variation, particularly within some populations, and it doesn't appear according to Wikipedia to have an effect on grip strength. Maybe it is just a variant. There's, you know, there's lots of variants or variants in the way the aorta leaves the heart. And, you know, some are presumably better than others, but there's also just a lot of variation within human. So this may just be a variant. And not that is inherently disappearing, but just exists and some doesn't exist and others. Next question, second question, but I don't see the first question. I'm studying physics. Oh, is this going to be this is going to be the person not in Washington, but in Australia, perhaps. I'm studying physics with dyslexia. dysgraphia, dyscalculia, dyscalculia and a Fantasia. I feel like I'm operating a different frequency to lecturers and classmates any tips especially regarding Eric, I'm not sure what the regarding Eric refers to here. But yeah, and I don't remember what a Fantasia is. I don't even want to look that up. You want to say anything about the different frequencies? Well, I'm inability to voluntarily visualize mental imagery is a Fantasia

**Bret** 1:13:31

Hmm, yeah, I'm not heard of that. I don't know, you know, here's the thing. Hopefully your inabilities are downsides of abilities. Yeah, you certainly want to lean towards them. Anything you can do to separate yourself from your would be competitors in some way that is positive, would be useful. And so you know, don't reproduce what they do do something that your particular unique skill set loans itself to and I would say that, that's advice I would give anybody because everybody you know, some, some disabilities have names, but we're all collections of assets and liabilities that result in unique skill sets. And paying attention to where your skill set is unique is clearly a key. Yep.

**Heather** 1:14:23

Okay, so we have five more questions here. I'm going to save the last one for us for next time. And we're going to quickly go through these other four questions that we haven't yet gotten to from this hour, and there's several more from the previous hour, some of which we'll get to next time as well. in reverse order, how do you gain strength when you didn't have the stability of an intact family? in part by building community, with you know, by by choosing rather than being lucky enough to be born into a group of people who 100% have your backs. It's it's harder to build it But it's doable. And it's important and it's harder now without social structures in place, you know, without things like a church or a synagogue, that, that a lot of people go to, especially younger people. But find finding people with whom you actually share something that is important and, and bonding with them. And then asking them to please point out to you when you are wrong, right, like that's that it doesn't, it doesn't work to just be with people, if they're only going to agree with you, that doesn't help people strength. If you're trying to build strength, you need to have people who are willing to tell you when you when you fucked up, or when they think you're wrong. And sometimes they'll be wrong instead, but you need that you need to have that tension. But coming from a sense of the security of even when we disagree, we actually respect and love each other underneath that.

**Bret** 1:15:59

I would add, you need to take your wounds and scar over that there is this fascination with keeping wounds open and wallowing in their consequences. And the ones are likely real. But the best thing you can do just as if it was a physical wound on your skin is generate the scar tissue and figure out how to move on, which doesn't mean the wound isn't, you know, a historical fact for you. But I would also point out that this is some place. This overlaps our conversation earlier, my conversation with Greg lukianoff, where he talks about the fact that woke ideology, effectively is the opposite of cognitive therapy, which teaches you to put these wounds to bed and move on. And well, cardiology causes you to emphasize them and keep them open. So anyway,

**Heather** 1:16:59

yeah, I believe that this was actually this was one of his insights that caused him to reach out to Jonathan Hite in the first place. And for them to write that Atlantic article and then to write the coddling of the American mind that his experience with what I say cognitive behavioral therapy was so at odds with what he was seeing in students who were so fragile, and so in need of safe spaces. Yep. Any advice on living with a woke brother who tells me I'm racist, stupid and want people to die? Because I don't agree with him. Those are the top three insults he uses. Can you find a new place to live? Oh, my God, he's That's awful. I'm sorry. I don't know.

**Bret** 1:17:42

You know, if it were me, I think I would point out, you know, at some point, you're going to realize how wrong that is. And you're just going to be embarrassed that you ever believed it. And you might invest now in some thought process that won't leave you wanting to flee your own skin? You know,

**Heather** 1:18:09

when so you're you're this guy asking the question, speaking to his brother, is that is that the voice you're using here?

**Bret** 1:18:14

Yeah. Okay. I'm just saying, you know, I think a lot of this stuff is like, it's the right thing to say this minute to get civilization to turn over some stuff. And the point is, you just gonna be so horrified that you ever said those things? Because they were never, you know, right. They were never plausible. And, you know, I mean, I do wonder, but at whatever point this turns around. I think a lot of people are just gonna pretend that they never said these things.

**Heather** 1:18:46

First, they're gonna sanitize all evidence that they said anything on social media. And if friends or family members are bold enough to bring it up, and they'll say didn't happen.

**Bret** 1:18:57

Yeah, actually, you know what, maybe that is a proper approach. But I'm very reluctant to give people advice that makes any of this sound like it's not dangerous, or that there's something to be done, because I worry that there isn't very much to be done. And maybe the point is, you know, what, would you write that down for me? I want you to remember that you said that. I want you to know that when you're saying these kinds of things, somebody is paying attention. And then at the point these things turn out to be clearly insane. And everybody understands that. You're not going to be able to walk away from them.

**Heather** 1:19:30

Yeah. And you can do it symmetrically. You know? No, it's not a trap. I will also write down for sure what I think

**Bret** 1:19:36

exactly, in fact, maybe that's the right one.

**Heather** 1:19:38

Can we put the two can we both write what we think read them, put them in an envelope seal it and you know if you also want to copy fine, but I'm going to keep a keep a copy.

**Bret** 1:19:50

I like this actually, it's not pulling rank. The point is, we really believe that. Let's write down what we both believe and freeze in place and let's revisit it Yeah.

**Heather** 1:20:00

Now that freezing what you think really being able to go back to what you thought at the time is so critical to, to so many things to do and good science to be a good friend to being in a relationship that makes sense to, you know, to so many things, and it's nearly impossible. Because our brands accommodate to protect us from our own wrongness. And and they lie on our behalf. Yeah. Yeah, that's good. I like that.

**Bret** 1:20:32

Yeah, another version of it might be I dare you to journalists. You think you've got this all wired you think you understand how this stuff works? I dare you to journal it and then just revisit, it doesn't doesn't have to involve me, you journal yourself? And then I want to see

**Heather** 1:20:45

it for no, hide it. But no, I actually, this is absolutely one of the values of journaling. I think, you know, journaling in general is somewhat gendered, right? It's more likely to be something that women do than men, and I do, I've done it more and less at times, but you know, pretty consistently throughout my life, and I do go back. And I do find it instructive to know for sure not to say that I was right then, but I do remember correctly. Usually. Yes, I really did think that then Yep, this is like this, this was written contemporaneously with the other actions that were happening, whatever. So whether or not I was right about it, I am not, I have not sanitized my own memory of how I felt about it that actually

**Bret** 1:21:31

this is the key to your own thought process being upgraded is keeping roofless track of what you believed and figuring out whether or not it turned out to be right. It's not always fun, but no one does get better at avoiding if you spot the pattern.

**Heather** 1:21:50

Yeah. Okay, one last question for today. Do you know why most animals keep their brains in their heads? Surely they're safer places. Cheers, Tim.

**Bret** 1:22:00

This is such a good question.

**Heather** 1:22:02

I know I love this. We could go so many places with this. There's only one good answer, though. Oh, okay. You go first, then. All right,

**Bret** 1:22:08

you got your answer, you've locked it down,

**Heather** 1:22:10

like you want me to come in journal, it

**Bret** 1:22:14

wasn't that kind of a challenge. I would just say, I believe the reason is because it minimizes the neurological distance to your eyes, your your nose, and your taste buds. So the idea is nert. So we sort of think in terms of wires and wires transmit signals that lightspeed so distances like down your arm are not meaningful. It's so fast, neurons aren't like this, even though the impulses are electrical, the way they're actually chemical, right? It's the influx of electrons into or ions into the, the axon, that causes the impulse to propagate down these neurons. And that means it's actually quite slow. And so the body has to correct for those things. To the extent, you know, a giraffe has a much worse problem getting accurate, immediate, timely information from its limbs, then does a squirrel because it's just a physically longer distance, and the transmission rate isn't any higher. So anyway, the point would be keeping your eyes near your brain, so that the information that comes in your eyes immediately reaches your brain, and you can therefore react in a way that's useful, is desirable, and so that that's true for every sensory modality. And therefore, also, I would say, from the point of view of protecting your brain, a big vulnerable Oregon, information where you know, your sensory organs are right near it, so that, you know, if there's some projectile coming at you, you are likely to see it right. So anyway, proximity to your sense organs is the short answer.

**Heather** 1:24:05

Awesome. So that is actually not the answer I was going to give. But the answer I was going to give is, is conciliate with that answer, which is a phylogenetic one, which is to say, brains actually evolved brains in crania involved with the wait for it creates, which is, which is sort of an important moment just after chordates evolved just after our note accords, evolved. And just before vertebrates, our vertebral column evolved. So right in there, we get these like, brainy single brains in crania, which is again, where all the sensor organs are, and that has not changed once in the history of the cranium data. There are other animals, like insects that don't technically have brains and like cephalopods, like squid and occupy that actually have distributed neural centers, and don't Don't have single brands. And it's not that they have, you know, brains in their knees or something, but they have distributed distributed centers, and with the exception of the cephalopods, it seems to have effects on how basically how cognitively complex they can get. And so with, with grainy aids, which is effectively vertebrates, who evolved the brain in the first place, it probably evolved, there were all the senses are centered for exactly the reason that you describe, and then it had no reason to move any move off of that particular local maximum would have been immediately destructive of any organisms that tried to move their brain to their knees or their butts or wherever it might have been.

**Bret** 1:25:45

That's Yeah. People have tried that. Sure. Which actually raises another question how many different times phylogenetically as a creature with a brain evolved to not use it?

**Heather** 1:25:57

Many, many times, but always in the hominid lineage.

**Bret** 1:26:01

Interesting. Yeah. run into these folks. Yeah. All right.

**Heather** 1:26:05

All right. Well, it was a long one today that was here we go. Yeah, it'll definitely be back next Saturday. Well, we'll be back, either a week from now or before them. And until then, until then, as well as you can be given all that is going on.

**Bret** 1:26:24

Check your six relatively frequently. You never know who's back there. You're six o'clock. I'm just saying it's 2020. You don't have inspector so mice? Could be alright. Yeah, we will see you next time and

**Heather** 1:26:41

join us on our Patreon.

**Bret** 1:26:43

Good idea. All right. Well, everyone