Your Questions Answered - Bret and Heather 37th DarkHorse Po...

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**SPEAKERS**

Bret, Heather

**Bret** 00:08

Hey folks, welcome back to the Dark Horse podcast live stream number 37 q&a section with Dr. Heather Hyang. All right, here we go. Here we go.

**Heather** 00:19

Here we go. We're gonna start with a couple of comments from the Super Chat in Episode 36. And one question from last time and then move right into the questions from the last hour. Comment number one from August 4, I am right leaning libertarian, you are left leaning and we need to come together against this mess of a state. Yes, yes, yeah. For that

**Bret** 00:42

the this being crucial this mess of a state doesn't have to be and we don't have to agree on what the resolution what state should or should not exist in order to recognize that our current form of governance has become parasitic, yeah, malignant and must be addressed. Nothing riding on it. But the game.

**Heather** 01:04

second comment from last time I tried talking sons against anti reason in my school, I failed. post modernism reigns and urban public Ed, sorry, internet, mom, dad and fellow Americans. I think we can still make headway. I think we have turned it around. But it's getting harder with every passing day.

**Bret** 01:23

Yeah. There's something to be said for you have had the same experience that almost everyone has had. And so in some sense, you are going to discover kindred spirits by virtue of having similar scars. Sorry, it happened, but that's simply the nature of the beast at this point.

**Heather** 01:44

Yep. Okay, final question from Episode 36. What is the importance of genitals, hormones, chromosomes, gonads, and secondary sex characteristics when describing gender? I've heard them called out dated. So it's a tiny question. Yeah,

**Bret** 02:01

just a little question. You want to go on your your usual riff here a little

**Heather** 02:06

little tirade? Yeah, so sex. Sex is basically binary. The gametes that we produce. Being the thing that is most fundamental to what sex is, if you produce or have produced or might produce or will produce at some point in your development. In your life history, small mobile gametes that have been stripped of most of the cytoplasmic plasm you are male, and those gametes are called sperm if you're a plant, pickled pollen, if you produce have produced might produce will produce etc. At some point in your life history gametes that are large and societal, don't move, fill the cytoplasm, then you are female, and those gametes are called eggs. From that truth, and we have in our lineage 500 uninterrupted million years of sexual reproduction. wherein you can point to that's male that's female, you find a new species, you figure out what gametes they produce, and you know who's male who's female, even if the organism looks unlike anything else, that you have ever seen, they will have large immobile gametes or small mobile gametes. And that is how you know gender is the behavioral expression of sex. chromosomes. In the case of mammals and birds, different evolution can delineate which sex are going to become genitals, our primary sexual characteristics that are used to deliver those gametes hormones are physiological mechanisms by which sex is displayed and manifest in the body. secondary sex characteristics, like facial hair and persistent and large breasts and in women are manifestations of the chromosomes of the of the hormones. And all of it stems from originally the binary of sex. So if secondary sex chromosomes and or their secondary sex characteristics, and genitals are produced by sex, why is it that as soon as we get to behavior, we decide that these are not correlated? This is totally cultural has nothing to do with evolution. This is a religious standpoint. So now it's outdated. What is outdated is the frankly religious approach is just that the behavioral manifestation of sex, some of which are, in fact, kind of old school and we can get rid of some of the old style, gender norms, we don't need anymore. But gender is to be an expression of sex. All these other things are other expressions of sex. Sex is binary. Gender isn't but it's still strongly bi modal.

**Bret** 04:52

Alright, so if I can just add a couple things, please. One 500 million good years of sex. That's that's not a bad run.

**Heather** 05:01

They're mostly good.

**Bret** 05:02

Yeah. All right.

**Heather** 05:03

I don't know I wasn't there for all of them.

**Bret** 05:05

Yeah, true. The thing that I sometimes hear you say is that the gamete issue is wildly correlated with the other downstream things there, of course, ambiguous genitals and things. But in general, the gametes, which are binary, are predictive of the chromosomes that you will find in the cells. They're predictive of the secondary sexual characteristics that you will find. And they are predictive of the behavior not all the time, but almost all the time they are predictive of it. And the meaning of this, which we rarely get to, is that gender being the software of sex, that software fits the difference in gametes, which predicts a difference in reproductive strategy from which all of the distinctions between males and females that we find in culture after culture, derive so

**Heather** 05:58

as culture across time, right for an over and over again,

**Bret** 06:01

the thing that you're being misled about is that the software is arbitrary, because it's software, it could be anything you could swap out male characteristics for female. No, you can't. The reason you can't is because the strategy derives from the, the biological underpinnings that trace all the way back to this difference in gamete size, which is universal in sexual creatures, yeah, and

**Heather** 06:25

emerges in part from a sort of cultural blank slate ism, which emerges itself in part, at least in academic circles from cultural anthropology, his missteps in the middle of the last century, in which it was, it was argued successfully apparently, such that the entire field is mostly captured now, that culture is is arbitrary. And whatever one culture is doing could just as easily have been a whole other suite of things. And you know, what's not true culture fits the environment in which the people who are who have created that culture live. And similarly, the behavior of sex fits the sex that the environment in which the different sexes have experienced life. And you know, as the environment changes, and obviously, it is changing very rapidly. Now, gender norms will change as well, and they will become more fluid and we can have, we can have a much less old school old fashioned, archaic, regressive understanding of what women are supposed to be doing what men are supposed to be doing. But we can't imagine that it was arbitrary from the beginning, that it had no, that it had no reason for being or that it is going to be possible to get rid of all of the things that are effectively behavioral downstream effects of sex.

**Bret** 07:42

So the way to remember this is that even if you look at plants, the parts that are male are much more enthusiastic, for example, about having sex with other plants than the female parts,

**Heather** 07:58

right? That's it, they don't do a life history. First, they just go and have sex,

**Bret** 08:02

right? And the thing is, it's for the same reason that you find this in animals, which is that the females the large gamete is the beginning of this strategy in which females are predisposed to greater investment in offspring which causes cheesiness to pay back. So if you can find that in a plant that literally doesn't think about anything, it's incapable of being culturally oppressed or anything else.

**Heather** 08:24

You're gonna be pissed off the plant enthusiasts, and maybe even the plants, conscious plant enthusiasts. Yes.

**Bret** 08:29

But anyway, the fact is, this is a very ancient pattern and it's there for reasons that aren't that hard to understand. It didn't get invented in humans it wasn't invented by a patriarchy doesn't mean it's not time to introduce some changes we can renegotiate the deal between the sexes but let's not pretend it doesn't arise out of something comprehensible

**Heather** 08:51

and and and certainly aspects of this have been taken advantage of by by regimes and by individuals throughout history 100% just just like with with race you know, when we say this, we're not claiming that you know that sexism is real hasn't been real and but but, but I don't know that I've we've said this anywhere else, just like historical racism has been much worse in the US in the past than it is now. Historical sexism has been much worse in the past than it is now. And so these hyperbolic and frankly, just flat out wrong claims that sexism is an all time high and racism is at all time high. You we just know this isn't true. And therefore you can start to suspect almost anything else that comes out of such people's mouths when they make false claims. Absolutely. Yep. Okay, on to the first question from from today's livestream. From from Tommy unique name. Would you consider using score voting instead of ranked choice voting, I recommend podcast 20 1210 six October Six interview with Nobel laureate Dr. Kenneth arrow by the Center for election science where Dr. Arrow says that core score voting is probably the best in practice. I didn't recognize I don't recognize score voting as a term. But obviously arrow is a is a person who is familiar to both of us.

**Bret** 10:16

Yes, he is actually the person on this because he proved arrows impossibility theorem was that there was no mechanism, no voting system that you could institute that would get a vote inherently to represent the actual will of the people. Now that system we have is particularly bad and I take it that can arrows indication of score voting means that although he has proven that it can't possibly represent it perfectly, that it is much closer to representing it. So presumably, there is a scale of the degree to which a voting system represents the will of the people that is to say, the collective output of not only the order of preferences, but the degree of preferences that weighed to these things properly. So anyway, I'd be certainly interested in looking into it. There is a question, we have a couple of constraints here. One is, you know, how do we get a system that is superior to first past the post? So rank choice voting is one possibility. Score voting is apparently another? And there's a question about the practical details of getting this into some system that actually works, which is something that we face inside unity 2020. And I would say, rank choice voting is good enough, maybe score voting is better. Hopefully, score voting is both better and easier to implement. And, yeah, I'd be happy to look into it. Yeah.

**Heather** 11:39

Good tip. Are you familiar with Gregory Bateson is correlation between the basic unit of survival parentheses flexible organism and its environment? And the basic unit of mind parentheses, news of a different flowing in a circuit? If not Google Forms of difference, his 1972 paper? This sounds vaguely familiar, but i don't i can't i couldn't pinpoint.

**Bret** 12:01

I'm, I have a vague recollection of a lunchtime discussion in the insect division at the DMZ initially, but I don't remember it well enough to even comment on

**Heather** 12:10

it. Yeah, but I will. I'll highlight this to remind us to take a look, hopefully. Okay. Thank you for that. UMD 2020 flagship policy suggestion, rank order voting, I should have put this right next to the other one. It eliminates the reality of spoiler candidates, no spoiler candidates means people get to give the non evil choice to try and put their lesser of evils choice as a fallback. Yep. So this is what this is what the plan is, maybe score voting will be better. Yep. And long term. But but the but the default, the default plan is rank choice, which is the same as rank ordered. Well,

**Bret** 12:42

I don't want to promise anything, because the implementation layer is not my purview. And the people who are doing it are, you know, stretched pretty thin. But yes, our objective is to solve this problem as well as we can. Yeah.

**Heather** 12:54

Am I right? So I just I'm, I'm out of my depth here. Rank choice and rank ordered voting is going to be the same thing?

**Bret** 13:00

I certainly think so. Yeah, yeah. Okay.

**Heather** 13:05

This question is for questions. And they're big ones. are more males born after wars? Do attractive parents have more girls? If are there? What's the mechanism? Does anybody know? So these are those are actually two very different questions, although they're both related to Well, the first one is specifically related to the question of sex ratios. Yep. And the second one is a little bit of the one about attraction. Parents have more girls is a little bit related to sex ratios, but more more to the question of sexual selection. And how as parents, can you maximize your genes going forward, which, you know, as we, as we said, over and over and over again, it's an uninteresting goal. And in humans, this is sort of the least of what parents do. But it obviously still is part of what parents do is leaving copies of themselves the next generation.

**Bret** 13:58

Really bad Zack. Alright, yeah,

**Heather** 14:00

this, he's on it. So are more males born afterwards.

**Bret** 14:05

So you can do a number of things here. First of all, just to make it clear why you would expect it is that worse tend to eliminate men. They don't just eliminate men, right? where time is bad for all sorts of things for all sorts of reasons. But because men fight wars, and I believe that as a cultural universal, yes, that men do the actual fighting, they are killed at greater rates, which would lead you to expect that the production of men? Well, there's two ways to think about it, you could think about it a lineage level, or there is a need for men. And you could think of it at the individual level. That is to say that from the point of view of a parent, physiologically, choosing whether to produce a male or a female, females are liable to be in surplus, males are liable to be scarce, and therefore a male that you had after war might be disproportionately successful,

**Heather** 14:51

both of which can be understood from a sex ratio perspective, which is to say, it's Fisher, right? Who does sex ratio stuff. So alright Fisher the Father of Modern statistics and one of the best evolutionary biologists of the 20th century, one of his contributions was understanding that not even all else being equal, but in almost every circumstance, in almost every circumstance, there are exceptions. We expect the sex ratio at the average age of forced reproduction to be one to one in populations. And you know, his logic is a sort of population level logic, which says, basically, if you have an abundance of one sex, parents who can influence the sex ratio of their own offspring, will end up having better luck in producing grand offspring, if they produce the sex that is currently underrepresented in the population.

**Bret** 15:44

So I would point out that there's a very interesting outgrowth of this discussion, I wrote an essay many years ago, on the hazard of the one child policy in China that it was going to make China warlike, and that maybe that was even its purpose, because it produced surplus males who were going to not be successful in finding mates, and who would constitute the substance from which an army would naturally be constructed. And it violates the one child policy violates the logic of Fisher, which is to say, you would expect in a country with a surplus of males that females would be prized as offspring, which is the opposite of what we see,

**Heather** 16:20

well, let's just it's not the one child policy itself does not either predict this nor violate what Fisher found and revealed about sex ratios. It is the cultural valuing of boy children or girl children overlaid on a one child policy, because then produces too many boys such that you have not enough not enough girls, and therefore and thereafter, not enough women,

**Bret** 16:40

right? So the question in this case is, first of all, is there conflict between the population level analysis and the individual level analysis in the aftermath of war, and which one should dominate? Because after all, at least, our argument is that it is lineages that fight wars, typically, and that that means that they're serving a lineage level purpose.

**Heather** 17:04

Well, I don't know that there is a conflict, though, you know, it, I guess it depends on the war. Well, right. It depends on the context, you know, if if an area has been so devastated that most of the men have been killed, and, and the women have been either enslaved and removed or raped and inseminated. You don't necessarily Well, if they've been enslaved and removed, then you don't necessarily have a sex ratio difference. Right? But if, if, if the women are still there, and even if they now have within them the children of the of their their captors, their warlords, you have a a likely move, but at the individual level and the population level to produce more males.

**Bret** 17:50

Yes, potentially. There is also another possibility here, which is that you would see polygyny, breakout in the aftermath of words, which actually I've predicted would be likely, because it doesn't make sense to sideline women reproductively just because there aren't, you know, an equal number of men. So in other words, one man can fertilize many women in the absence of men as a result of war, you might imagine that all women who were capable of producing offspring would end up with offspring, which I have argued is a basis for lesbian coupling, lesbian coupling, lesbian couples perfectly capable of raising offspring, and gametes aren't that hard to get? So not if you're a woman, if you're a woman? So in any case, there's a deep question here. But the one of the piece I want to point out is that warfare is frequently going to happen, at least by our model. When there when there is a deficit of resources. In other words, austerity causes populations to go to war. So in one sense if you're going to do this analysis, and it may be that the analysis has been done, it may be that Peter turchin knows the answer to this question for one thing, but

**Heather** 19:04

yeah, we don't we don't know. We're talking from an evolutionary we're trying to make evolutionary predictions, but we don't actually know the answer.

**Bret** 19:10

Right. But it may be that the answer is different, depending upon whether you won or lost. Right, I would imagine that that actually has some important implications.

**Heather** 19:18

100%. And I guess I was speaking from the assumption that we're talking about the losers,

**Bret** 19:22

right. But the other thing is, if austerity is generating this, and we have made arguments in other places for mechanisms to prevent austerity from causing conflict, causing violence, but in the case that such mechanisms don't exist or haven't worked, and you have violence, in some sense, what it may be doing is backing the population away from carrying capacity, which if you do the individual level analysis, you would expect to have very little implication because an individual just because the population may be better off backing away from carrying capacity, the individual still has an evolutionary interest in creating as many copies as They can in the next generation. On the other hand, if we start thinking in lineage level terms, which I would argue we always should, that it a lineage level, it's a very different analysis, because the long term well being of a lineage may indeed allow for some kind of restraint with respect to immediate moving the immediate move back to carrying capacity.

**Heather** 20:20

But it's also true, we have argued, I'm not sure that we have argued publicly yet but you know, it's it's in our book that that monogamy actually is a way of filling a landscape more quickly. And so yes, you of course, if you're if you're below carrying capacity, you expect birth rate to go up the sort of an obvious prediction, but you also expect a move further away from polygyny towards monogamy, as there are more resources available and more landscape to move into.

**Bret** 20:45

So I'm alluding to that what I'm getting at is that if you have an oscillation at the carrying capacity and warfare results from some boosting population above normal carrying capacity that then results in violence, and the violence was a bloodletting that removes some people from the population, the evolutionary drive to go into a population increase mode, that would be facilitated by monogamy, which brings all potential parents into child rearing, that that might not be incentivized. Right. So anyway, let's just say this is a complex question. Sure. Sure. It may be that the pattern you hypothesize is there in a general sense, it may be that it's there for winners and not losers, or vice versa. Or it may be that it's absent for other reasons that dominate the question that we don't know, but certainly worth looking into.

**Heather** 21:40

Yeah. Now as to, maybe we spent as much time as we should on this one, but two attractive parents have more girls. And I guess I first read that more broadly, not as attractive, but sort of, you know, higher quality, whatever that means, which would be a direct allusion to the rivers Willard hypothesis, which was published in mid 70s, probably, which suggests that, because put humans aside for the moment, because the variability in reproductive success is so much greater for males than it is for females, that is that females, no matter how many meetings they get, no matter what the social system is tend to have, you know, roughly two surviving offspring that make it into the next generation that then go on to reproduce themselves, that is the exactly replace themselves in a in a stable population situation. Whereas males have a highly variable, number of offspring, and how many they have varies greatly by the number of reproductive opportunities that they find for themselves or make for themselves. So the prediction of the triggers reload hypothesis is that the higher the quality offspring you can produce, the more likely you are to produce males. Because Because males have such a greater variability in reproductive success, you want to make sure that your highest quality offspring are more likely to be males with a higher variability with the higher chance of getting more offspring themselves. This is a purely genetic argument. And obviously, with humans, where we tend towards monogamy, and where female beauty in particular, is a big predictor of basically wealth acquisition and also reproductive success. This may this May at least mitigate the effects of traverse Willard, or even flip it on its head. Wait, wait, wait, I was with you until that last Okay. Well, I didn't say it. Well, I said it may. No, no,

**Bret** 23:29

I thought where you were headed? Is that all else being equal? A very important phrase here, all else being equal, prettier women should tend to have male offspring because of the downstream consequences of beauty in mating and dating. So not only of male beauty? No, I thought we were talking about female beauty. Right? Well,

**Heather** 23:53

but so you just said, women, beautiful women should be more likely to have male offspring. But if it's because of the role of female beauty and mating and dating, why wouldn't you Why wouldn't you expect a flip of Jeffers Willard because beautiful women would be more likely, therefore to to themselves, again attract more high quality men, yeah, higher quality mates,

**Bret** 24:15

they would they would, they wouldn't tend to marry up. And therefore the chances that a male offspring that they produce would be successful would be higher than if we take their beauty out of the equation, and we figure out where they would have made it in the hierarchy based on other characteristics, so if a woman can marry up it should increase the chances of her producing male offspring, because the offspring will be better placed to reproduce themselves and he's less likely to produce dead ends.

**Heather** 24:48

So how is that different? How does the human situation that's just a classic traverse Willard argument that doesn't change in any way like so the fact of female beauty or not actually doesn't even belong in that kind. conversation is changed the argument not at all?

**Bret** 25:03

Well, right i think this is standard drivers, will it? I don't know, I have yet to see why, why the logic would reverse here. It's just the beauty plays a certain role in human mating and dating. And so to

**Heather** 25:15

me, because there's choice because because both men and women choose Yes, right? to a greater degree than really is found in just about any other mammals. And there are a number of monogamous species of birds. But in in a mostly monogamous species as as we are, where you have choice on both parts and where female beauty and specifically indicators of youth and fertility are highly prized across culture. You might expect a woman with those characteristics to exactly want to replicate them in her daughters, because she will want daughters who will be similarly chosen by also highly ranked men, because female beauty doesn't necessarily convert into the indicators of success for men, right? Like, you know, if success for men is often about wealth, and, and you know, later in life success.

**Bret** 26:06

Now I get your argument, okay. But I still think it goes the other way, precisely because of the thing that sits at the bottom of the triggers Willard analysis, which is that the variance for women is lower, and therefore So first of all, no

**Heather** 26:19

matter no matter, no matter what else is true about humans still, there's only so many kids a woman can have in her lifetime. And the number of kids a man can have in his lifetime is basically unbounded, but don't try.

**Bret** 26:29

Right. But so anyway, just just to complete it, if woman so first of all, there is there's several layers playing into this discussion. One is that a beautiful woman is likely genetically well endowed and has had access to resources that are her mother did that result in you know, this is one of the things that Bob Trevor's has looked deeply into, is the fluctuating, fluctuating a situation race, basically, we find symmetry pleasing. And so a woman who is beautiful likely is genetically well endowed and has also had a developmental environment that was hospitable. Which, you know, some of this is heritable, and some of it isn't. But a beautiful woman is probably if those characteristics are right, if she's especially symmetrical for one thing, she may also it's not that her it's not that she is capable of producing female beauty, he is likely capable of producing beautiful well put together offspring of either sex, he is also capable of commanding more in the mating and dating market. And therefore, she you know, let's just say that male quality, physical quality doesn't even matter, right? Certain things like higher position in society, she can marry somebody as a higher position in society, which increases the chances that her offspring will be able to find mates,

**Heather** 27:45

although until, until very recently, until post industrial cultures, often higher position in society for males needed to be vetted with tests of physical prowess early on.

**Bret** 27:57

Yep, I still, I still think all these things pointing in the same direction, that which is that whatever it is, the female beauty is a proxy for whether it is, you know, mediated through males who are choosing or whether it is mediated through nature and her ability to produce offspring that are well structured. In both cases, the unsettling and uncomfortable conclusion of triggers, Willard is if you have some reason to know that your offspring are liable to be more capable than average rather than less capable than average, then you should tend to produce males and in a more certain uncertain context, you should tend to produce females and that female beauty if it does anything, it tells you, she should be more likely to produce males because she's more likely to produce males that are well positioned and well structured.

**Heather** 28:43

Fair enough. Okay. We could we could of course go on for hours as we probably will later as we could. The camera and I will say and maybe correct me I I didn't didn't see this question coming. But I think I don't know the triggers at Willard has been investigated with regard to mechanism and humans are even investigated, necessarily in humans at all. But it has been looked at in some species of mammals where the mechanism actually appears to possibly be choice of the egg, by the egg of particular sperm, because mammals have chromosomal sex determination. I believe at night, you know, it's possible I'm just making this up. But I think I think I remember one or two papers suggesting that basically, the egg knows and obviously, none of this is conscious. We're using this evolutionary shorthand, but the egg can tell expert versus wise sperm in a mammal, Busey versus w sperm in a bird. Now, actually in birds is going to be totally different because they've got this different sexes. heterochromia can in birds. But in mammals, x versus y sperm, the egg can tell and therefore the egg can make choices based on the sex of the sperm that is approaching them, and appears to do so I will try to find that. Find that to make sure that I'm not making it up next time.

**Bret** 29:54

All right, good.

**Heather** 29:56

All right. The next question is also evolutionary. Which is good because it'd be really hard to switch completely after that. Is there an evolutionary advantage to being colorblind? Okay quickly goes down evolutionary in your case, Brett, does it help to not fall for the vote red or vote blue dichotomy? Thoughts on Oh, and now totally different within the same question thoughts on doubling the number of reps, we've had 435. For almost 100 years, could more seats mean less government capture?

**Bret** 30:28

I'm probably going to punt on that last bit, I would have to think about the implications are not immediately obvious to me. But let's talk about color blindness. First of all, you should know, Eric and I have an unusual kind of colorblindness. It's not red green. We have the identical colorblindness, which we know because there are these marvelous pebbled tests that assess which cones are doing what we're you've probably seen them. It's a round display that has these different size dots in it. And there's some number written in the dots is salient thing about them is that they're differently colored dots, right? But here's the thing that you may not know, because most people see color approximate the same way is that some of those tests have a number in in them that only a person with a certain kind of colorblindness can see and Eric and I see the same thing on these charts with one chart after another.

**Heather** 31:22

So 90% of us are seeing seven and 90% of the remaining people see nothing and then 10% of the 1% of people and these numbers are all wrong. It's much less than 1% of the population that has this particular color blindness. See the number two instead, which no one else can see it. All

**Bret** 31:40

right, yeah. So Eric, and I could go through the book separately, and we'd come up with exactly the same answers and people who see color normally would all be in an agreement about what they saw up to. So anyway, the The reason I raised that is because red green colorblindness pretty clearly does have an advantage and marvelously the advantage seems not to be an individual level advantage. It's a population level advantage. In other words, it's not like you'd all be better off being colorblind but you're better off to be in a population that has some colorblind people just like you are better off being in a population that has some left handers and so there is clearly and I find that this is true for me too with my colorblindness is that there is an increased sensitivity to pattern I can find things other people can't find and in fact we don't know you're talking

**Heather** 32:32

about visual pattern but I wonder if it doesn't track and other kinds of pattern as well

**Bret** 32:36

well I think it has all kinds of downtown political pattern yeah for one thing I think it just there's probably something to the idea that if you live in a world of people who agree what color stuff is and you're

**Heather** 32:49

not lying,

**Bret** 32:50

you see it well now believe me one of my favorite things is when you color normies get into a disagreement about what color something is that really warms my heart move versus tope whatever so I've seen some crazy arguments and I like to just sit back and listen because usually it's because you know It's me who's off and I know it can I

**Heather** 33:09

can I just claim oppression status here that I live in a very small population of four here in the nuclear family and I passed to our two children my father's red green colorblind gene I of course don't I mean I carry it but it doesn't manifest in me because it's on the X and it gets it's it's it's recessive. So I live in a family with three colorblind people varying degrees you got two different types but but I'm me me the color norm you're in the minority you

**Bret** 33:37

are in the minority but look I do think there's something to the experience of like week after week seeing a world with your own eyes I mean it's very compelling what you see with your eyes and then to have the world say no, you're not seeing what you think you're seeing does lead you a to have the sort of confidence of well sometimes you do see something that other people can't see because you know, I never knew whether my dissertation work on tent making bats was facilitated by the fact that because I don't see color normally the bats were less successful at deceiving me with their tents So after I figured out the trick of how to find these things, I got very good at it and I find sometimes you know 200 in a day if I you know was really trying

**Heather** 34:23

no and these things are these things are super hard to find or recommend. It's hard. When the first time you walk into a lowland rainforest, a jungle or tropical jungle you can't see anything but a wall of green but even once you've spent you know, years wondering when these forests it's much harder for me to find these things then for you and I know exactly what I'm looking for at this

**Bret** 34:41

point, right? Yeah, you've seen hundreds of Yeah. So anyway, that's all an aside the point is yes, there is an advantage. The advantage may come in the form of just the same way we sometimes colorize pictures from Jupiter, for example to highlight different things that the normal color image of the red spot reveals different things than a false color image. Having some people who just have a different color wheel in operation reveals things that will be hidden. It is certainly true that during World War Two, I believe, yeah, World War Two, colorblind, people were used to spot camouflage from airplanes, because they were less easily deceived by the color of the camouflage. And that that pattern may be more general. But it may also just have this cultural impact, where if you have the experience of being out of sync with your population, and what it sees, it may train you to be a little more dog when you think you see something that other people don't see, you pursue it? And they say, No, you're getting it wrong. It's like, Am I really

**Heather** 35:44

know, and we've talked about this in a number of places, that, you know, there may be particular ability to detect pattern because you're not focusing on the main thing that people are saying to colorblindness. But, you know, left handedness, being on the spectrum, you know, all these sorts of forms of neuro diversity, basically, you know, any, any way that you're walking through life, such that you're not effectively totally neurotypical and normie. To use to use that language puts you out of step enough that you may start questioning other things that everyone else is accepting.

**Bret** 36:17

Yeah. And you know, you can force this ex Pat sometimes have an interesting,

**Heather** 36:22

being outside of your own culture is huge for this, I think. I mean, it's it's one, it's one of the reasons I keep on here. This is one of my drumbeats consistently, like, go experience life outside of your own, especially if it's a privileged little bubble, as you know, it is for most of the activists, for instance, and just be there, among other people doing their own thing. And watch how many of the things that you thought were just sort of fundamental to being human. I just done differently over here. And sometimes it matters. And sometimes it doesn't, sometimes it's random. And sometimes most of the time it's not. And usually, if it's persistent, whatever they're doing is better in their environment, whatever was happening over here was better in this environment. And, and it just, it reveals a lot of the biases that we actually carry around with us about sort of just what it is to be a human, a man, an American, or whatever it is. Yep. All right. Next question. I made, Daniel made a new social deduction game based on medieval era, called Long live the king, that you can find it guilt free. gaming.com. Long live the king, it was criticized for the lack of diversity. Shin, he says it was based in the medieval era, should games ignore historical truth for more inclusion? Would this change help anyone? Well, this is this is a good question.

**Bret** 37:43

Yeah. You and I have been talking about this question, not in the context of games. But in the context of plays, theater theater. Yeah. So we may go and say more about this soon. But I would say there is a judgment call. And I believe that there is a proper place for the line. And the aspiration to be inclusive, I think is honorable, there is a level at which the implementation can be absolutely wrong. So we've seen plays, for example, where the, you know, every time you go and see a play, or start watching a new movie, or something, you have to get used to who the characters are, what their relationships are. And having enough data to do it well is important in the case that the parents have a child in the play are of a different race. And it causes the mind to just when it tracks normal logic of these things, to throw an error, and it causes it to be harder to figure out who the characters are. And remember when they show up, what their relationship is, that's disruptive of the purpose of the play, and probably not a good place to do it. On the other hand,

**Heather** 38:55

and, you know, just genetically nonsensical and less than the player that kid was adopted.

**Bret** 38:59

Right, right. Right. But that said, there are lots of places where you can do things we've seen the sex of a character reversed in places. Yeah. And you know, it can be done very badly. And it can also be done well. We've seen races that would not have been represented

**Heather** 39:22

in the places where the play is taking place, places and times.

**Bret** 39:25

And we've seen it done well. We've also seen cases in which you know, who was it was in Othello, I think. But anyway, there's a place the more shows up anyway, the point is, you are simultaneously trying to correct a historical bias and trying to provide enough data for the mind to be able to track what's going on, but should it

**Heather** 39:51

so we've seen plays from a number of theatre companies now recently in the last really 10 years that we've been noticing this and the ones that we keep going back to just because of where we are geographically, but also because they're putting on really high quality theater are all playing around with this stuff. And sometimes they've done it brilliantly. And sometimes they've got really badly. And we hope to see them improving over time, assuming they don't go out of business, which we hope they want to do to COVID. But I guess part of the question here is, you know, it has become a kind of is becoming a kind of compelled speech. Yep. Right. And really, I don't think I'll just go ahead and answer the question that he doesn't quite ask here. I don't think it should be incumbent upon anyone who is trying to create a piece of say, fiction that takes place in an era in which, you know, there weren't diversity of particular races to introduce them. Right. Right for I mean, for one thing, among among many other problems, doing so requires learning about a whole bunch of other things such that you're now fictionalizing people and races in a way that you're much more likely to caricature and actually make racial missteps. Yeah, right. So it certainly should not be required. I we have both seen it done well, and it does seem to be becoming compelled. And so that would that itself would cause me to push back against it. But but having seen many plays that do this, I will say that it can be done well, and it can you know, you know, Shakespeare can be more inclusive than then the actual lives that he was writing about about war. And that is not inherently a bad thing. But you know, the direct question, should games ignore historical truth for more inclusion? I guess the answer is gamers could choose to do that if they choose to, but step carefully at No, they absolutely should not be expected to. That said, the mob is loud and growing, and we need to push back against the mob. Because what you need is the choice to make on your own if you're the Creator.

**Bret** 41:52

Yeah, I think that's the thing is that at some level, you need license to make a decision that somebody could accuse you of, you know, yeah. should

**Heather** 42:00

do you speak of the medieval medieval Europe? Well, it existed and it was pretty white,

**Bret** 42:04

right? Can you make a movie, you know, about battles in World War Two? How many women with women are not equally represented on the battlefield? Certainly, you should be able to Yes. So yes, I think the thing is, anything, anybody who thinks the rule is simple, is misleading you.

**Heather** 42:26

If we were to develop personal self confidence, particularly in younger children through social emotional learning, would it actually be a better mechanism to the elimination of our current divisive social issues? Hello, from Winnipeg, Canada?

**Bret** 42:39

Oh, if I understand the question,

**Heather** 42:42

absolutely. 100% Absolutely. Yes, this is

**Bret** 42:45

this is in some sense, the whole point is raise your children to be robust, anti fragile, be to be anti fragile, don't school them, and how to find micro aggression, school them and how to let little stuff you know, just disappear without worrying about because for one thing, you're just never going to know in most cases, whether the microaggression is really a microaggression or whether you're reading something into it that isn't there. And so all of us have to be this way we all get little things that feel like slights that weren't really and sometimes they are and if you dwell on that stuff, you'll just get your brain will overheat.

**Heather** 43:21

Now and this you know, personal self confidence. Absolutely. So expose your children early and often to the physical world, and help expose them to risks that grow over time. You don't want them getting hurt, you really don't want them getting killed. But allowing them to get hurt sometimes, such that they have learned from what they did and are less likely to make those kinds of decisions going forward means that they are far less likely to grow up and become the kind of you know cartoon character like wily coyote who you know, so doesn't believe in gravity that isn't actually fall until he looks down. Right? You know, this is the worldview that imagines that wily coyote is scooting off a cliff and not falling until he knows that you should fall is the kind of mischaracterization of physics that we are we are raising kids and you know, to those who would say what are you talking about physics isn't socio emotional learning? Well, it is like that's, that's how you get it. Because expose kids in groups and alone to the physical universe, and then allow them to start seeding those ideas and those things that they've learned into their friend groups, and among their siblings, and they will figure out very quickly what's true in the universe and what's not what's right and what's not, what's just what's kind, what's generous and what's not.

**Bret** 44:35

And so many of these things, there is some line to be drawn somewhere like with bullying, right? bullying sucks, but the bully in your child's school yard is actually part of the education, right? You have to know how to deal with bullies. If you're going to melt in the face of bullies or figure out who you can go run to. You are not very well positioned for the adult world. So there's all sorts of stuff that has to do with you know, the way Friends like probe each other for vulnerabilities and exploit them and call each other out. That stuff may not be pretty as you're looking at it but it is part of figuring out how to deal with a complex world that isn't built to be safe and the world is just not a safe space you can't make it one so you know is there is there some level of bullying that you want to punish at the level of the adults yeah but is it anything you know any hint that somebody is being mean now it's not and we've got to stop telling ourselves that you know, we know what's good and bad you know our arguments bad no arguments aren't bad arguments are a way to figure out what you actually think if you decide that arguments are bad and they're therefore not allowed anybody who engages in them is a bad person you're you're destroying people's ability to reason

**Heather** 45:49

Yeah. Okay, how how far in Are we the SEC Okay, we're gonna do two more here and then we'll skip to the other stream okay? Isn't canceled culture just online Simon says the leader yells commands and you must comply as quickly as possible, but they're trying to trick you into making a mistake. One wrong move and you're removed from the game.

**Bret** 46:12

There's a lot to be said for that. That's right.

**Heather** 46:13

Yeah. I recently saw Boyce's evergreen doc also read the denial of death, which is not a book I'm familiar with. What's up with the fetishistic use of bodies to describe people of color? Thoughts on TMT? evolutionarily? DMT? Is DMT is the left acting on a most a mass overreaction to mortality salience? Oh, that's interesting. But yeah, we've talked a bit in the past about this, this use of bodies and you know, I find it explicitly dehumanizing. I think it It removes the whole the whole being into its constituent parts, pretends that we aren't emergent. He'll a whole humans and focuses on the physical.

**Bret** 46:53

Well, okay, I'm going to defend it. Okay, I don't think it's useful in the way we see it. And I find it jarring exactly as you do, you know, when people are described as if that's what they were, yeah, they are bodies. That's a misuse. But I think originally it comes from Tallahassee coats. And that his point, which I agree with, is that ultimately, oppression comes down to the control of somebody's body. Right? That there's a lot of stuff that happens in the space of what is said and what is believed. But ultimately, this is about things in the physical universe, it's about the body's access to resources, the body's ability to be free. And that may not be perfectly accurate, but I find it insightful and important. what's troubling is just with, you know, critical race theory, there is some kernel at the bottom of it that's important, that then gets drawn into this ideology that makes the turns it into nonsense. And what's more pernicious nonsense. So the idea of describing people as if they were simply bodies is obviously absurd, and it is dehumanizing exactly, as you say. But the idea of tracking the way in which somebody whose body is being controlled by some unethical force is important. And so I, you know, there are a lot of these things, I would like to rescue the important thing from the bad thing, you know, woke used to be an honorable, meaningful term, it's now a garbage term. But it'd be lovely to be able to recover the original thing, because it actually mattered.

**Heather** 48:26

Yeah. Very good. First question from this Super Chat, q&a. Super Chat. Is anyone tracking what medications were administered? Sorry? Is anyone tracking what medications were administered to people who have lingering symptoms? That is such a good question. And I don't know I've not seen anything on this topic. Well,

**Bret** 48:46

I can tell you, we do a terrible job of this about everything. Right. So there, we are running an experiment. We are the lab rats in some giant experiment, where we are having drugs administered to us that nobody could possibly know what their long term effects are. And the problem is, if you just think through the logic of, let's say, I mean, in this case, we know that, that erythromycin does heart damage. But that was very late emerging that piece of information, your doctor probably still doesn't know it. Yeah. The point is, you had lots of people being administered erythromycin. It works. It's a very functional antibiotic. What has to happen? You you go on it, you get rid of your infection, and you go off and how much damage does it have to do before somebody puts together the pattern? Oh, that person was on erythromycin 25 years ago, and now they have, you know, a heart problem. Yeah, right. There's no way unless you're tracking what what should be happening. And this is increasingly beginning to happen in some places, is you have to track everything that some population takes so that you can then go back and look at the data and say, all right, did the people Who took erythromycin in their 20s have any reduced longevity? Right?

**Heather** 50:05

So I mean, that's that's huge obviously and we should be doing we should we should be doing this and it's very difficult to do in this one way at least the COVID problem is more so is more solvable. Like it's more tractable because the time the time period is so much shorter, right? So Oh, yeah, I mean, it does what one thing you didn't say that adds complexity, of course, is that all the supplements and over the counter things that people are taking, that may be interacting badly with diseases or other medications, we aren't tracking because we just don't even we just don't even we pretend we don't even care. And it doesn't matter.

**Bret** 50:36

But this is, you know, if we go back to one of the discussions we had, at the very beginning of our series of live streams here, we argued that military bases, for example, constitute populations that you could track over time, and maybe you should get hazard pay or something, you get paid for keeping track of all of the things, including the supplements that you use on your own, yeah, you should

**Heather** 51:01

definitely you need to get something for giving up this level of privacy for some period of time, right? Like, you know, we're asking for, for, for some authority, some research authority, which presumably has some government presence in it, to be able to look into your medicine cabinet and everything that you're putting in your mouth. That's, that's a very big breach of privacy. But, you know, many people would be willing to do that for a period of time. And, you know, especially if it came with, and it

**Bret** 51:27

kind of, could be anonymized, you know, we could we could address the privacy concern. So that, you know, there was some method of authentication in which the data went in and according to some number that nobody could track. But what we need to do is we need to, we need to D noise the data, so that it's not up to physicians to detect some pattern months or years down the road,

**Heather** 51:48

to ask exactly the right question of the patient and have the patient know exactly what to say at the right time, right?

**Bret** 51:54

And the answer is so much iatrogenic harm that is to say, medically caused harm is the result of the fact that our data is too noisy for us to be able to track even really important patterns, like you had that drug you took, you know, cause your Achilles tendon to be fragile and to break or knock 10 years off your life or any of these things. You can't notice that in a clinical setting. You have to get it from a large enough sample in which you've collected really good data on what people took. And you have no idea how much are we doing to yourself? Yeah.

**Heather** 52:28

Next question. In order to learn the lesson about authoritarianism would it be Would it help to legalize intellectual bullying of the kind that is happening now? It's interesting, that question came in before we talked about bullying, right? It's, it's this one. I'll read it again. In order to learn the lesson about authoritarianism Would it help to legalize intellectual bullying of the kind that is happening now? I think legalizing bullying has the problem that we see across platforms with regard to you know, at what point at what point are you stepping in appropriately? And at what point is it inappropriate? When is it censorship? When is it not? When is it bullying when is it not? So, you know, like, like you said to speaking to bullying just a few minutes ago, as like I said before this question came in. Were rather No, this question was asked before you spoke to it. Bullying is real. There's a real hazard to it, but the way that our school yards have responded to it is ridiculous and antithetical, actually to creating robust and anti fragile children. Yeah, I would, I would suspect that the same would be true over in electroplating. space.

**Bret** 53:46

I would agree completely. Yeah. And I think you legalizing it is going to backfire.

**Heather** 53:50

Yeah. two part question. One, what does reaching out to potential Darkhorse, candidates look like to our grad students in a unique position to handle this great awakening? I am a graduate physics student co stem. So first question, what is reaching out to potential Darkhorse candidates look like?

**Bret** 54:08

Well, there's a reason we phrased this as a draft. And I think the basic problem is that we have a national emergency. And we are seeking candidates who are patriotic, courageous and capable. And we believe that in the end, such people are very likely to recognize that, that we need them and that as much as they don't want to do the job. And I think a great many people who might be identified by this process will not want the job. The smart ones, they won't want it. But but that's to say, that's the whole reason for phrasing it as a draft. So what does it look like? We will find that out when we have our candidates, some of them will be easier to reach than some of them will be more difficult to reach, but a patriotic appeal to the nation and the world's well being and the catastrophe of having two people who are both disinclined towards leadership, and growing too old, to, to effect it calls upon the rest of us to do things we might not otherwise do.

**Heather** 55:15

And the second part of the question, which is different, asks if graduate students are in a unique position to handle this great awakening asked by a graduate student in physics.

**Bret** 55:26

I think they're in a terrible, but

**Heather** 55:29

yeah, and so in some ways, it's it's just as hard a position as there is because you're still a student, you're still trapped in the university system. And you're completely at the, at the whim of the administration, the department, the faculty, too, if you're teaching of the undergraduates as well, you can just you can get it every which way. Yeah, I'm afraid only on the other hand, I would love him. And I'd love to know what what you see is the potential to the potential upside to being in that position,

**Bret** 55:59

maybe. Because being a graduate student sucks, and the job that you're supposed to get at the end of it doesn't exist, you have less to lose and can therefore afford to be bolder.

**Heather** 56:09

Yeah, maybe allow me most, I guess, one thing that's true, that may not be well known outside of being a graduate student in STEM, at least this is always what what the advice I always give to my students, when they were thinking about graduate school, one of the things was, Do not go into graduate school do not do not accept any position for which you will end up in more debt at the end of at the basically graduate school and stem should pay for itself, you wind up with rich, you will end up you know, not with very much money at all to live on. But the basically, because the STEM fields are such high demand with regard to graduate students, you're basically very low paid labor to do either research or teaching. You should never have any, any new debt that comes in. Whereas graduate school across the board is money making opportunity over in humanities and social sciences and arts for the university a racket, it's a racket, it's a total recommends of racket in a different way. Yeah, for STEM students. But master's students in STEM is a little bit different. But basically, if you if you are accruing debt as a graduate student in STEM, you should probably find a different program. So that said, What you are doing is if you don't end up with a degree, you were sort of treading water with nothing to put on your resume or your CV at the end of it. But at the very least, you shouldn't end up in a worse financial position than you were when you started. You know, whatever undergraduate debt you came in with, you still have but you don't have any new debt. Yep. In early mammals, curses tend to tend to be part of the vagina and trigger ovulation in humans, what is the advantage if it's evolving to be outside? If the main benefit is to have less populations? Why hasn't it disappeared? I think that that I'm not sure that the second part of this the last part of that I'm not sure how it follows if the main benefit is to have less oscillations. Why can you track why that would be the guess as to why it has evolved to be on the outside. I'm

**Bret** 58:11

not following it. And I'm I'm puzzling over the beginning part of the question, because my guess based on too little information, but some is that glitters is in early mammals are not playing the role that they're playing, where they're important, because in a very small number of taxa, and so it's not as

**Heather** 58:34

much I don't, I don't know that they're not, but I'm pretty sure we don't know.

**Bret** 58:40

Well, in any case, I you know, this is the second time we've been asked about the external placement, which has an interpretation, but I wonder,

**Heather** 58:48

actually, so this is from echo. You, very smart, very knowledgeable. And, and I'm in touch with you. over email, if you have access to a paper or eight or something, send them to me so that we can make more sense of this. And and yes, this

**Bret** 59:06

is becoming an increasingly dominant topic in our q&a section. We gotta at least get it right. Yeah,

**Heather** 59:12

that's right. What are the roots of circumcision of infant males in the West? What are the evolutionary advantages if any of foreskin,

**Bret** 59:22

so Okay, this is where we finally get canceled. I know this discussion and it is a catastrophe. Here's the key piece of information that you need. I have deployed years ago now on my channel, something that I used to teach from which was the Adaptive Test a test to tell whether something should be assumed to be the product of adaptive evolution, and it consists of a diagnosis of whether something a characteristic of behavior or a structure is complex, whether it has a cost whether that cost can be reduced, and yet it persists. Over evolutionary time, the logic being, if you have such a structure like the appendix, the appendix is a complex structure that really is independently enough to suggest the role of adaptation and its creation. But to be conservative, it is a structure that can be reduced. So that is to say that the expense that goes into the appendix can be reduced over time, and yet it persists, which implies that it is paying the cost of it. And as we discussed last time, in the case of the appendix, that would also be the risk of having it. And therefore the adaptation is of a magnitude that we can approximate even if we don't know what the advantage is. Now, the reason I go through that is that in the case of the four skin, and circumcision, they both pass the Adaptive Test, which is to say, the four skin was built by adaptation, it has a value, that more than covers the cost of its production. The removal of it also has an adaptive meaning, they removal of it is something that has persisted over evolutionary time in spite of the cost and the risk of it. So what that tells us is that there's a tension here between values. And it may be that in some places, the value of the foreskin outweighs the risk of removal, it may be that in other places, the reverse is true. It may be that in some cultural context, the value of it exceeds the cost of removal or vice versa. And so that is the kind of answer we are looking for anybody whose answer comes down to this is this is mutilation, and should be halted because it has no value has misunderstood, misunderstood the implication of circumcision, being a long standing practice, whether, you know, it could be that the circumcision is a bit like the appendix in the sense that the thing that made it valuable is no longer present in our environment. And therefore at this point, the value is not there. There's obviously lots of debate over the implications for disease. So there was a very popular piece of research that suggested that it was preventative of things like aids, it may be that hygiene compensates for that advantage. It may be that that that data did not indicate what people thought it did that the methodology was no good. So it is a very complex environment. But the thing you want to look if you can walk away from the Dark Horse podcast with something to say on this topic that will make you more enlightened than other people. It is that both the foreskin and its removal are adaptive, right? That doesn't tell you which context you should expect preservation versus removal. But it does tell you, you're looking for something at least complicated enough to deal with that set of truths.

**Heather** 1:02:53

Beautiful. We're probably at about an hour's deck. Yeah, you're just okay. There are a couple of big money questions here. So we are going to try to get through four more here. And I've saved one that we are going to save for the top of next time. So let's go through four more questions. today. Could Joe Rogan and our Dave Chappelle be the wealthy and patriotic citizens that Eric called for during the campfire? You've got Joe's phone number, right?

**Bret** 1:03:25

Well, so first of all, I have to be there's a squirrel in distress outside.

**Heather** 1:03:30

casserole inside, so Okay, I think it can fend for itself

**Bret** 1:03:33

dealing with its own distress. Here's the thing. First of all, Joe is a friend. I don't want to put Joe in any position that isn't warranted. So the question is, I don't think this is a monetary issue. I think the thing is, Joe is in a unique position in society at the moment, he is somebody who has proven the ability to acquire a gigantic audience to cover a range of different topics, including very controversial stuff, to live to tell the tale so far, at least. And the question is, you know, does one want to call up Joe, and have him put himself in some kind of Jeopardy over something? That's really a question for Joe to answer whether this is that something because certainly the risk of not having Joe playing the role that he is playing, and his ability to assess what his risks are, is much greater than our ability to assess them. That's not it's not something anybody else can answer. So I think Eric's invitation to whoever it might be, is really a question for somebody to figure out whether they are in a position to be able to play that role and whether they desire to play that role, has a cost that isn't worth paying somewhere else. can't answer it for anybody.

**Heather** 1:04:53

Yeah. Okay, the next question is about consciousness and big brands in Homo sapiens, and I think we're gonna save this for next time. But also we can point to our Princeton talk, which which spoke to the evolution of consciousness and in humans, but we will we will address this at

**Bret** 1:05:11

the top, I would just say I like big brands I cannot lie

**Heather** 1:05:17

in Peru in Peru has been ruled that subjective gender identity is going to be what determines what is written in your national ID. This obliterates any relationship with objective reality, why not have different categories for different levels of sex and gender? Yeah, that's really unfortunate. I have no knowledge of this, I'm assuming that the person writing the question does. But it does, you know, yes. Why every time we are every time that we are asked, What's your sex, and they give us 87 options or something? If they're going to spend the time to do that, and they should have given us two different questions, what's your sex, and what's your gender identity, and for those people who think it's important to care about gender identity, and there are contexts in which it is quite important for many people, that will still give them the opportunity to describe what they view as as their gender identity, but their actual sex, which has ramifications across the board, including for their own health would not be diminished or made invisible by whatever particular possible fantasy space they're living in at the moment.

**Bret** 1:06:28

So I would just link this up with something we've said about utopians in general, that utopians tend to be people who a are too convinced that they know how to blueprint, the solution to some problem and that be tend to be focused on solving one problem and completely unaware of what the unintended consequences of what they do, will be. And I would just say that this is sexual utopianism, where there's one thing that is being targeted here, and it's the comfort of people who are having some different gender experience than normal, right. And the idea is, we cannot have anybody even thinking that there's anything true and absolute about sex, because that will potentially cause a person who is, let's say, trans, to have to grapple with the discontinuity between their subjective experience and the objective assertions of people who are involved in giving you a driver's license or whatever. And the point is, look, you can solve your one problem, and you will cause who knows how many other arbitrary, dangerous, difficult problems elsewhere? Or you can grow the fuck up? Right? I mean, seriously, you can grow up and you can recognize that yes, the comfort of trans people over their gender situation is a factor. It's an important factor, period, the end, right? You cannot craft civilization over somebody's comfort over something anybody's my yours, anything, this isn't about your comfort, this is about a functioning system. And some of

**Heather** 1:08:06

them seem really not able to grow up, right? Like that is for some of them, their development environment, the drugs, they were given their families, their screens, some combination they're in, have actually kept them from having the ability to grow the fuck up. Yeah.

**Bret** 1:08:23

And the thing is that that's not a failure of compassion. That is to say, you know, you know, we can't turn off the engines of the airplane, because the sound is driving you crazy, right?

**Heather** 1:08:36

We, but it's annoying,

**Bret** 1:08:39

it's annoying. Granted, it may even literally be driving you crazy, but the engines have to remain on, you know, yeah, until we get to the ground. And then we can talk about whether you could take the train, but, you know, please, please do.

**Heather** 1:08:53

If that's going to be your complaint, please take the train, which also isn't going to be

**Bret** 1:08:57

quiet. It's not going to be that quiet, but you know,

**Heather** 1:08:59

not in the US and

**Bret** 1:09:00

you can't crash civilization over issues of comfort no matter how real they may be. Yeah. Okay.

**Heather** 1:09:07

two last questions. Just that came in at high high money value. So I don't think we can actually answer this one, but I wanted to read it. Have you read the revolutionary phenotype? Before I finished the question, I will say I have not I don't even know it.

**Bret** 1:09:21

I have not rang a bell. It's on my list somewhere after it was released

**Heather** 1:09:25

the field of origin of life and early evolution went silent. They can't debunk it because it is true, but also can't acknowledge it because the writer is an outsider. So I don't I don't know this book.

**Bret** 1:09:36

Is it an evolution space?

**Heather** 1:09:37

Is that I guess so. Yeah. So I, like I say, I don't know it. I'm going to try to make time to look at it. enough to know if it's easy to say, Yeah, actually, this is where it's wrong. Or actually, this is one of these things that that deserves deserves discussion and perhaps the person writing the question is right. It's not discussed because the writer isn't already in The fold, but I don't neither of us know at this point. So final question for today. neurological or conscious mutation. Sorry, I'm just it's not they're not quite enough words here. I'm trying to see how to read it.

**Bret** 1:10:15

Consciousness mutation.

**Heather** 1:10:17

I'll just I'll just read it I'm not sure quite make sense. neurological or consciousness mutation for what we are seeing and the reason they do not make sense to anyone outside their circle. Are these few evolving to be hyper tolerant outsider intolerant to the point of superiority or destruction? I think let's, um, let's maybe try to come back to that one. See if we can make sense of it. Next time because I, I wanted to get to it. Yeah, but I just I words, it's too dense, and there aren't quite enough connecting words. So because I said it would do one more. I'm gonna we're gonna go to this one. Hey, Breton. Heather, are you familiar with Ian McGilchrist, the master and his emissary would love to hear your thoughts on the evolutionary reasons for having two brain hemispheres? Do you agree with McGilchrist Thank you. So this, this, I didn't read all of it. It's very long, very long book. But he's great. And it's it's a very interesting and important book, we were on stage with him in London, 14 months ago, or so in May of 2019, along with our friend Jordan Hall at the rebel wisdom summit in London. We don't agree with him on everything. But I'm trying to remember exactly what his position on the brain hemispheres are. I did, I did speak to him a little bit, one on one backstage about brain hemispheres, because so lateralization which is having not we are bilaterally symmetrical. And we have been since we were early vertebrates, never never have gone into radial symmetry since then. or so. But having two halves that are roughly mirror images of one another across the left, right axis, does not mean that those two halves inherently do different things. And so at the point that we start talking about brain lateralization is the point at which we can see that actually, the two brain halves, the left and the right are doing different things. And then stemming from that sort of downstream effects of that, including include things like having handedness and footedness and iridescent ins. And so lateralization where you actually have different stuff happening in the left half of your brain and your right half of the brain begins to show up pretty early in vertebrate history, but really, really becomes manifest in both birds and mammals separately. That's convergent evolution in two of them, because it's different brain parts, actually, that become the large brains in birds and mammals. And let's see just one more thing about the history here that I wanted to get to. And I've now forgotten what it was. With regard to, maybe you want to riff a little bit. Okay, one other thing I wanted to say about that realization, but I can't remember.

**Bret** 1:13:02

It'll come back to you. Yeah. So I would say I'm a bit familiar with Miguel McGilchrist model, there's a great RSA animate that he narrated, which covers it pretty succinctly in a short period of time. And it's been a while since I've seen it. So I've now forgotten what is his two components we're doing? I'm seeing the animation in my mind that I don't have it exactly. But I thought it was very high quality and that it dealt with a lot of the issues of the standard right, left brain dichotomy garbage that doesn't add up most of its garbage. Yeah, right. And so anyway, as far as I'm aware, McGilchrist and I at least have only one important disagreement, we might have a different sense of certain things, but I found him very compelling on this topic. The place where we part company is Pan psychism, where he does seem to believe that there's some consciousness written into the matter of the universe. And I find this preposterous. I will say though, it was the marvelous case we disagreed with this in person about this in person, it had no implication for our sense that we were talking to a kindred spirit, it was very, very rewarding interaction. And I think it's a great demonstration that you can agree or disagree over something absolutely fundamental. And then you know, where that disagreement no longer has any implications, and everything else is just simply enlightening and productive. And you know, it was exactly that experience. So

**Heather** 1:14:27

now he is he is fabulous. He's he's really a, an amazing human being, kindred spirit, like you said, um, so I was trying to sort of riff and bide time to see if I can crop myself to remember exactly what his position on lateralization on the brain is. And I just don't remember. So I will speak to what what I have said before, and what I have thought before with regard to why why to brain, two brain hemispheres is is something we have inherited from our mammalian ancestors from way back, even before there appears to be distinct functioning between As soon as you have two distinct brain hemispheres, the cerebral cortex, you also have the evolution of what in mammals is called the corpus callosum, which is the neurological band of fibers that connects the two. So this raises the question, of course, if you're going to separate your two main parts of your brain that are doing sort of thinking into the future, and thinking in the back, you know, scenario building and memory, and, you know, and planning and flexion, and all of these things that our cerebral cortex is so excellent at why, if you're going to separate it, anything gonna bring it back together? Well, there's real benefit in being able to hide some things from yourself over here, or to specialize and localize a task over here, while the other part of your brain is doing something else over here. And, in fact, we we see predictable differences in the size of the corpus callosum that connects the two hemispheres based on some demographic markers. And we've raised this before, and I'm actually I have not gone back and looked to see that this is stood the test of time. But what I used to say to my students, when this would come up in class, which again, I'm not positive is totally up to date was that on average, women, and left handers and homosexuals have larger corpus callosum than do men or right handers or heterosexual people. And if you just think in terms of Ah, this thing that we've got is good, therefore, I want a bigger one, you will feel a little bit out of the loop if you're a right handed straight male. But of course, it's not like that. Like like you, for instance, for example, for example, whereas I get two of them, right? Like I'm a left handed woman, so Okay, my corpus callosum, on average is likely to be you can't tell until I'm dead. So don't try to check. We can scan Yes, you probably scan but yeah, on average, larger than someone who didn't have either those demographic markers. But so what like what is it better for? So what does a more integrated left and right brain bring you perhaps a greater, maybe greater executive function, which is this, I don't love the term executive function. But I think that there is separate psychological neurological evidence that women on average, have better executive function than men, it has to do with sort of organizing things and spaces and keeping track of calendars and things like that, right? And that that might well be a result of a more integrated brain in which it is also harder to hide things from yourself. So the flip side of that, why would you maybe want a brain that has less frequent or able connection between the two hemispheres, maybe you can partition and specialize and go deep and block out the rest of the world to the enduring irritation? First of all, and and you know, and really dive deep more effectively, than if you had a bigger corpus callosum. But you know, that's that's hypothesis. I don't know that that's true. But can you imagine a trade off between having a more integrated versus more separate, separate brain? Of course you can, and is one better No, one's better in some circumstances for some tasks, and the other is better in some other circumstances for some kinds of tasks.

**Bret** 1:18:08

So in closing, I would just say, we've got a number of different models. One, the typical one that we hear left, right brain, you know, analytical, artistic. Yeah, that's nonsense. Yeah. The master and his emissary version is really cool. There's a another, like a bi cameral brain model. The other thing is a lot of merit to it. I've deployed one which I will explore more fully at some place that has to do with an interaction between consciousness and unconsciousness. But anyway, there is there is a theme to be explored. And the early simple diagnoses turn out to be wrong. There is a trade off based on conductivity versus separability. there that's evident in the structural differences. And anyway, it's a very, it's a very important topic, but somewhere in that neighborhood, yep.

**Heather** 1:19:02

All right. All right. Are we number 37? Number 37. Dun Dun, dun.

**Bret** 1:19:07

It's it's in the cam.

**Heather** 1:19:10

Not yet. sec still has some work to do. Yeah, well, that's true. Yeah. So your 20 2020 2020

**Bret** 1:19:16

go to unity. No articles of unity.org slash nominate, you can nominate two people. And we will move quickly to a process of discussion of the merits of various candidates, and then on to a vote about who it is we want to draft. We hope to have candidates by the beginning of September.

**Heather** 1:19:36

You can join the discord server at either a Patreon or become Darkhorse member at my Patreon and join a private q&a once a month. And be great if you subscribe to the channel like the video all of that.

**Bret** 1:19:49

We are working on upcoming unity campfires. They will be coming no yet when the next one will be. We are hoping for Wednesday but I have to nail down again so I can't promise it yet. All right. Until next time, be well