Bret and Heather 57th DarkHorse Podcast Livestream\_ Big Game...

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**SPEAKERS**

Bret, Heather

**Bret** 00:21

Hey folks, welcome to the Dark Horse podcast live stream are 637 Is that correct? And half and a half? Yes. Yeah, I forgot the half Sorry, my bad. Actually what number is it is seven minutes. 5757. All right, that's a lot of live streaming. It is. Yeah. So we have, we have more topics,

**Heather** 00:44

we have four topics. And although neither of us really love to do this, we should start at the top of the hour by saying what we did last week, at the point that it was only 24 hours old that there are now there's now March available, including the title of last week's episode your algorithms, no good here on T shirts, hopefully on hats at some point. All of that takes some embroidery. Yes. Yep. So

**Bret** 01:08

distance park near you sooner rather than later.

**Heather** 01:12

I'm not sure you can buy it at a socially just No, no, I'm hoping people will wear them. Yeah. So that you can go to store dot tar corps podcast.org. To to find those things. If you want to while you're

**Bret** 01:27

awesome. As long as we have sullied ourselves by you use the term March, did you not? So March, all right. We're dealing with commerce markets, we're interfacing directly with the public in their buying power. You should if you are interested in having us address your questions know that you can file Super Chat questions during this first hour that we will answer during our second hour. That's right. So anyway, and he's sort of doing that

**Heather** 01:53

if you have questions about any of this, you can email Darkhorse dot moderator@gmail.com. And the person who answers that email will likely respond to you unless you're rude in which case they may not. Yes, yes, indeed, I'm using the VA simply to preserve their pronouns, because they don't go by they know, they don't know. All right, so we want to talk about big game hunting and pre Columbian America. Whether or not you when you say something with anger, or with love, or any kind of emotion, it changes whether or not the thing itself is true. Let's see, we want to ask what the game theory behind bailout funds for. For riders in Portland might be and how that's playing out. And then, finally, and perhaps for you know, a lot of the time here today, we're going to wonder, and then investigate whether or not asking questions like that make us all right. If you all right, today.

**Bret** 02:54

All right, man. The question as far right.

**Heather** 02:58

Well, but they're both they're both listed there. Yes.

**Bret** 03:00

Okay. All right. Okay. So it's big game hunting. Let's Let's do this. I'm excited for this. Yeah.

**Heather** 03:07

Yeah. You're excited for me to go up big game hunting and drag them a moose?

**Bret** 03:12

No, I'm excited to discuss whether or not it would make sense for you to go out big game hunting, being a woman and all

**Heather** 03:18

a woman at all. Yes, I'm not just a woman. I'm a woman and oh, man, and all right. Yep. frying up that moose in a pan.

**Bret** 03:29

Yep, good, though.

**Heather** 03:30

It's good, though. All right. Okay. Here we go. Zack, let's show show my screen here. This was published in Science. I think it wasn't one of the science. The secondary publications, I don't know what the science do that is that just nature that does that

**Bret** 03:50

I'm I'm confused by Science Advances at the top is that advances in science grants is a thing. But really, we can know what Science

**Heather** 03:57

Advances actually it is it is one of the sort of knockoff knockoff science magazines. This is published in November, November 4 of last month, so just a month ago, called female hunters of the early Americas. And I want to just actually, rather than the abstract, I think in this case, the introduction provides a slightly better introduction, rather than the abstract, which is a summary of the whole paper. So just the first paragraph of the introduction reads as follows big game hunting is an overwhelmingly male bias behavior among recent hunter gatherer societies. Such observations would seem suggests that this gendered behavioral pattern is an ancestral one, ostensibly stemming from life history traits related to pregnancy and childcare, which constrained female subsistence opportunities. However, a number of scholars have theorized that such division of labor would have been less pronounced altogether absent or structurally different among our early hunter gatherer ancestors. And here instantly, they have like eight, nine references, early subsistence economies that emphasize big Gain would have encouraged participation from all able individuals. Aloe parenting, which appears to have deep evolutionary roots in the human species would have freed women of childcare demands allowing them to hunt. communal hunting, which also appears to have deep evolutionary roots would have encouraged contributions from females, males and children, whether in driving or dispatching large animals. Moreover, the primary hunting technology of the time, the atlatl or spear thrower would have encouraged broad participation in big game hunting, pooling labor and sharing meat are necessary to mitigate risks associated with the atletas low accuracy and long reloading times. Furthermore, peak proficiency and added lateral use can be achieved at a young age potentially before females reach reproductive age, obviating a sex biased technological constraint that would later intensify with bow and arrow technology. Last the residentially mobile lifestyle entailed by big game specialization is quite conducive to human reproduction and thus female hunting, contrary to previous thinking, because it reduces net movement relative to central place foraging strategies. This hypothesis is consistent with high population growth rates among early hunter gatherer populations. So I wanted to read that in part because I want to be able to say atlatl a number of times Sandalow? Yes. Which I have, I will have more opportunity to say as we proceed, but so you have not actually spent any time with this paper? No, I've been a little tough. Oh, you have? Okay. So I have a number of things I want to say. But do you have any immediate response? It's not your first response. But yeah, sure.

**Bret** 06:22

So first of all, a number of things. One, there is, as I'm sure you will get to a very broad pattern in populations where you have both hunting and gathering there is this overwhelming bias towards males doing hunting, or at least big game hunting, big game

**Heather** 06:41

hunter, long distance multi day hunting. Right.

**Bret** 06:44

And, you know, that's not really in question here that question, right? Well, nor should they the evidence is so overwhelming that this is the general pattern that it just simply isn't the

**Heather** 06:55

question is recent hunter gatherers, right? Is what they is what they say, right? It's evidence is for recent is is clear, they say

**Bret** 07:01

recent hunter gatherers, which really just means the extent and those recently enough extant for us to have good evidence. And so what we have here is subfossil, evidence subfossil, meaning it has not been converted to stone, these are buried remains in the new world, which is an independently interesting that the new world may have had different dynamics unfolding. That suggests a female hunter of big game. Now, the place where the rubber meets the road here, as far as I'm concerned, is the nature of the evidence and how justified we are in actually inferring what they have inferred here. from it. So I think that introduction did not explain the nature of the evidence at all.

**Heather** 07:49

Yeah, the nature of the evidence is burial sites, right? That they have, they've found 20s. They've got 27 burial sites. I think if memory serves, it's all in the Andes. Yeah, this is, this is tropical America elevation, which most people wouldn't call tropical, although technically it's tropical, but it's an elevation so it's not hot and humid. It's sort of got a temperate climate while being actually really tropical. So Andean habitats, with 27 burial sites in which a full hunting toolkit was buried alongside people at in these 27 burial sites, there are 16 that are men and 11 that are women, which is statistically a not apparently not indecipherable difference. So it looks like you know, men and women are equally likely to be buried with a full hunting toolkit, which in other places has been interpreted as evidence that you know, you're buried with the stuff that you used in life. Yeah, just that is the that is the that is the one big inference here

**Bret** 08:50

now. Not so fast there. Dr. Hi. Okay. Okay. So, among the things that are worth paying attention to here, here's a thing that if you study paleontology you will have to grapple with which is the ability to distinguish a male skeleton from a female skeleton is not nearly the straightforward thing that that one would imagine that that the morphological distinctions that we see in a flesh and blood human are actually not so reliably reflected in skeletal structure that one can simply look at a skeleton and say one way or the other. Now,

**Heather** 09:29

if you have are looking at not just osteological they say but proteomics and isotopic analyses,

**Bret** 09:34

I know they do, Okay, question is what are these kinds of evidence and how good are they right so a the skeleton doesn't tell the story in and of itself? If you

**Heather** 09:43

have So, let me just let me pause here so I did not spend a lot of time considering their evidence I, I spent a lot more time thinking about what it would mean if it were true and therefore how likely it is that that that it is true, but super fascinating that you would be our arguing that you can't tell based on the even just like just the shape and size, the, you know, robust versus grass isle nature of male versus female skeletons at the same moment in time, what sex they are because I mean, this is a position that that I at least and I think you have been very clear on the regard, you know, this these, this is one of the things that, on average is highly, highly different between Oh, male and female. But of course, those population distributions males and females in particular moment time, are also highly overlapping,

**Bret** 10:33

right, and that's the problem is that they're overlapping. So, you know, if you looked at a large population of skeletons, and in some sense, they have a small population of skeletons here, which you cannot assume are equally so if you had carrier type evidence,

**Heather** 10:49

you know, I'm so i'm not i'm not buying this because because pelvis width alone is a highly highly correlates. It's highly predictive of

**Bret** 10:59

sex, right? But first of all, there's a reason that a I don't think their fossil evidence is so awesome here in terms of quality of the skeletons. Now, this is the logical evidence right there subfossil. Anyway, but yes, there archaeological evidence, because I believe now you spent more time with this paper than i did i breezed through it. It looks to me, like they were inferring this, from, for example, the grass cyl nature of a femur? I think it was. Um, so I don't think they have complete skeletons here. I think they have fragmentary evidence. And the reason that they're using three different kinds of evidence here, one of which is actually new to me, and I don't I do proteomic No, no, the proteomic I get right. So proteomics is going to be basically protein evidence, right?

**Heather** 11:46

I just so so 20 years ago, wouldn't have been called proteomic.

**Bret** 11:51

Doesn't make any difference? I don't know it, let's put it this way. They are inferring sex from a certain amount of skeletal evidence, and then a bunch of molecular evidence. Now why the molecular evidence would be substantially different between males and females. I don't know why the morphological structures would be different is clear. But let's say for example, and then I don't think there's a population on earth for which this would be true. Yeah. But let's say, for example, that this population, buried only it's men, right, maybe does something else with its women, they've not been discovered, or the whatever the burial procedure was resulted in the complete destruction of those skeletons. So you had a population that was all male, and then you come at it with the assumption that half of these are something like half of them are likely to be female, and you start figuring out which ones are the females. So your assumption causes you to impose femaleness on a population that doesn't have any right? Again, I'm not saying that that's likely. But I'm saying we don't know we're inferring a number of things. One, we are already if they have it, correct, that some of these skeletons are female, and that they are buried with what they call a full kit for big game hunting. Then we are inferring that the implication of that is that these people use those kits in life and therefore in the afterlife would have some need of these kits, which makes perfect sentence I'm not arguing It doesn't make sense. It's the first level inference would be Yeah, they buried them with a kit of things that they would be likely to need in the afterlife. And the afterlife is similar enough to life that one can infer their in life behavior from this, but that's not a dead certain chain of argument,

**Heather** 13:35

for sure. There are those there's, there's uncertainty at each step. I will say that apparently in this again, this is not where I spend a lot of time thinking about this paper, but their citation for why they used all three of these methods for sex estimation, in combination is based on an also very new paper called the comparison of proteomics, genomic and osteological methods. Actually, that's one genomic versus isotopic think, and I still logical methods of archaeological sex estimation, which I have not reviewed. But anyway, they're there. They were using multiple methods in order not to get so as Apparently, the osteological stuff can be spurious. But very rarely when combined,

**Bret** 14:15

right? So all I'm saying so let me just say, I believe that they probably have this right, and that it probably does make the very interesting implication that they derive from it. My point is just that we are caught in this bind, where we're looking at a very tiny sample from one place, that very tiny sample, we are imposing a viewpoint on who is of what sex based on three kinds of evidence, none of which are secure in and of themselves, but together, they make it much more likely that it's right, assuming that whatever we've used to calibrate these methods matches this population. Yep. Right. And the population could be distinct in some way. And then on top of that, assuming that we've got the sex of the skeletons right And that, therefore we know who's who we are inferring things about a belief system from physical evidence that cannot possibly report the belief literally all it can do is imply Why else would you bury a person with a hunting kit? If they weren't going to need it in the afterlife? And why would you need it in the afterlife if you didn't need it in life? That's so there are a lot of steps here where something could be weird. And there could be something wonderful in what's weird, and we might never find it, we might never know. But the point is, at some level, the most parsimonious interpretation of the fossil or subfossil evidence that they've found is that women were engaged in this population in big game hunting in high Andean South America.

**Heather** 15:46

Yeah, I think actually, that that is, right. predictions of whether or not you can generalize that to, to habitats outside of the particular one that they were in or to other moments, would be, I think their their real limitations that I would predict only in certain habitats. And I'm not sure like one big question for me is what came were they hunting? This is the Americas. Remember, this is, you know, this, this is this is South America. I'm not I don't I don't know what they were hunting. And it's going how they were hunting is going to depend not just on their tools, which primarily it turns out, we're out of battles, but also on what it was they were hunting. So but hold on, it's going to depend on what tools they were using, you know, if if it's a bunch of men with hand-axes, it's a bunch of people with hand axes, it's not likely to include women for reasons that we'll get to. And although cooperative hunting is what we're imagining here, it's really unlikely that that women are going to have been hunting alone, right like that men going out hunting alone even in populations where cooperative hunting is the rule would certainly I imagine have happened sometimes at least for some types of game, but the prediction would be women are not likely to have to have done this alone. We're also engaging in inference here but well I mean there's a number of places to go I want one place I do want to go here is we've got this National Geographic article about this research which has, you know, of course, an illustration that I think is quite misleading here's a woman a skirt MP huntin alone and she is I don't think she's in a skirt. Oh something a tunic of some sort. But she's but she's hunting alone and I guess you know, it is its commitments that she's on time which is the only thing I came up with her what they would have been wanting.

**Bret** 17:44

We've got spectacled bear is also a possibility. Yep.

**Heather** 17:48

Oh my god, okay. So, but not, not there actually. So I don't it depends on what the actual habitat was like at the time because spectacled bear was would not have been above tree line right, spectacled bear, are are in sort of cloud and just above level of like montane forest in the Andes, but not above tree line, not in the sort of habitat that she is she is illustrated in in there. And we have an quote in that article, which is paywall, so I'm going to just read it to you rather than try to show it to you a quote from an archaeologist who was not involved in the research, Kathleen Sterling, who says, Did the newfound toolkit belong to the buried individual? Sterling challenged the inquiry itself? We typically don't ask this question. We find these toolkits with men, she says, It's only when it challenges our ideas about gender that we ask these questions. Now, that strikes me as an attempt to shut down investigation. You know, she she appears to be questioning a, you know, until very recently, clearly male dominated way of understanding the world that was present in archaeology. But just because that is true, does not mean that we shouldn't always question the inferences that we're making in what we find now. So I thought to sort of counter that apparently feminist critique of anyone who would question whether or not these were in fact, women who were hunting big game, I want to read a tiny bit from this amazing book, one of my favorites. I can't I don't know where the camera is, Mother Nature, maternal instincts and how they shaped the human species by the extraordinary evolutionary biologist Sara Blaffer. hertie and I guess sort of an academic sibling

**Bret** 19:36

of ours. He is an academic sibling, Irish student of Bob rivers. Yeah, exactly. We are students of Bob rivers. Yeah.

**Heather** 19:43

So she wrote in this 2000 book, which I highly recommend. No doubt patriarchal bias played a role in Victorian and earlier ideas about motherhood. And yes, such pious biases permeate the writings of evolutionists from the 19th century onward. It was an all male club And unwittingly, darwinians accepted the bias assumptions handed them on a platter by their predecessors who were more nearly more or less than scientists. The same biases were still very much in evidence in 1975. For instance, when eo Wilson published his pioneering work on sociobiology, which included a notoriously inaccurate description of foraging societies that claimed that quote, during the day, the women and children remain in the residential area while the metaphors for game or its symbolic equivalent in the form of barter and money. If Victorian and a 1950, suburban ideal of mother tending the hearth was substituted for the actual life of a highly mobile Pleistocene gatherer, but Wilson, let's recall was an entomologist and how to give himself a crash course in ethnography in order to write the chapter on humans for sociobiology. Perhaps more telling professional anthropologists themselves failed to register this Whopper, even anthropologists who would actually help collect the data indicating that a woman in a hunter gatherer society might travel a full 1500 miles in a year, while carrying a year old baby. The error was simply overlooked, because it correspond with expectations about how the world should appear. So we had we had a literature we had fields that were utterly involved in, sort of moralistic unscientific naturalistic fallacies style type of thinking, in which they've it was even like backwards naturalistic fallacy, right? They were they had an image of what they thought should be true. And they backfit even when, even when the data suggests entirely opposite things. Yeah, and you know, women have have were never sedentary. And agriculture largely changed that, that that was the moment that did transform sex roles, rather dramatically into being more and more divided in terms of the labor that we were doing. But so you know, that history is part of what archaeologists, Sterling and other people are pushing against. But it comes across as deeply anti scientific. And of course, we'll get in the way of progress and of actually getting you getting to understand what these data truly mean. So female hunter gatherers were never sedentary. Obviously, that's just that's, that's not that's not the job. But were they big game hunters across lots of habitats on the regular or solo? Probably not, right, because, well, upper body strength is remarkably lower in women than than men. On the other hand, the atlatl is pretty light. And, and I got to spend some time on World atlatl calm today I'm thinking about ALS, describes the action of throwing one which I have never been lucky enough to do as a candidate for throwing a ball or a stone. And so you know, you don't you can't throw like a girl. From you know, from the elbow, you have to throw from the shoulder. But you know, anyone who actually is engaging in the physical world and throwing things is throwing from the shoulder. And you're depending on its weight, it's the woman could be expected to throw it quite effectively. In looking for what the weights of these things were, which I never did quite fine, but they seem to be pretty light. I came across a 2013 blog post from a female researcher at the Royal Saskatchewan Museum, describing her experience in learning to throw out a lot all as well at an archaeology field school. So this is just an anecdote, but I found it interesting, quote, one of the grad students in the archaeology department had made the atlatl and had also manufactured one of his darts from a graphite rod that he had purchased. In no time I was throwing that Dart 100 meters with ease at some of the other young men in the group were throwing the darts 300 meters, the darts disappeared out of sight when they threw them. She doesn't make a comment about this, she just she just says it. So let me just this is Evelyn sigfried, who is at the Royal Saskatchewan Museum, who reports just this anecdote without any explanation, in part because guess what, it's obvious, of course, men are going to throw things farther than women are. And we, you know, we see we see this in all in all throwing sports. Less so though, interestingly, in things like walking and even endurance running, the disparity between men and women at a top performance is a tiny fraction in walking and endurance running, as it is in things like throwing because are the disparity, the average disparity in upper body strength for men and women is,

**Heather** 24:23

gosh, I can't remember but something like 30 to 70%. And I'm not sure about those numbers, whereas the average disparity between top top endurance runners, for instance, men and women is closer to 10%. That's interesting. And you know, and why well, and until we became people who had homes while we were still roaming, everyone had to keep up. Yeah, right. Everyone had to keep up and for a period, not only do women have to keep up, but they kept up while carrying their babies. And in fact, in many extent, hunter gatherer populations, women actually carry more load on average than men. Do. You So women had to keep up with men and they tended to do so well carrying more load. And so, you know, they shouldn't surprise us that actually endurance in terms of locomotion is not that different. But that doesn't mean that we're not different in other ways in like upper body strength, which we are

**Bret** 25:15

absolutely. Alright, so I wanted to go down a little other road here, right? So I looked carefully at the date that they believe these subfossil fines are from, they said about 9000 years ago. So that's right, that is, I believe, going to be well, after the megafauna extinction that happened coincident with the end of the last ice age.

**Heather** 25:43

I think that is true, although I did not I have not lined those up, for sure.

**Bret** 25:47

But the reason that it's relevant is that a what there were hunting might arguably have been a larger list, if it was before that extinction had completed. But also, you know, there is a debate, and I think the debate is actually headed in the wrong direction. Or at least it was the last time we checked in with it, about why the megafauna of the New World went extinct about the time people showed up. And it seems clear to some of us that the best most parsimonious answer is that the megafauna of the New World having never been exposed to people before behaved, rather like the fauna in the Galapagos currently does. And what Darwin noted so clearly about it, which isn't, it just doesn't run away, right, it doesn't have experienced enough to know that a human being is a dangerous creature, and therefore it is very easy for human beings to over hunt. And that basically, when your dinner is friendly, right, right, when you you know, when your creatures just look at you curious, really, and you can, can overwhelm them. And so anyway, one of the questions I had here was, if I don't think that there's going to be a general and persistent pattern that yes, in fact, women have been doing a lot more of the big game hunting than we expect, I think there's some tendency to evolve towards a division of labor on this, but that exceptions are likely to have happened, this probably isn't the only one. Sure. And it may be about something, right. Like, for example, it may be that as the continents of the Americas are not yet full with people. And I think they there's a strong argument to be made that they never were full, that they were still in the process, those populations are growing at the point that Europeans showed up,

**Heather** 27:26

even if there were 100 million people here before Columbus, right? And the estimates

**Bret** 27:30

are 50 to 100 million people. And the question is, what what would those numbers ultimately have become? And what implication does it have the carrying capacity for these two continents, if you can use the concept in that way, had not been reached, and therefore selection would be very different, right? It's not zero sum selection, it's quite different, which I think would account for many distinctions. And one of them might be that, in effect, one does not need to be at peak hunting performance of the kind that would make males the much better resource for the job. Because it may be that the hunting pressure on these environments was somewhat less now you have to be really careful than analysis like that shows. Even if the continents were not at carrying capacity, it doesn't mean that your local habitat wasn't and obviously you aren't local to your habitat. So that's really where the rubber meets the road. But but there's some question, I guess as to at the point that human beings arrived in the Americas from from Beringia, what world did they face? And what kind of hunting therefore reward? And then what was the evolutionary trajectory? In other words, prediction of this hypothesis would be the farther back you go from that 9000 years ago date, the more female hunting you would see, right? And the closer you come towards modernity, the less you would see, right? So I don't know if we'll see that pattern or not, but

**Heather** 28:57

I love the predictions of valid prediction. Yeah, that's, that's great. And it's, you know, if we trust this method of assessing whether or not there were female hunters, which you know, with asterisk, asterisk, asterisk, we've made all these caveats. But you could test that prediction simply by continuing to keep track of you know, what the sex of those who are buried with full content gets out. Yeah, exactly. That would be the inability to age them in your agent, our dating techniques are are pretty good.

**Bret** 29:28

They're, if well calibrated they're pretty darn good. Yeah, I'm more doubtful about the sex assessment on any individual find, right? If you really have a population, then you can tell on the basis that you really do have different averages but

**Heather** 29:42

yeah, so the problem here in part that you're you're concerned about with regard to sex assessment is with only whatever it was 27 individuals, you and your only in, not none of them together. You don't actually know what The representation for the population is you actually you don't have any idea.

**Bret** 30:03

Right? You have no idea and nothing with which to calibrate it. Yeah. So that's that's that now I, I do have one other place, I hesitate to go here because I think the scientific discussion here is so good on its own. And frankly, you know, as much as there are places where I will raise skepticism about whether or not they got their sex assessment, right, and whether or not the toolkits imply what we generally take such toolkits to imply. I do think, you know, if I had to guess, I bet you they found what they think they found. And it's pretty interesting, right? But that analysis, if we put that just slightly to the side, and we say, now we've got the problem of this analysis is now happening in the present. Now, you and I have argued that there is a renegotiation of the deal between the sexes, that is long overdue, and that there are many things which may once have been divided by sex as a matter of division of labor that have no reason to be in the present. And the realities of mating and dating have changed too, as a result of birth control and many other factors. And so we it is the moment that we effectively have to renegotiate, we can't go back because the old stuff doesn't make sense in the modern world. And a free for all doesn't work either. So renegotiating the deal is, is where, where the Smart Money is, however, we are now in a context in which these narratives, you know, a scientific narrative about women having done or not done big game hunting in the past, are going to be contentious by virtue of their implication, or the implication that people will wrongly take for the present. You know, they will, they will fall afoul of the naturalistic fallacy. And they will want to read things into this. But so you go two ways here, one, you've got the likelihood that women were hunting big game, that, to the extent that evidence for that might have existed in past samples that it might have been missed by academics who were very likely to be male, and very likely, even if they weren't male, to view things through the eyes of ancestral academics who, you know, could make foolish errors like eo Wilson's imagining that women were, you know, back in camp, you know, keeping things tidy. So anyway, there is a very real reason to worry that bias has been playing some role in these in our ability to understand these stories, or find them or look for them, or whatever it would be. And so great that we have evidence that really does strongly suggest if through a series of assumptions that are all somewhat iffy, but does seem to suggest that there was some sort of a different deal in the Americas at least high in the Andes, at least 9000 years ago, there was some different deal between the sexes. That's cool. It's a model for the fact that actually these things can be renegotiated. Right? So I think that's all positive. On the other hand, we are now stuck with the possibility. How do we know it? Let's say that these skeletons that were buried with these big game hunting toolkits, were assigned male at birth, and then we're transmitters. Okay?

**Heather** 33:25

If we take it really well, that's where we're going.

**Bret** 33:29

Here's my point. If they were assigned female at birth, trans and went hunting, then the answer is that in fact, they were men. There's no news here. Right.

**Heather** 33:47

It does point out the lunacy and, frankly, the misogyny of much of the modern trans ideology

**Bret** 33:56

right so what I really the point I'm really trying to make I mean, a we're bypassing a tremendously good joke about the authors of this paper having dead named these fossils, but or misgendered them or whatever they did, but but the real point here is,

**Heather** 34:14

I guess you could dead name someone who was already dead.

**Bret** 34:17

Yeah, and double dead, that's worse, because why? You know you're kicking them when they're down. Alright. That's also a terrible joke. But here's, here's my real point. My real point is, on the one hand, we have the awesome, messy, fascinating story of human sex and gender in one population that most of us You and I spent a fair amount of time thinking about the high Andes, but most people don't write this marvelous story that just the hint that these fossils have have some different deal between the sexes that existed, right? Compare that to the mind numbing story, that you know that actually there is no sexual binary in the whole Scientific attempt to impose that on people is wrongheaded to begin with, and they are we're whoever they felt like they were when they were hunting and there's nothing else to be seen here. That's a nonsense garbage story.

**Heather** 35:11

And anyone who believed that 9000 years ago left no descendants, right?

**Bret** 35:15

Exactly. If you were that confused as a hunter gatherer, you weren't a very good hunter gatherer. Yeah. Right. So anyway, the point I guess, is, look, can we get over this stuff? Can we just embrace the cool, messy, interesting, sometimes awful story that is reality? And stop trying to impose morality on it? And, you know, purify it, and police those who would dare think Other thoughts? Yeah, right. Oh, that's good. All right. Well, you and me We'll start with that agreement. I

**Heather** 35:41

think I think we should. Just one more thing, it occurred to me that I had not made the connection before with this paper. If this is 9000 years ago, in the Andes, we actually were at a site choshi that is thought to have been active about 1000 years ago. So you know, that's both a long time, 1000 years between those but, but perhaps the habitats were the same enough, and the culture was the same enough in which people took cover in this really shallow cave, and apparently hunted by funneling guinea pigs and rabbits and porcupines off a cliff and retrieving the corpses or perhaps having to kill the corpses the the not yet corpses at the bottom who were injured. And then they turn those things into food and clothing. And so if we add that as another possible method, which we know like shoshi, is a well documented and pretty well studied archaeological site, you know, there would be there would be a little reason not to have all members of the group who were living at this cave, go down with our adult models and dispatch, any animals that they wanted to eat, who were injured at the bottom. Actually,

**Bret** 36:48

I love this. And you know, whether or not that story is right, or stands in for some other story, it makes the point that actually you got one population here, which gives us one set of archaeological finds that suggests one unusual feature that we didn't expect. But who knows what the idiosyncrasies of the hunting environment were at that place. And as trophy shows, yeah, you can have all kinds of things, you can have one particular Cliff that, you know, animals don't see coming. And if you can scare him in that direction, they, you know, do most of the work for you. And so, you know, could this be responsive to an idiosyncrasy of the landscape? Was it an idiosyncrasy in time, you know, creatures that were more plentiful and less likely to run away? Who knows? But really, at some level, that's the fascinating thing is, what were the sum total of inputs that caused selection to spit out this output? If in fact, this output is what we think what caused that? And it wasn't going to be one thing it was going to be a combination of factors. That's right.

**Heather** 37:50

All right. Good. We could keep going on. But maybe that's that's that for now. So you want us to talk about? Oh, yes. About our next topic? Yeah, you want to introduce this? Do you want to show the screen or not?

**Bret** 38:08

I'm sure. Why don't you show the screen. So what we have here is Kareem Carr, who is a PhD student at Harvard, who made a big splash several months ago on the topic of what on earth two plus two might possibly equal. And his point was, all of you who think it's for are failing to grasp just how subjective and arbitrary mathematics is. And so in any case, the world descended into madness over this for some time. Now, two plus two equals five is also an oblique reference to Orwell. 1984. This is, I don't know, is it Newspeak or it's some sort of

**Heather** 38:56

it's it's one of the modes by which you force a population to totalitarianism if you can get people to agree that two plus two equals five. Well, you're well on your way. Right. And just the the kerfuffle from many months back was led on the side of No, two plus two actually does equal four, by our friend Jim Lindsey.

**Bret** 39:15

Yes. So any way most people will remember that if they're on Twitter, at least they will have seen some part of that battle. And Kareem has decided to blow on the embers of that battle to see if he can rekindle it. And I What is he said something just, y'all just get this off the screen. He's got two tweets here. He says, When someone says two plus two equals four in a really angry way, they're admitting that the statement can't what the statement can't do for itself. One can't calmly state it like a fact it is it supposedly is one must back it up with the threat of force to make it stick and this act affirms the spirit of two plus two equals five he goes on, and he says so even when they think they've won The argument they're losing their defensiveness and anger is already a loss, because it brings two plus two equals four into the subjective where it

**Heather** 40:09

belongs. So those two last points, being angry brings the statement into subjective. And the secret, this objective is where it belongs. Yeah.

**Bret** 40:20

Now, so the reason to be here is not just simply to harp on the absurdity of what Karim Carr is saying, and to try to parse it and finally get it right so people can finally understand why two plus two equals four. Because as I said to him the first time through this, what he is engaged in, is a classic example of sophistry, which is to say, his argument is hard to field, which doesn't say anything about its being right. And his argument, if you go back to his original claim had to do with the fact that the symbols two and five, and equals and plus, are all something that we simply agree on. And there's no reason to agree that they equal this or that, and so they could equal other things. And therefore, the statement two plus two equals five could be a totally reasonable statement as good as two plus two equals four. And the answer is, that's such

**Heather** 41:09

a sophistry. I mean, that's a bit colloquially people, when they say semantics, and it's not actually semantics, but not

**Bret** 41:16

just sophistry, but he's not a PhD student just anywhere. It's Harvard level, sophistry. Yeah. Right. So anyway, that is what it is. That's not really the point to return here. The reason I wanted to return is that it struck me when I saw his new argument, that this was actually an interesting opportunity. So several years back in 2017, I gave a talk in Vancouver, that I called how the magic trick is done, and how the magic was done was basically a sort of a taxonomy of tricks and Kafka traps and other things that are causing the social justice ideology to actually wield a great deal of power in spite of the fact that the arguments that it's making are not correct in many regards. And what one does not typically see. So one of the things I said in that talk is that these techniques evolve, people try a lot of stuff and the stuff that doesn't work doesn't leave a fossil, right? The stuff that works, gets picked up on and it gets augmented, and it gets built into a very refined strategic structure that we realize needs to be talked about at the point that it comes for us. And we can't feel it. Because even though we may be right about something, it is very difficult to figure out how you deal with the incentives surrounding. So this Karim car, next chapter here struck me as the rare case where you might be present for the birth of a new technique, right? If you think about his argument here, if people say two plus two equals four, and they get angry about it, then their anger is an indication that two plus two does not inherently equal four, right? Well, this is an amazing argument, right? This is stunning, because what this says is, first of all, two plus two equals four is a baseline nearly foundational level of societal agreement, right? We have to agree what these symbols mean, if we're going to establish truth at all, we've got to establish what the meaning of words is, what the meaning of symbols is, what the operations that they dictate are. And when somebody asserts that two plus two equals four is not inherently true. They are attacking something fundamental. I mean, you know, if you imagine if we were to invalidate two plus two equals four, so two plus two suddenly equals question mark. The modern world ceases to function instantly, right? There's no device that we're using, that doesn't depend on that level of agreement, and a great many things stacked on top of it.

**Heather** 44:03

It's like, many years ago, our younger son, Toby asked me, What would it be like here if there was no gravity? And it's exactly that there wouldn't be there's no here, right? Not nothing, nothing that we know has happened in that world. And the same is true for two plus two equals what now?

**Bret** 44:22

right? Exactly. So in some sense, what Carr is saying is we have the right to attack the very foundations of systematic thought. And we have a right to do so in a politically charged environment where those of us who are doing that are actually dictating policy, not only are we saying two plus two equals five, but defund the police is, you know, a reasonable thing to demand. So it is natural that somebody who thinks Oh my god, how did two plus two equals five get out of Orwell and into the world? And, you know, why is it marching? Right, that could make a person very nervous, they might be right to be nervous. And they might speak with a certain amount of urgency and saying no, two plus two equals four goddamnit. Right. And the point is that has nothing to do with whether or not two plus two does or does not equal four. That just has to do with the fact that what is in jeopardy if it doesn't equal four is really important. So

**Heather** 45:21

but it's but it's, as you say, a slick rhetorical move that probably just dies here, but maybe not. So I mean, this is it's like, it's like a reformulation of Ben Shapiro's famous facts don't care about your feelings. This new formulation is feelings about facts, change the facts.

**Bret** 45:37

Yes, feeling feelings about facts are all you need to figure out whether those facts are in fact factual. So and then the final point I would make is, I want people to understand just how beautiful and diabolical his formulation is, right? So let's say that let's give him the benefit of the doubt here and let's say, okay, for the, for the purposes of this argument, his assumption is to be taken literally, if a person responds angrily to the idea that two plus two equals five, then they imply that two plus two does not equal what they think it equals. Okay? Now let's apply that across the population. Okay? What if all of us, but one decides, you know what, I'm gonna say this very calmly. Two plus two equals four. My hand does not shake. I'm not raising my voice. Two plus two simply equals four. And that needs to remain true, right? But one person isn't so good at keeping their their calm, yeah, right. They're cool. And they get angry because they're worried, right? Well, that one person has now invalidated the two plus two equals four and left us in a world where two plus two now equals I'm your new king and you will bow before me that guys anchor blew up the universe blew up the universe. And so in any case, what I'm hoping is that are discussing this here on Darkhorse will result in this particular attempt to generate a new super weapon failing because people realize just how crazy it is. But nonetheless, maybe the point is it's actually sophisticated enough as a strategy that in spite of this analysis, it will continue to grow and be augmented and wielded and we will see it morph into all sorts of things out in the world. We don't know yet

**Heather** 47:29

well I mean in part in part it may well work in part what we're doing here may not touch the effectiveness of the strategy precisely because we are trying to do analysis and if the strategy works, it will work exactly on the emotional level. Right? It will it will affect how people view things because they will have been informed by the emotional content of people who are certain that actually if you claim two plus two equals four well then you're probably a fascist or some such.

**Bret** 47:56

Yeah, absolutely. So it could be both we could do the analysis and it actually might have an influence in a particular quadrant but have no impact on

**Heather** 48:04

the utility of this art. It could still be an evolutionarily stable strategy even if it's dead wrong

**Bret** 48:10

Yes, didn't raise your voice you said dead wrong in a strong way but the amplitude was perfectly a little sarcastic maybe Yeah, but that suggests strength Oh, I think actually works in reverse. Okay,

**Heather** 48:23

sorry. Good. All right. third item of four people's generosity in across the country but with regard to people in Portland us seems to be being used to help out criminals.

**Bret** 48:43

Pray tell what might you be talking pray pray tell.

**Heather** 48:45

Let's see. The before we show before we show the screen funds that were created to pay bail for people who are arrested while engaging in vandalism or assault or whatnot during the protests and especially during the riots in Portland, have been wait for it abused by those receiving the pill money. Who would have thunk

**Bret** 49:05

cooler me? color you fucking shocked

**Heather** 49:08

All right, yeah. So here it's just let's show the the tweet before you start talking about it. From defense fund PBX. Some folks think the bail funds can sustain themselves because most bail eventually gets refunded. In Portland bail paid is returned to the person arrested, not the person that paid the bail. We have paid over $100,000 in bail since May. We've only had a few folks return their bill to us. If you've had your bell refunded, please consider sending it back to us if we paid it. You can return it via any of the methods found at the link in our profile. If you want to mail a check dm for our mailing address. Gee, shocked people who are arrested for criminal behavior and get their bail paid for them from the generosity of well meaning liberals I would think mostly, but there's no expectation tied to it at the point that they actually show up for it wouldn't be their arraignment. Um, what is it that is that when you get your bail back, what point in the process to show up and you get your bail back? They get their bail back. It's not theirs. They take it. And they keep it because of course they do.

**Bret** 50:12

Yes. So I should tell you one point during the portion of these riots that was attacking the, the courthouse downtown. Yeah. I went down there, spiking around and I saw two people who were part of this bail fund, standing next to a sign about donating to it and utilizing it and all of this and I was shocked because a the whole idea of a bail fund certainly intervenes in the incentive structures surrounding these riots in a way that immediately it was obvious like, oh, what you're doing is you're dropping the cost of rioting. If you're arrested during a riot, I mean, a the state abuses these penalties. So one of the things let's leave rioting out of it for a moment. If you are protesting peacefully, you can be arrested for all kinds of violations, trespassing, protesting without a permit all sorts of stuff. Yes. And it's a nightmare for people that it happens to. And you know, basically had friends

**Heather** 51:21

up in Olympia, for whom this

**Bret** 51:22

Oh, yeah. And there's a whole set of undeclared penalties that come in the form of bureaucracy that surrounds you getting your due process, right? So it's an actual actual nightmare. And in fact, the cops when they're going to arrest people at a protest will often give them a choice, right? They will say, do you want to be arrested. And the basic point is, if you don't want to be arrested, then you have to do what we say. And if you do want to be arrested, then don't do what we say, and we're about to arrest you, and then those penalties will kick in. And so anyway, it's a sort of unspoken rule under normal protesting. But in this case, you've got people who are rioting, you've got other people who are signaling their virtue, the riots are ostensibly about challenging racial inequity, right, they're not, but they say they are. You've got people who want to advertise that they are in favor of racial equity, who are signaling this by donating to this fund to bail out these people who are really in you know, in this portrayal, misbehaving, you know, it's civil disobedience, right. And by Latter Day throws, by lowering the penalty here, you are increasing the incentive to continue. Right now, if this if these were really peaceful protests, and they were really about injustice, that would be one thing, but in the context where they are actually attacking courthouses, and trying to pick a fight with the cops and demonizing people and threatening to kill them and all of those things, it's preposterous to lower those costs. But what it turns out is that it's even worse than I thought by a lot, because what's really happening is that those who are donating to reduce the cost of being arrested are ineffective, paying people to engage in those behaviors that get you arrested. So what you have is people behaving in a destructive and violent way, whose bail is then being paid, they are freed. And when they get the money back, it comes to them. So it is a payment scheme for those who are behaving in these in these ways. And,

**Heather** 53:34

and what a perfect tell for whether or not these people actually believe in the values that they espouse. Most of most of these. These people will tell you that there's something akin to socialists Yeah. Or, you know, or farther, farther left than that, right. And the the honorable, the important, the valuable part of socialism is returning that which belongs to the community, to the community. It is if you have a fund, that is a pool that is designed to help people like you and you have been helped in the past, you keep that pool alive by returning it to the pool when you are done. This is you know, this, this is basic human decency. 101 but it's certainly important. If you espouse any kind of collectivist thinking and anyone's failure to pay back that reveals them as exactly the opposite. Yeah, individualistic. At at

**Bret** 54:30

its core, yeah, it's bad faith. And at some level, this is subsidised anarchism. And when you ask yourself why it is that Portland has ongoing destruction of property and violence, you know, then this is part of your answer is that when you apply these principles locally in this ham fisted way, what you do is you end up paying people to riot, which is an absurd thing to pay people for, right? It's a it's the most absurd job. program conceivable

**Heather** 55:04

yes okay so I'm feeling pretty far right

**Bret** 55:07

not as much as some people would have you imagine

**Heather** 55:12

yeah yeah yeah neither mine never have we now we don't have a number of conservative friends

**Bret** 55:20

yeah I won't say any far right I hope

**Heather** 55:22

no one far right by usual standards but so hold on my computer's taking me a long time to pull this up this is in a preprint server as of what this week last week this week okay so for those of you listening not watching yeah so that's last week I guess yeah well that's when you downloaded it or is that I think that's what it posted Yeah, okay, so for those listening not watching this is a high bar I'm gonna butcher her name. Let's say Marty perhaps it all six authored yeah six authored a preprint. That is to be published in a peer reviewed journal presumably published just two weeks ago we can have a go called elvet evaluating the scale growth and origins of right wing echo chambers on YouTube. And just Zack me I have my screen back for a minute. Just to jump to one of the main conclusions here. This paper makes the claim that the channel you are watching now if you are watching this YouTube channel, Brett Weinstein's YouTube channel, along with Sam Harris, Benjamin Boyce, Mike Naina, Gad, sad rebel wisdom, many others are far right. And that's a that's a five point scale. We got far left left center, right and far right. Fox News is right. Or far right

**Bret** 56:54

far, right. Yeah, Fox News is right. And we're far right. Yeah, yeah.

**Heather** 56:58

And you have let me see if I can pull this up. Sorry, this is gonna take me a minute. Here we go. This is page 26 of the article. The text of the article is actually very short. But there's many, many pages of appendices and references and such. Here we have label aggregation. How did they decide whether or not your far right right center left or far left? Well, they relied heavily on a few references. And here is this this bullet point here? the far right. Any oops, any channel labeled as alt light? Art, right? alt right. I dw or MRI, men's rights activists by reference 20 or conspiracy, ITW? alt right, MRI, Alt light religious conservative by reference 23 or right or conspiracy or Alt right. So let's just talk very briefly about a couple of these references. 20. Reference 20, which is a big part of where they are exactly. And I think a big part of where they are basing their assessment is a reference that doesn't even exist online. You have, it's Roberto at all 2020. And when you search here on Google Scholar, it looks like it undid so my search but you find Oh, that's super interesting between my search a couple of hours ago and right now it is now showing up. So that's that is new and is taking a while. Okay, so this is the basis by which they this this paper is the basis by which the paper we're talking about is deciding whether or not channels are our far right. And here this is the first time I seen it because I literally it was not up a couple of hours ago, we analyzed 330,925 videos posted on 349 channels, which we broadly classified into four types media, the alt light, the intellectual dark web, and the alt right. And what they say is or what the voice and Marty at all paper says is that they that that reference that we just were looking at was based largely on the data's data and society paper from from what a year or two ago which your brother Eric Weinstein roundly roundly criticized, with some with some clarity.

**Bret** 59:44

I would say he debunked it Yeah, it's it's total garbage right.

**Heather** 59:48

So that the end, frankly the the the take home with regard to this part of what we want to talk about is if you have been identified as a member of the ITW Or are claiming to be in the ITW intellectual dark web this this term that your brother that Eric Weinstein invented, then you are out right into the story. All right, sorry, far right End of story. That's that's that's it? And that that is the claim made in this paper that simply if you're at W you're far right, and, and please stop bothering us now. But that that can't even be true, can it? Because if that was in fact, the sole basis of the categorization, then obviously Eric himself would be far right. And he's categorized as center. So there must be more to their categorization scheme, than is apparent. Were you headed somewhere? Yes, but go on? Well, I was just

**Bret** 1:00:46

gonna say, what's more reference? 23? Is it? So go there? Yep.

**Heather** 1:00:56

Whereas the other primary reference that they relied on in this paper.

**Bret** 1:01:01

So when challenged in this paper, and I challenged the authors of this paper on Twitter, and one of the authors, David Rothschild, responded extensively. his point was, look, we borrowed our categorization from these other references. And we did the analysis while we were playing about the fact that we had done that, but in fact, that's not the case. And Mark ledwidge contacted me, pointed me to a thread of his in which he showed that the analysis which this Hassan Marty paper, claims to be utilizing, in fact, doesn't match their own categorization. And I looked at lead, which is paper. And in fact, it categorizes us as center. So there's something very interesting going on here where, in effect, the Hassan Marty paper simply asserts that Id W is far right, right. It hard codes that into their analysis. And this, I think, has every danger of being used as a pretext for barring channels from from YouTube in particular, and that, you know, this paper was about YouTube. So where are we headed? You're talking going? So I wanted to point out a number of things. One, what would it mean for this channel to so the ledwidge paper categorizes our channel as anti SJW. But center and actually this matches, I think what the content of this channel repeatedly does, and we can go through some of the things people will have heard us talk about,

**Heather** 1:02:46

let me interrupt here a moment. I did not spend a lot of time with the what is it the ledwidge and zaytsev? paper? Yep. But the paper on which they based much of their know, the host and money paper is only actually looking at data from 2016 to 2019. So you know what we'll get here I think, but fascinating to me that you I just went back and looked at that point. We hadn't begun our live streams at all. So I think there's a couple of videos that I'd show up in in earlier but your channel had 40 bread's your channel had 43 videos up at that point. Here they are. It includes such far right questions as Why do plants make medicine, sympathy and empathy and evolutionary perspective marriages and evolutionary phenomenon? in here somewhere, what do bowerbirds want? And, and and so on, and you know, the only you know we've got a somewhat conservative voice here in Douglas Murray, and a conservative voice and Andy. No, here you are criticizing Steven Crowder. You know, cloudways No, glowy Valerie is no conservative john wood is but again, conservative and far right are not the same thing. And certainly Katie Hertzog is and and Mike Nina isn't. And Sam Harris's

**Bret** 1:04:18

diversity is what you would expect from a centrist. Yeah, centrist channel,

**Heather** 1:04:22

but I guess asking what bowerbirds want is now far right?

**Bret** 1:04:24

I guess so yeah. So I wanted to I don't know what order to do this. And yeah, but first of all, there's some question and there was some consternation online about whether or not the analysis was claiming the channel was far right or the audience was far right now, it's very clear from the paper that what it's saying is that the channel is far right. And not the audience. And we can talk about what it would mean if the audience was far right, which it also isn't, but is that could you think it

**Heather** 1:04:52

just is agnostic about the audience? I don't think it's not suggesting to the audience isn't. It's in fact, in some ways Actually, because it concludes that actually this isn't due to YouTube's suggestions, it is due to inherent choices of people watching YouTube. So it is kind of, you know, closer to making the argument that the viewership also is of the political ideology that they're assigning us to whatever right. Then other arguments, other analyses, which are just saying Actually, it's the YouTube algorithms that are that are that are radicalizing people, right.

**Bret** 1:05:27

So they took their contribution to be, they took who's contribute who took some Marty paper sees its contribution as another mechanism, that is not the result of the suggestion algorithm radicalizing people. Yes. So but here's the point. Okay. Is the channel far right? Is that could you put up the political compass test? That's my political compass test, I've taken it several times. Now, I take no pride in the fact that my.is hanging there off almost the farthest left edge, it can be hanging out, it's there for reasons that I think are quite clear. What I would say is, as I've said, many times, I believe we have to engage in radical change or we will perish. I think radical change is frightening. We should be very, very cautious about it, but I don't think we have a choice about it. That said, people have also heard me say that markets are by far the best mechanism we have for figuring out how to do things right so why is my dots so far down and libertarian and is because I believe that actually meritocracy is the best mechanism and markets are the best mechanism. But why am I on the far left edge because I believe we are far from a meritocracy in which everybody has access and that markets have this frightening dual role where they're very good at figuring out how to do things and they're absolutely terrible at figuring out what we should do. And so anyway, it explains that can I

**Heather** 1:07:03

just clarify possibly one thing that you said which is that in the past you have clarified that you would love to live in a world in which you could be a conservative right? You have no interest in trying to live in a world without markets because you like I understand that markets will always exist and that trying to that we need well regulated markets but an utterly free and unregulated market is a recipe for disaster but that trying to obliterate markets will also end in disaster yeah I also you're not trying you're not seeking a world without markets

**Bret** 1:07:41

right right now I want to mark I want a world in which markets are free to do what they do very very well and you're right I don't want to be a progressive I want to live in a world where we are doing so well that progress would be a mistake and I know we don't live there Yeah,

**Heather** 1:07:57

so you showed you showed your political compass test but maybe even though the information in this paper which makes this channel far right basically doesn't include me at all but it's possible that I'm dragging you down maybe I'm maybe I'm maybe I'm the right way I have wondered about that. Yep, yep, yep. So here's my political compass test God I am farther right the new art of me Yep. And well and still

**Bret** 1:08:23

okay so so here here's I think the there are several points that we need to make. One is if your goddamn method looked at this channel and decided we're far right, your methods sucks, right? You can just tell that this diagnosis your method and your method is garbage. Okay? So what I would say is we are not the only channel that got caught up in this lots of channels that are clearly nothing like far right. And I would say although you and I are I would argue far left our channel his center because the point is, we are analyzing perspectives from all over the map and you know, basically it's heterodoxy and

**Heather** 1:09:06

we are also specifically challenging the errors on the left more than we are actively challenging the errors on the right because it's our own home. Like this is the place where we live and the right should clean up their messes, should prioritize and cleaning up their messes and the left should prioritize cleaning up their messes and we should all be able to come together and convene and you know, we do take some some shit from people for not credit, you know, for instance, we're not criticizing Trump enough. And you know, what, a it's been done to the degree that we have had any you know, unique perspectives on what's wrong with Trump. I think we've said it but it's been it's been rare because he is so real. So fully analyzed, I was gonna say well analyzed, and I don't think it's been particularly well done. But, but the fact is that when you see the thing that you are come to have some sort of a pathogen in it. Of course, you're focused there as opposed to them distant enemy?

**Bret** 1:10:02

Yes, I think that's, that's quite right. But I also do want to take a brief step down the road of all, you know, what about this maybe has to do with audience and point out that even if it were true, our audience is not far right. We know this, we know that there's a good deal of right of center stuff, but I would say it is center. To the extent that there's a bias in the audience, it might be center, right. But let's say that there were far right people listening, right? to rate that as a radicalization problem, if you have two people with political compass test that looked like ours, and people from the far right are listening to us isn't that a success? Isn't that good that people who may be you know, are too extreme to be reached in general are actually hearing somebody from the far other end of the spectrum. And that that might be D radicalizing them. And, you know, to the extent that you just want to put together a giant list, and I must say, this is the moment of putting together giant lists, right? the extent that you want to compile a giant list of people and you want to say that Gad sad, and Sam Harris and Brett Weinstein and Benjamin Boyce and shoe on head and all of these people, Mike Naina, right? If you want to just shove us all into a corner where we not only don't have to be listened to, but you can safely dismiss us as contributing to the problem, then you're actually contributing to the problem, right? You're making this a worst phenomenon. So the fact that the method doesn't work, that it is predicated on at least one paper in which the authors of that paper are alarmed at the abuse of their work, in which the authors of that paper on which this current paper is predicated, reached a different conclusion. In other words, ranked us as center rather than far right? That suggests that whatever they're doing, they're not even doing it well, or consistently or accurately. And then this raises a question, which is, why, why are they doing this right? Now? I was shocked when I saw this paper. You have something you want to add? Just maybe

**Heather** 1:12:17

before you go into why can we show Anna Zaitsev, whose name I'm probably mispronouncing, who was the one of the co authors on one of the papers that was supposedly used to build these categories and who objected strongly to those categories? posted a long excellent piece on medium which for some reason isn't coming up right now, but we'll put it in the description of the video. The final paragraph of which is as a researcher, my greatest goal is to find the truth about YouTube algorithms, radicalization and political bubbles. I am confident that our prior study and websites wreck Fluence dotnet and transparency dot tube offer currently the most thorough, accurate, nuanced and technically the most advanced representation of the political spheres on the platform. So I just thought we could show these two. Very, very briefly. This is rec. rec Fluence, our EC Fluence dotnet I've plugged in your name the tags you know it's not a complete listing of tags at all of course but of these tags on the left here and I'm not going to read them all I apologize for those of you just listening not watching but the tag that your channel that this channel gets spread is anti SJW not really just conservative obviously but not conspiracy not partisan right you know certainly you're not even not anti theist none of those and you know if we if we plug in just you know well let's see what will what your brother come up as I don't know why this isn't working there we go same right and you know his his connectivity is slightly different here and if you scroll down you see you know like like for you connections to you know Sam Harris and Reuben report and powerful JRE and then the other site that that the co author of the paper mentions is this one transparency dot tube where you can just plug in any channel and find out what tags and this is just a slightly different set of tags this channel seems to come up with and in this one your anti woke and center and that's that sounds right for for this channel right and so the options here are mainstream news partisan left partisan, right. Anti woke social justice, late night talk show state funded, conspiracy religious conservative politician, libertarian, anti theist, socialists, manosphere, q anon, and white, white identitarian, which interestingly and not surprising at all to me Is is a tiny number of sites with a tiny number of views compared to all the rest of them. And yet both that's that's the big bugaboo. That's what everyone is actually scared of.

**Bret** 1:15:10

Well, that gets back to why Yes, yeah, good. So of course, whether that's what people are scared of, and people, of course, have a right to be scared of white identitarian ism. But there's a question about how great a danger it poses whether that danger is worse in the context of a woke revolution that is basically defining people by skin color in a way that is liable to create that menace, which I have argued on this channel. But so there's several, there's several points, I wanted to make one, I consider the fact that lefties have a channel that is center to be something of a triumph, because what we're striving for here is to be objective. And the reason I think we come out as center is because basically, you have political teams evolving. And if you are committed to figuring out what the accurate perspective is, on a wide diversity of topics, what you get is something that doesn't match any team's slate of beliefs, right? You get all a cart analysis and,

**Heather** 1:16:21

and given the options, partisan left and partisan, right. We explicitly have always, but also on this channel and not to be partisan, right? Wait, you know, we we believe what we believe. And we are seeking to understand reality, but partisanship should not be part of that.

**Bret** 1:16:38

Right, which is I think the hazard here is that, you know, you can say the very same thing about Joe Rogan, for example, right? Joe Rogan himself is a liberal quite clearly, right. He has people from across the political spectrum, and he treats them honorably, and I think something has understood him to be a great danger, not because he's either on the far right or because he appeals to the far right. But because if you are trying to control the narrative and wield power on its basis, heterodoxy is dangerous. And so how do you get people to punish heterodoxy? you portray it as something dangerous in and of itself. In other words, if you take the people who are navigating the center, who are heterodox, who aren't putting up with bullshit, and you can portray them as somehow in league with a bunch of white identitarian, then you can explain why you're purging them from platforms. And this may sound hyperbolic, except, you know, articles of unity was suspended from Twitter remain suspended, I was kicked off Facebook without explanation and then brought back with an obviously phony story. Jordan Hall has been kicked off Facebook, as far as I know, he has not been restored to it. So you know, we've got this thing on the march, which is actually deciding who has access to the world through these platforms, and who doesn't. And there is every reason to fear whether it is the explanatory in the case of this paper or not, there's every reason to fear that those who have something to lose in a proper heterodox analysis of the world conspiring to get rid of voices that they cannot beat on a level playing field. And that is my concern here is whether or not this set of authors and we need to get back to who these authors are and why that matters. But whether or not these authors were motivated by whatever it is that caused data in society to release that terrible report. In other words, if there's some behind the scenes thing that wants to create reports that will justify purging people from platforms, or whether they are simply responding to the fact that there is demand for papers like this. And therefore they are basically, you know, evolving into a niche where they haven't been part of any such discussion doesn't really matter, because the role that's going to be played by a paper like this is to justify action. And you know, what happened in this paper? Well, you had heterodox voices simply hard coded, grouped in with unsavory voices in a way that then appears to be the conclusion of the paper. Right? It was built in as an assumption. And it appears to be the conclusion and the conclusion, if all you do and, you know, it occurred to me that a paper like this functions rather like an End User License Agreement, the number of people who are actually going to read this paper is tiny, the number who will understand it is even smaller than that. So the real point is, well, what was their conclusion? Oh, we've got this far right thing and it comes from something other than recommendation algorithms. What can we do about it? Yeah, well, there's no reason we have to give these people platforms is there. Yeah.

**Heather** 1:19:47

Go ahead. Before you get back to you said you wanted to talk about the author's but as I was reading it this morning, this paper, which somehow i'd remained ignorant of until last night when you mentioned it for the first time. I was thinking about how it is that we do animal behavior. And I use AI. As you know, I used to teach students how to do animal behavior quite a lot with a with a strong focus on epistemology on how it is that we make claims of truth. And on the entire part of the research process, not just the statistics, not just the experimental design, not just the hypothesis generation, not just the communication of everything at the end, but the entire thing from from pattern recognition and, you know, initial observation of what it is that you think might be true to hypothesis generation, a full slate of hypotheses, etc, that you could possibly explain the phenomenon. And I was imagining a student new to this, you know, an 18 year old perhaps, who decided that they want to study territorial behavior in ducks, which was a fairly common thing that students would do because ducks are common enough and and territorial enough that you could actually, you could actually see this happen whereas in a 10 week project, it's hard to see animals do much if you actually go out and try to find it. But see, you know, the one of the first things you need to do is figure out what what it is that you're calling territorial behavior. And one of the one of the things that people who haven't done animal behavior don't realize is that if you go in with an idea of what territorial behavior is, and then anytime you see something that reminds you of territorial behavior, you call it territorial behavior. You have simplified your assumptions into your work and when your work spits out your assumptions back at you, when you look surprised you're fooling yourself in the world. That's not science. It's terrible, right? It's it is it is absolutely not science, but it's, it's how a lot of this is done. Actually, a lot of published work operates that way, you plug in your assumptions into your model, whatever it is, even if you're not using some kind of fancy statistical model, and you get those assumptions fed right back out at you. And guess what, you're really not supposed to be surprised at the point that that happens. So if you went out and start looking at ducks, and you see some males actually up in the water on each other, and you know, bumping breasts and, and, and engaging with each other, you would have to very carefully code what actually you were seeing, but there's a good chance that that actually is some kind of an altercation either over a potential mate or a territory. You still have don't know that for sure. But let's let's put that in the probably you can take data on that sort of thing with clarity enough and and make an argument that is territorial behavior. But maybe you're also because you know, what a territory isn't. It's about defending a perimeter. you're observing some some ducks, swimming along what you've what you've identified as a perimeter and occasionally coming up against another male duck and, and, and then engaging in one of these, you know, breast breast altercations, you know, okay, well, sometimes, patrolling the perimeter is also territorial behavior, good. And then you say, well, maybe whenever they're anywhere near that line at all, its territorial behavior. Well, maybe whenever they swim in the way that they do when they're near that line, its territorial behavior. Maybe whenever they're kind of anywhere near an area that I've seen them at other moments engage in territorial behavior, its territorial behavior, you see how your expansion of categories Can, can can grow. And it will make your data collection easier, because now you have more and more examples of territorial behavior. The problem being it's not really territorial behavior. What you've collected is a whole bunch of observations of things a tiny sliver of which may in fact be territorial behavior, but most of which is not. And then no matter how good the rest of your work is, no matter how good your experimental design is, or your observational design, which is totally legitimate way to test hypotheses and our behavior, no matter how good your statistics are, your analysis, your description, your literature review all of this no matter how good all the rest of it is. It's not science, the research is crap, because the categories that you put your observations into were simply wrong. And that I think is exactly what's going on here.

**Bret** 1:24:07

Yes, and in fact, I have heard and see in this paper that there is some properly done work quite a bit of paper properly done on a garbage data set. And so

**Heather** 1:24:21

no, I don't I don't even think the dataset is garbage trade. I think the labels on individual things the labels the carriers, the bins right but if you just if you stripped the labels and relabeled what what we saw by what was his name Mark ledwidge says actually, I think a lot of this work was well done, but they took my and Zed subs data and strangely categorized I don't know what they did.

**Bret** 1:24:51

Well, you and I are going to get into a thing over this because I you know, the same thing would go for Mark ledwidge, which is a When I'm saying that the data set is garbage, I mean with the labels, right? I'm not saying that you couldn't analyze these channels independent of those labels and get a reasonable analysis. But the but the point is, there is no such category as this is good work, but for the fact that what you fed into it spit out a conclusion that you started with, right? Let me just Oh, the fact of the matter. The fact that the quantitative work is well done, I think speaks to the fact that the nature of this paper is in fact, pseudo quantification. And it has strong confirmation bias. it suffers from overfitting, and that it is, in fact ironic that it suffers from overfitting, because three of the authors of this paper have written another paper on overfitting. So they're, in fact, so well versed in overfitting that they completely understand what it is and yet have fallen into this trap. And so my feeling is, I don't know why it happened. But a paper in which you apply a mathematical method correctly to a data set on which it is not justified is a bad paper.

**Heather** 1:26:11

Okay, I don't, I'm actually not convinced that they've overfit their data. I'm not convinced that they've engaged in pseudo quantification. And I think our disagreement is about this category of garbage data set. There, there are multiple ways for a data set to be garbage on which you should not then do analysis. And in my mind, the the sort of platonic ideal of garbage data set for which that term should probably be reserved is a data set that is fraudulent at some level in which the data themselves have been, have been either made up or specifically biased. In this case, you have a kind of fraud in terms of the categories, the labels, but you could fix the data set by changing the labels and everything else about it. We are told and this is not our wheelhouse. I can't assess the the mathematical analysis here, right? I just I don't have the skills. But we are told by someone who does, yeah, I think actually, the analysis was good. But the categories are so bad that you cannot trust the results. That's a different kind of garbage data set than one in which the data themselves aren't good.

**Bret** 1:27:21

I don't care that it's a different kind of garbage data set. It's a garbage data set. And the fact is the net effect is overfitting confirmation bias. And the mean, it's like saying, if your lab did 20 experiments of the same kind and got one statistically significant result, and you published that one, that you would say, Oh, well, that paper was good. No, that paper wasn't good. If you knew that you had that? Well, it's a lot like that. Because what you what you have is a competent use of techniques on things that these authors of all people should understand, are not justified, you cannot apply these techniques to that dataset encoded in this way and get anything out. That isn't the conclusion that you started

**Heather** 1:28:10

with. But it's just the encoded in this way. part that is as far as I can tell. The problem? I don't think that anything else, and it is is wrong here. And I think you may be objecting because it sounds like I'm saying it's just this one little thing, this one little thing is foundational, and without this one little thing being correct, it renders the entire interpretation and the rest of the paper null and void, frankly, and it shouldn't have gotten through peer review, right? It hasn't But okay, because it really, it really is a kind of scientific malpractice. But there are a lot of other steps at which they could have done bad work and they didn't and that is not the justification for the bad categorization. And bad categorization is not a trivial thing at

**Bret** 1:28:56

all. I don't accept us, these people, these are not unsophisticated people take a look at that author list. Alright, hold on. Here we go. Okay. You have you can show this. First of all you have, these are top flight institutions, and Harvard, Santa Fe Institute, Microsoft Research. And you have this prior paper on overfitting. So they're aware of the hazard. You have top flight people at highly Ed important institutions wielding techniques that they either do understand and wielded badly or don't understand and should have. And the fact that they did some of the work right, constitutes no part of a defense of what they released, especially in light of the fact that what they released, actually stigmatized people with channels and put them in a situation with respect to platforms that decide whether or not we have access to the world. There's there's no If you took, let's say that you did a drug safety trial, and you knew that the mice were broken in such a way that they would lead you to believe that the the compound in question was safe, even if it wasn't right. And then you say, well, we did the drug safety trial perfectly. The only mistake we made was we use mice with long telomeres. And the answer is well, okay, but why did you do that? Did you know that they had long telomeres? Or did you not know? And if you didn't know, shouldn't have known? Right now, there are cases in which somebody might know might not know in the mouse situation, but in this case, they have everything they need, not only did they have, did they have the knowledge as to what the assumptions of the test that they were going to apply required. But they also had the fact that prior work had categorized these channels differently. So what's their excuse? And then I think, frankly, the most conspicuous thing here, it seems like an anomaly. But why did they categorize Erica center? Right now Eric has a hypothesis about this, which I think belongs on the table. His hypothesis is that because Eric has engaged in challenging conservatives on their channels that he reads differently, which suggests that they did a fine level of encoding here that they looked at his channel, and it looked different, because of something he has done. I think this is very unlikely for one thing. I've done some challenging of conservatives on conservative channels, too. And so it's possible that those were read differently that Eric has been more forceful about it, or it was done somewhere that it showed up in their data set.

**Heather** 1:31:35

Well, it's it's supposedly the analysis is entirely on the home channel. It's not about the person who has the channel. So it really is that according to what they have stated about how they categorize channels, that should have zero bearing.

**Bret** 1:31:48

But

**Heather** 1:31:49

well, for either of you, for anyone,

**Bret** 1:31:50

in fact, given what they do show about how they categorize the simple fact that Eric, not only is he ITW but he named it W. So how it is that it w justifies being put in the far right column, and Eric ends up in the center. But anyway, my point would be what I think actually is likely to have caused Eric to be put where he was, but is that he was so forceful in debunking the data and society report. And so in some sense, the cost of putting Eric in the far right category was probably regarded as too high, which suggests if that is the mechanism here, but it suggests that this isn't even data. Right? Right, that this is cherry picked in order to reach a conclusion. and for what purpose? We can only speculate. But if if the answer is that it w was misunderstood to be far right, then Eric wouldn't be in the center category. The fact that he is in the center category suggests that this was massaged for some purpose that we can see is true. And, you know, I see those institutions ought to be concerned that they have people putting work this bad into the world, and the fact that it's people who have the relevant expertise, and therefore this isn't just some sort of mistake, this is this is the equivalent of academic malpractice that ought to concern them.

**Heather** 1:33:10

Yep. No, I agree with that. I, I am not compelled, by your argument that there's overfitting or pseudo qualification and such, but the category errors are profound and fundamental and render the entire analysis not worthy of considering as to whether or not it might not be it might be true or not, because there is effectively it's built on not even a house of cards. It's built on nothing.

**Bret** 1:33:37

How is that? Not pseudo quantification?

**Heather** 1:33:40

Well, what I mean, I guess I need a definition of pseudo quantification because I'm, you know, in terms of the actual analysis that they did, presumably, and again, you know, not not my wheelhouse, and I cannot assess. But other people who can assess who objected to what they did categorically, like in terms of categorization, said, the way that they performed the analyses, aside from the categorization, they did it well,

**Bret** 1:34:06

well, but they did a mathematical analysis on a data set that is subjective and purely so. So that is pseudo quantification. They have taken something that isn't quantitative in nature, they have made it appear quantitative, and they have spit out a result that suggests Look, this is the Yeah, I mean, it's pseudo quantification.

**Heather** 1:34:26

Yeah, I can see that argument. Yeah. And, you know, there's a, there's a long and rich history of turning things that aren't numbers into number like things and, and then doing things to them that you can only do the numbers in, you know, also in the natural and physical sciences, but especially in the social sciences. And I guess I hadn't thought of that as pseudo quantification. Exactly, but, perhaps it is exactly that.

**Bret** 1:34:52

I think it does exactly that. And, you know, overfitting we can argue because overfitting is traditionally a purely statistical claim. But the point is they've got a model and they basically shoved the data so that it fit it. And you know exactly what you would expect has to be true, which is that things end up in categories that no reasonable person would put them in in order that the model spits out this answer. So

**Heather** 1:35:16

yeah, it does it does seem conclusion driven. And you know, that's that's editorializing on my part. But there is it almost reads like Glee with regard to the conclusion that the far right, like yours truly are ascending in the world. And oh, my goodness, we must clutch our pearls and try to figure out what to do about it.

**Bret** 1:35:38

Well, and in fact, when a bunch of us challenged this, David rothchild, one of the authors on the paper responded on Twitter that he was getting a lot of big feelings from you know, ITW circles, when in fact, what he was getting was critique. Yeah. So anyway, yeah, there is a lot of Oh, the last thing I want to say about this, is that something else that David Rothschilds said on Twitter suggested that it's Rothschild. Oh, okay. In any case that he was getting a lot of pushback, and that they were open to changing the categorization of channels. Now, on the one hand, I have a feeling our category is going to get changed, right? What I'm concerned about, is that, as happened with Facebook, the only people who are going to be able to get out of this out of the way of this juggernaut, were people who have a sufficiently large channel to embarrass people who write terrible papers like this into taking them out of the line of fire. And, you know, that cannot be Yes, right? The fact is, you either do the work properly, as, as I think these other authors have led, which insights have led which insights have done, right, that this is a model for how you do this work carefully. Or you don't do it at all. And to the extent that your work is going to be used to shape policy inside of YouTube or wherever, you have an absolute obligation not to stigmatize people. And it we can't live in a world where you get to stigmatize the people that you want to stigmatize. And then those people who have a big enough channel can get some sort of an indulgence because they can make a stink about it. Cut it out, right. You've demonized a lot of people as far right, you've raised, you know, this particular white identitarian specter over people who have no interest in such things and in fact, are exactly on the other side of the spectrum. And Shame on you for doing it. So cut it out. And you know, that applies to everybody. Big channel or little doesn't make any difference.

**Heather** 1:37:52

Yeah, no, that's good. Shame on you. Stop it. All right. Well, I think we are I think we're ready to give our little end end piece and take a 15 minute break and then come back to answer your questions in the next hour. So we'll be answering your super chat questions from this hour and from the next hour starting in 15 minutes or so. You can once again find Dark Horse shirts and hoodies and bags and such at store dot Dark Horse podcast.org. Email the moderator Dark Horse dot moderator@gmail.com if there are items that you don't see that you'd like we're working on some other stuff. Some of it is harder than you might imagine. A few things that we've considered are perhaps epic Tabby, and people will merchandise Yeah, possibly if we can make that happen.

**Bret** 1:38:50

Totally possibly some flintknapping tips for your atlatl Yes, we have them in putting out in

**Heather** 1:38:57

house by Fairfax.

**Bret** 1:39:03

I'm gonna regret having said that.

**Heather** 1:39:05

Yes, especially because the colors that we use to associate with the different sectors is definitely highly paid while and has changed remarkably, in fact, even as recently as Victorian times. Were exactly the opposite.

**Bret** 1:39:20

Yes, I have them in the blue and black.

**Heather** 1:39:23

I have them in gray and a different gray. Right? Yes. Flint naps heads for your arid Spears that you're using with your algorithms perfect. We're gonna have to get our our moderator right on that. Yes, she's gonna start putting up a map. Okay, darker is membership at my patreon has a private q&a every month we had ours last Sunday. It was two hours, intimate enough that we can actually look in on the chat. It's very nice. It's fun. You have Patreon conversations. A couple times a month with patrons at a higher level. You had one this morning. I did you have your second one tomorrow morning. Yep. So people can join your Patreon to see if they go to your Patreon to see if they want to join that

**Bret** 1:40:13

if not sent out the invite for tomorrow's because I thought some people might sign up for it today and I want to make sure they get the invite. But anyway, I will send that out. Let's say by five o'clock pacific time tonight,

**Heather** 1:40:30

all right. You get access to a Discord server either via Patreon and of course you have a clips channel that's got a lot of clips uploaded with with for quite a frequency. That's it.

**Bret** 1:40:45

December. It is December. We will see you in 15 minutes.

**Heather** 1:40:49

We will see you in 15 minutes and then again for those of you listening well. We'll be back in a week.

**Bret** 1:40:54

All right everyone