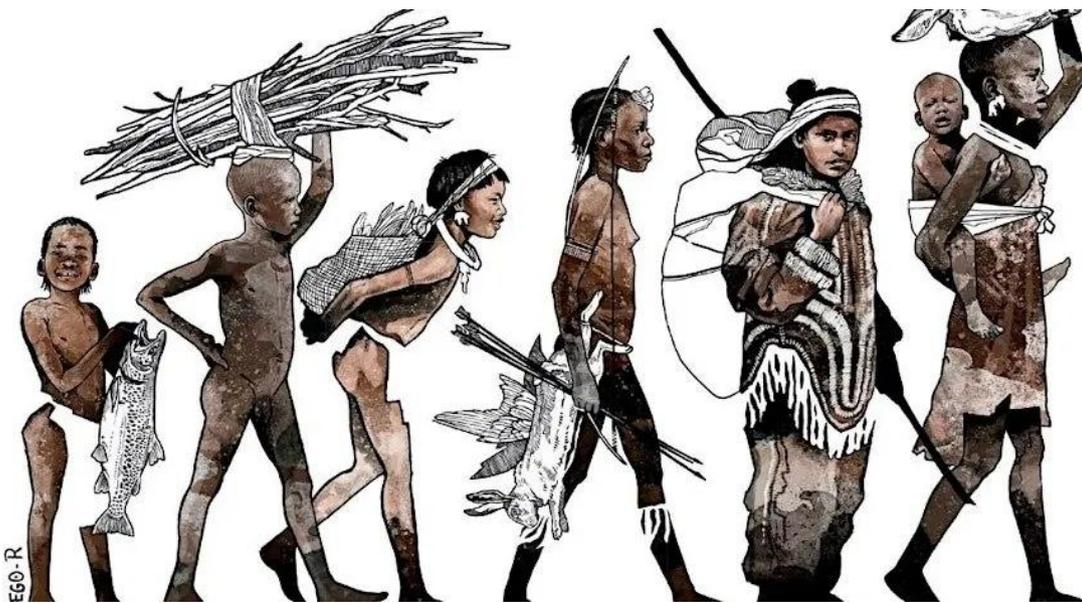


Becoming Human Workshops

Radical Anthropology Group



25th of March, 24th of April, 20th of May & 24th of June,
2003.

Contents

Part 1: Are we just a third chimpanzee? 3
Part 2 33
Part 3: Did cooperative childcare make us human? 65
Part 4 111

A series of workshop talks/discussion on 'Becoming Human' with radical anthropologists, archaeologists and psychologists.

Each New Moon in March, April, May and June 2003.

Part 1: Are we just a third chimpanzee?

<https://www.youtube.com/watch?v=pH2PR5y0TTw>

Camilla: So, I have a few little slides and just say something about this that the specific question tonight; 'are we just a third chimpanzee?' It was actually Jared Diamond the author Jared Diamond who had a a book the third chimpanzee which was lining us up as amongst the other great apes just making this point very strongly and one of the video resources that the rich rangam. Somebody was just talking about it Spike was just talking about it and he is a person who's very notable research of chimpanzees and who tend to make arguments that there is a lot of continuity between human and chimpanzee but also certain discontinuities of human and chimpanzee behaviors, and I was just going to share screen briefly to kind of show if I can't find it that's Can people see? Yeah, yeah, you got the thing there.

So, I mean, it's quite if you if you pick up photos and film of chimps.

it's quite easy to get why people would think even though chimps have quite different distinctive look and bodies and physical aspects.

That there's lots of aspects of chimpanzees that do look like they are like us the it it's quite easy to understand that there's expressing a lot of similar emotions Expressions.

I don't know if anybody saw the little press release by University of Saint Andrews about their research on chimpanzee and bonobo. Just yeah.

Where they were showing that ordinary people who had no training could interpret the gestures of chimps and bonobos and get it right A lot of the time and they were suggesting. Well, we've got a Heritage we've got a Heritage as great apes and that means that probably going back to our ancestry there's just certain amount of stuff that that we do share. But let's just check on exactly where that ancestry links up.

So on that chart, it's quite a helpful chart showing.

that last common ancestor of all the hominins leading to us as Homo sapiens right at the The end of the line we are now the only hominin left on the planet and we've only been modern humans for 300,000 years. So that's a pretty short period out of the whole six or seven million years back to that shared answer and on the other Branch chimpanzees and bonobos the panins coming back down into the last million years and

chimpanzees and Nob is a pretty close relatives, but they've separated out in the last million years and Chris may tell us about that at some stage.

We have several. We know several hominin species that have been.

Part of the evolution of prominence through that six million year down to modern humans and some of these species may have actually been our ancestors australis. Famously Lucy quite likely to be an ancestor of modern humans homerectus almost surely an ancestor of ourselves and are very close cousins and Neanderthals and they are very close relatives sister line because we know for sure that neanderthals and us we had babies together and there are many people in the world who are carrying evidence of neander told genetics recently fun. Take parbo who showed that recently got a Nobel Prize when it comes to the pannings chimps and bonobos. We've got a big gap of what really happened in that six million years that they went down that lineage and what, what what works what are the species? Actually were there we haven't got fossil evidence their Forest living species. So it's very hard to get it. But what we're looking at is effectively 12 million years.

Between us as modern humans going back six million years or more to it common ancestor and coming back down six million years.

To the panins to the chimps and bonobos today and so we've got 12 million years for.

It differences to start evolving.

So there's there's a lot of possibility for difference and we can see evident differences between ourselves and chimps and the novos but also we can understand that there's reasons to look for certain continent and so having kind of said having kind of said that that's setting up what our perspective is tonight. We're obviously evolutionary scientists working within an evolutionary perspective and I expect most people are Are kind of in agreement with that but if anybody has any issues with that, you're lucky you you're welcome to to raise them and have we got some of somebody very helpfully copied or Workshop questions.

Thank you Catherine and I'm suggesting that we've got just about enough people to run a single Workshop. I don't know if you want if you want to make a breakout and have it smaller and what do people feel or stick together? I'm happy to stick together. Yeah, let's do that and just don't feel perfectly at ease to interrupt. We're not putting this this recording out publicly. So let's stick together and so yeah, we're we're not expecting everybody has a lot of knowledge to in particular of primates monkeys or Apes, but from generally In kind of common background knowledge you may be able to to work out some of the issues.

So let's just go think about.

Some of these similarities or differences. What are we? What do we think about this? We starting with just like physical aspects.

bodies differences or similarities I think the physical differences would be the first issue on our Workshop question list.

So the differences in body size and weight and muscle and face, which as he said right on first glance is quite apparent.

Maybe we can look a little bit at the similarities.

Well those pictures that Camilla showed at the beginning of the chimp taking.

So postures stances that.

we readily want to sort of identify with and think sort of see some similarities there as You know that there is .

It would have appear from that. Just those pictures alone.

some psychological commonalities emotional I think possibly when someone would see that photo of the chips sitting there cross-legged.

They may think that's a chimp imitating a human but what if it's not and it's humans imitating chimps.

Well, they I mean we have certain basic body plans that that are kind of that lead to sort of similar postures in positions. Yeah, and yeah that chimp comes across as really yeah.

Just try to be human. It's quite a funny picture. I just saw the other day.

Jay do you want to speak? oh, yeah, if that's okay. I'm just something which is on my mind's.

quite a lot it just one of the things which pops up for me every so often is I used to watch David Adam required a lot and there were that was footage of chimpanzees on there because, I wouldn't there be and Hi, I'm someone with ADHD and I find myself sort of doing what I understand as stemming quite a lot. So doing a little movements that sort of work for me various different ways and one of the ones that I used to do quite a lot as a child was was something which I saw chimpanzees doing well grilling each other I think with just sort of Smacking their lips together and making little noises, which it's it's something which I find myself doing quite a lot because it's a very it's a very easy movement. It's just there so just That that's my king. How amazing.

Is anybody else doing things lip smacking? and So based on J's comment, I find myself curious if some of the things that we do instinctively as humans seeming for example in people who have Unity I understand is a response way to either self-soo or deal with some stimuli that you are you are trying to handle within yourself and I wonder if the similarities that will show up they taking up on the lips making is amongst teams and bonobos and among humans are just in places of that common lineage that are manifesting in different ways and instinctive almost response to being in the world with all the similar around us.

Have we got any more thoughts about difference and just to clap? Let's try and be gross about it just to progress.

where we what obvious differences I mean, we've said we this mentioned You know by pedality is a clear and obvious difference and yet some of those ancestors that were bipedal that were just on that chart.

May have been very ape-like in many respects.

Have we got any other? S points about difference just very basic points. I have I have I have a huge list.

Great. Yeah and keeping over the years.

well Let me bring this.

Over okay, I have.

I have genetics.

bipedalism jaws and teeth Brain, and it's size and caloric requirements gut versus gut and it's caloric requirements.

diaphragm and breath control menopausal grandmothers But when you think that you mean that humans have them.

Chimps don't is yet there? It's a distinction yet.

Yeah.

Like I can go on. Yeah, okay, if some of the questions and that shop just to clarify for people and I mean you're you're touching on very important ones. Oh, yeah, like I said, I've been I've been kind of adding to this list over the years.

Because I find that the topic so fascinating. so that's just the kind of he kind of the very large scale differences that I started with and then it winds up.

kind of moving into a much more picky a little differences anyway.

Yes, that's quite a lot to go on again. Yes and every night checking a couple more there. Yeah.

But go in yeah, but body fat.

Really humans have much more body fat and particularly infants.

It but Michael.

Elena yachik Michael. Do you want to say yeah. Hello.

Hello. Yeah. Well, I remember from Jared Diamond the striking difference between us and The Chimps. He has stressed a couple of times in his famous book with regard to the reproductive organs. Right? So one of the chief questions of the third chimpanzee was why why the penises are so small which he tried to combine with some Theory on General differences in in sexual behavior and with far-reaching conclusions, maybe too far reaching. I don't know. I'm here to to get to know.

Okay.

So sexual reproductive organs. Yeah, I think is is a critical issue and with that sexual behavior, and then we could think about chimps and bonobos as well and regarding that all the different Behavior differs.

Quite a lot as far as I know.

Yeah.

but all these differences sex and reproductive organs, actually the most with males necessarily or between chimps and the bonobos Well, James bonobos and us.

Well, there seems to be to be huge differences both in the in the reproductive behavior and in the social organization, right between us chimps and bonobos and it's it seems to be interrelated.

Yeah, anybody else on that Eleanor? Do you want to speak? What's more basic? It was about the Harrier. The chimpanzees are much Harrier and also about body fat about females and babies.

The white in the eye with females and babies you thinking the body fat.

Was of body fat human babies are fat fat babies. Yes and female we human female. Yes sexual dimorphic dimorphism dimorphism.

The thing is there a big not one of the dimorphic aspects how much difference? I don't but I think the male chimp is always bigger than the females.

Yeah, and then that question Rises well, our human males bigger than females and I mean, oh there is that much difference on sex with animals, maybe a little.

Okay, nobody but yeah, it's an important.

I think that diet is very different. What we are eating is very different.

Yeah, how in what way is the similarity in this difference? Isn't that I think we'd much more meat.

We we don't have that. We don't eat that many fruit and veg. We cannot really we cannot eat raw leaves.

You chimps eat raw leaves do banobos.

Yeah, that's wrong that they are generally not eating. They're not like so much like like gorillas or they and but yeah, we should look at at diet issues and I didn't put diet in there very much. But yeah and should we go? What about I mean we talked about male sex dumb I will force dimorphism but in terms of strength and muscle and so on chimps, but no base.

comparative to to us the power of time of sapiens so much stronger They're massively strong. I mean they are seriously seriously strong and incredible muscles and in terms of body weight and what about body weight actually? Can you help us there that Cathy? Oh don't have.

Don't have that one on my list.

My but my sense has always been that.

Their strength per body weight is much greater.

Yeah, yeah, I think shints maybe a slightly less, but but it's not but that much difference actually for bit for the males. Not that much different.

But slightly slightly smaller. It's anybody got any good and Good data on that but it's not massive difference.

But in terms of strength, yeah chimps muscle bound comparatively a few pictures that help show that other things about Jaws and teeth that Cathy was talking about what about the sheer site the shape of the face and we can see the differences the shape of the face a human faces really and we really are surprisingly and this is true for Gina Simone very flat face.

comparative to chimps and other things fingers and toes skin.

We've kind of talked about the hair.

Movement, what about movement? You said a little bit about it, but I think my God is stand up.

Go for it.

Michael yes, just thinking to the similarities and the differences in the, you're talking about the movements and one thing that's always a kind of impressive Found Me Is You know the chimpanzees they're like so expressive. You know, they got so many the facial muscles they have so many facial muscles just like we have and they're able to do all these facial expressions.

But I also wonder if that's also kind of a difference because how much, this maybe isn't a physical difference but it's symbolically like are they able to really think symbolically? Does that facial expression really translate into symbolic thinking ability? And also, the differences, I mean they're much more robust than us and I think and again this, I think, the difference is in a similarities. I think the physical and the mental are very connected to each other. I think maybe there's humans have a little bit more.

control of their emotions Maybe Yeah, so that's that's something that Richard Ranganam was especially emphasizing in relation to violence and we'll talk about more about conflict and Jay. Did you want to add something? yeah, I'm gonna just bring in your adversity again. I'm because that's immediately when my mind went in terms of I'm sure people have come across this sort of something which I'm sure a lot of folks but something which comes up quite a lot in in discourse and in neurodiverse spaces is, um differences in what it's safe to show on your face what you might want to show in your face and things like that and I think what a lot of time or at least something which which comes up quite a lot with with these people's experiences is that actually what's on your face doesn't necessarily line up with what you're thinking or there's this huge amount of thought that you you have to put into sort of being okay with what's on your face, which it's it's thinking ability, but I don't know.

um It feels like it's in a slightly different realm to the idea of deciding that you're going to express anger on your face and all of that it just as something that popped up for me.

mmm Okay, that's really interesting point and at some point we're gonna be talking about particularly eyes and a pies and the and what that's indicating about kind of into subjectivity and so called Cooperative eyes hypothesis and which I think links in to that understanding how you look to another person and how they're reading what your thinking and is is one of the critical issues that if anybody managed to read Thomas sullo's chapter would be coming out of that as well and what should we go on to think if we've sort of thought about physical aspects? There's that's a baseline of difference.

What about social and cultural aspects? Some people have already been thinking about this and we've just got chimp Society there, but I think the updated PDF was also saying let's think about bonobos too because they're very interesting to compare as very close relatives.

socially and culturally and how what about chimp Society or binoba Society ways. They can be very similar or very different for us. This is sometimes why people think of us, so we're just chimpanzees because sometimes people in in a kind of Pop science

way just saying look, we're just doing the same kind of scheming or politicking that chimpanzees do. What about chimpanzees have they got families relatives kit? How do they relate to other chimps? It's, do we can we talk about getting married? And what about their emotions you do they express love and care. Do they have friends? What do we think about any of that? And then we can think about politics Maybe.

There's a million different ways. You could go within chimpanzees seem to have a lot of similarities behaviorally with us.

I mean, everything from showing Cooperative Behavior.

Showing altruistic Behavior, even though like you're going to the debate about whether or not it really is ultra instant or how altruistic it is.

um cooperative I think you mentioned this before with the Cooperative caring of the young.

I mean, there's so many different things and I was just this is just sort of a random thought I mean, are you familiar with like the story of Oliver the human Zee? or there's this chimpanzee that they were sort of touting back and 60s or 70s as being like a quote unquote chimp human hybrid. I mean he wasn't of course, but, I think that just, underlined this how they are so similar to us that like one of them could even be passed off. It's like a chimp human hybrid.

You just mentioned Cooperative breeding. Now.

Is that something that is characteristic for chimps or bonobos? And That is something that's going to be a big topic for us in to in the third meeting. We're having and what about that? Helen do you I just want to make sure I get David's comment in the chat in he talks about chimpanzees appeared to struggle with non-hunting group Corporation situations.

Particularly, when not dealing with other known individuals and sapiens that is all humans appear to be better able to find group consensus irrespective of language differences. And only if you want to add anything to that David before we go David you're muted muted.

Oh.

I'm not sure if I did that correctly, but we can hear, oh, excellent. Thank you. I can't think of any specific examples other than the fact that whenever I've seen chimpanzees on TV, but they appear to be very able to cooperate if they're hunting but the minute that they come across other chimpanzees who are not of the same truth. It almost descends into a a level of aggression which homo sapiens seem to be able with the exception of obvious examples at the moment which seem to be able to get along together, even when there's hundreds of other Homo sapiens and often who can't speak the same language.

Yeah, I'm not sure that I have the answer. I just have the question. Sorry other. Hey Chris, Chris.

Do you want to say something about the differences between chimps bonobos and Us in regard to relating to strangers? Well, okay. So this is completely wrong to think that there's a kind of specifically chimpanzee.

style of social life that's just wrong to say chimpanzees for example are highly male-dominated and competitive and warfare and I can and so on I mean so so it really does depend to quite a large extent on the kind of environment The Chimps are living in so it is true that the chimps we were probably most aware of the most we've known about the longest that gone very stream chimps that Jane Goodall began by studying and that The Richard rangham was also studying is they are very male dominated every male dominates every female and as as the gyms kind of come of age the male say it's kind of make sure they beat up every female in the group. Even this even the smaller or younger males. Make sure they can beat up and all the females, went when it, just to make a point that they're on top.

But although that's true of Gabby's Gumby streams that's on the fast of Eastern range of the area within gypsophile and found living in the wild right across the other side of the Eastern range right over to the west and places like Thai forests. The the resources are much more abundant and where the resources are more abundant, the females can afford to forage together.

So what goes on is it where this is very little food around the females are very anxious not to have any competition. It's it's like each Freeman eats her own Cabbage Patch and if other females Kind of invade their cabbage packs their local area. They're very hostile. They're very hostile against like immigrants coming into their their patch and because they're isolated because they don't want they don't want to to sorry with each other. They don't they're not able to form strong alliances and because they're isolated that that opens the door for the to the males to to dominate the females quite intensively.

But it's just to take type Forest. The subsistence is much more abundant and the females can up to a point for each together. Therefore they formed every day alliances and therefore they make it much harder for the males to to dominate them and then we have the fact that across the Congo River on the South Side as some chimps made it across the river in a period when the river was quite low and they could make it across perhaps just managed to manage to swim or Wade across to the south side of the river and there they found themselves almost in a paradise.

Lots of wetlands all kinds of resources all kinds of eggs and waterfowl really bulbs. I mean masses of food really and that meant the females were so able so capable of sharing the territory among themselves that they they formed on alliances to such an extent that everything was turned upside down socially and unlike the common chips north of the Congo south of the Congo.

They evolved essentially makes the article and social relationships. So among the bonobos.

Females dominate because they form relationships and they use their theirs. They use sexuality female went one female.

She meets another female the two females could compete for the food and stuff which they they do the GG rubbing. They spent quite a long time on having sex and that having bonded through sex. They're then in a position to to beat up any mail

that get some food and take it from them and then and then even further than that, what happens is that you have what's called The Offspring defense hypothesis as the basic logic of bonobo.

Society so it's very important that bonobos are chimpanzees. We call them bonobos because they're rather different but they've only evolved divergently from the common chimps about a million years. It hadn't taken very long to turn a patriarchal society into matriarchal Society. But what happens then is that any male will be kind of scared of annoying a baby so you can get a fruit falling from a tree the baby starts to eat the fruit eat the fruit the male might So why can't I eat that fruit and he won't do that because he knows that if he annoys the baby will cry and then the male will be kind of beaten up by the mother but not just the mother of the infant that's crying or getting annoyed but her allies as well. And so you have in a sense the ruling part of the local population will consist of infants. It's almost as if infants are dominant thanks to the fact that the mothers are always watching after them and the mother took lots of allies.

So the idea that you have a sort of chimp social system is not really not really correct. It's much more variable and it's not really determined by genetics except within some minutes.

Okay, so so are we wasting our time here? Or or s***, or do we need to be more nuanced about? About, what? What are the factors? That would influence on a large evolutionary timescale differences between ourselves and chimpanzee.

lineage And just very briefly again. It's just that females always want to choose their sexual partners Freedom of Choice freedom of sexual choice is always something which female and higher primates which impedes kind of want.

So but of course it all depends on whether they can what the costs are and it just is just that females would choose if you like sexual freedom of choice if they if they, if it wasn't but the heavy cost involved, but actually they don't have a lot of choice because basically with common chimps the females end up with the dominant alpha male and of course it's sort of it's in sort of interest in the interest of those females to mate with the most dominant males because then of course they're they're Offspring the male offspring will be likely to have their genetic qualities. So from us from a genetic point of view or female interests Fitness interests, it makes sense to mate with the dominant males.

But still didn't like being pushed around if they can avoid it and with some Timothy Freemasons.

Okay, one of the critical things with with dominant with them bonobos bonobos, the No No parametologist has ever recorded an instance of rape or sexual harassment by a male among the neighbors. Whereas among common chimps. It's it's actually kind of everywhere lots of coercion dominant males and older brothers are always trying to have sex with their sisters and others and so on and that doesn't matter how much the females resist it because they want to choose themselves who's going to have they're gonna have sex with the dominant now, even if it's a relative we'll try to get away with

harassing them and even coercing them that never happens with one of those so but yet the genetics are almost identical in the two in the two groups the two populations, David's point was about bounces to strangers So what about chimpanzees in relation to strangers David was mentioning that there is a lot of aggression if there's group on group like meeting at the boundaries. This is something that John Mitani within GoGo chimps has some demonstrated that's that is again an extraordinary contrast between bonobos and common chimps a bonobos. Have you can it's always legitimate to call it Warfare. I mean, they have the males Patrol their boundaries and do that common chimps. Will Patrol the boundaries of their territory a bunch of chimps pretty much related probably brothers or cousins and Patrol the whole branding containing all the different females and every now and again, they'll they'll they'll invade the neighboring territory. And if they come across at the enemy chimp, and they're attempt to kill that chip and so but that doesn't happen over and so it's really interesting because the bonobos they also have territories kind of territories.

but what happens is almost the opposite because the females are so powerful that when when they when they're moving towards the boundaries of what's called what you might think of is there territory And what happens is that their males get a bit worried because they're pretty sure the females will favor not them but they're and if you like the quote enemy of males, so imagine a group of beloved females moving towards the boundary. The their males will get quite anxious about it because what what tends to happen is that the females were making an alliance with the other the other females they're combined together to beat up their own males and have sex with the Enemy males. So it's almost like a reverse Warfare Dynamic with them with bonobos.

So I mean so it just I mean it's just so incorrect. For example it's so incorrect to sort of Simply say that chimpanzees are warlike. I mean, it really does depend on circumstances and it's also wrong to say that chimpanzees are intensively per patriarchal male-dominated it is it's often true. Perhaps typically true for common chimps and they're part of the world north of the Congo River, but it's just really does depend on circumstances and it in the resources we listed there's a very excellent video from Richard Wrangham where he's talking about. He does consider there is some sort of evolutionary continuity of warfare and lethal violence, but he also considers there are differences in the responses of our responses to threat and violent responses.

But he's talking about situations with chimpanzees on the edges of their territory.

Where they will produce very violent displays, but it's it's a lot of noise and thunder really it's a lot of noise and screaming and panting rather than actually going into attack mode.

If the chimps in the other group are pretty much equal numbers equal strength, but if they can find a chimpanzee who's buy themselves a male chimpanzee by themselves or even a female by herself, they will attack they will creep up they will be very quiet. They were creep up. They will attack if they know that they're attacking alone individual they will do that and they will leave that individual in a very very bad State and but

he considers random considers that is quite similar in terms of warfare strategy tactics to humans in many ways and yeah check did you want to say something? Thank you. Yeah, yeah. Okay. Thanks a couple of questions related to what you just said and The gyms have any have we observed any mechanisms which would enable a certain degree of control of aggression within the group? That's my first question because they are aggressive towards strangers. Even if the stranger comes from their own group.

Yeah, they were they were cases where they attacked basically their cousins who split earlier but how is how is the aggression within the group regulated do they do they have any instinctive mechanism for that? Because I think the humans as far as we know the hunters gatherers, they they have some kind of section sanction. They sanction Intergroup aggression. Don't they there is it doesn't go doesn't go without saying if one 100 gather kills another for for no reason am I right here or not? I'm not sure and second. What about the family is as far as I know neither chimps, no Nobles form family.

The males are not engaged inside care RNA.

They do not care about the babies. So it's always a matter of of the mothers.

It's also different from from early humans as far as we can. Imagine they they have lived.

okay, so that that's quite a lot to to ask about and you're asking in important questions and in terms of yeah differences of violence again.

We can talk about yet within the group.

In terms of males. There are some very important studies of chimps particularly by France Duval francoval researched chimpanzees in captive situations in the honam zoo. It was a very famous series of chimpanzee politics and peacemaking among primates. They're beautiful books to read and but they were captive and however the ways that the males.

demon achieved kind of leadership the ways that males became dominant males was as Chris mentioned first of all, they had to demonstrate their ability to to beat up all the females if effectively And then if they were able to show.

That a dominant occurrent dominant male could not protect the females from being beaten up by the new upcoming mail.

Then that would be how that new upcoming mail would take the dominance rank and then once he was in that dominance rank.

He would assert leadership role by preventing by being protective.

Like policing violence in the way that you're suggesting.

So it's basically could a dominant male it was he so secure as a dominant male that he could stop other males being violent to females.

He could achieve that high rank.

That's corpse. Pure, isn't it? It's it's all right, it's clubs Thomas Hobbs pure. It's sounds like they they let they let the dominant male beat them in order. He could protect them from others because that's exactly right and this one more thing. Of

course if I just carry on and this is a vocalization called War barking and what I what the Val said, this is the same book as criminals talking about is what when I kind of rogue mail this I don't causing absolutely chaos and have it by racing around trying to beat up a junior male who's been having sex with one of his females. I'm causing causing Mayhem all that indenting the infants and stuff. Like what begins to happen. Is that the females start to do this while barking until a huge chorus of Wow, Wow, and it's and it's almost like it's like a collective resistance threatening to beat up the male if you Carries On This this kind of rogue mail. and what happens is that this this while bucking intensifies an intensifies an intensifies and until it lasts the male just leaves off all this chasing around trying to trying to beat up Junior rival mail and get some message which is if he does carry on the females will go beyond just wild barking and actually themselves stay take measures to beat him up.

So so that's very very interesting because we we think in rag most many of us we think is something like that female resistance to violence Collective resistance of violence is what eventually transformed politics among humans that eventually became, became us and that's in that's in that's in contrast to what Richard wrangem says because Richard wrgham's claims that human females do not form alliances and neither do chimps in general. I think he's sort of Master admit that sometimes female chimps do formalities because he can't really deny it especially with but nobody's of course, but then he says that the maneuver examples of God. Yes, sorry change and to form alliances more females tend to formal answers more in captive circumstances because they have less problem about feeding about forages just It's just because resources that's right in the Adams Zoo there. They're welfare, the famous conference together. They don't need to further to get supplied with food something like that happens with the binocles. So as soon as the females can get together, they can afford to share and, the foraging months themselves in localized areas, then they then they do acquire a capacity to resist things beaten up and he get a much more peaceful situation and it was just paradoxical difficult to understand is that random says that human females never form alliances and then although he admits that I know is to formalizes and they're related to us. He thinks the Chipmunks that the Burnaby example is irrelevant that we we need to follow what happens among chimpanses and that explains human Warfare.

Alan did you wanna? Comment. Yes. So this thing listening to the conversation. It sounds to me like access to resources really is the deciding factor on if we're not a community of humans lenovos or or gyms will evolve towards more meal dominant or female Alliance type situation. So my my question is if looking hundreds of thousands or millions of years in the future if it's possible that chimp Society might evolve if access to resources sort of let them to a situation where there wasn't so much competition. Is that a possibility at all? The Identical probability but in principle it was what would happen every few million years if chimps continue to evolve somewhere and there was plenty of resources around I think in the fit the females was for us together and

they they, they would have this, there resistance would have a similar effect going as something like a Direction.

Perhaps, roughly like what happened with the neighbors probably not like what happened with you. Nobody natural experiment for that, right? Yeah, that's exactly right and it's exactly right. It's about it's like you for freedom and Harmony social harmony you need abundance because as soon as this scarcity, you're gonna you're gonna you're gonna get competition for this guest resources that are around. I mean that's across the board scarcely produces conflict.

Yeah, and yeah check again. We we didn't really respond to your question about.

about families because I think problem I have another Yeah, you want to go on? Yeah. No, I just advert them. Do I understand correctly that you are suggesting that chimps are capable of cultural evolution.

Well, they certain account capable of cultural Evolution.

But whether it's the ratchet effect, whether they can cumulatively evolve more and more and more culture. The way humans did is another matter but there's no doubt chimpanzees have culture. They have all kinds of techniques. Well, they use different they use different tools depending on the region, right that's different tools and different kind of handshakes different manners all sorts of things which are culturally specific and they're they're cultural Traditions passed on down the generations. No question about it. But what you've said means that there is this potential for for different even Divergent waves of evolving culture for them just as for us which would be a similarity and we're looking for similarities and difference one thing is one thing is comfortable Evolution and one and another thing completely different is symbolic culture and I think our view would be that although when I was in chips have some potential for symbolic culture in the wild. They just don't do it. They just don't need or use symbols a tool of any kind.

So even though they can because as soon as you get a bonobo in a human family or a chimp in a human family bring them up.

They are able to use something like sign language to communicate.

Although they don't communicate with each other. They tend to communicate with human carers, but among each other even to each other and they did they certainly don't need anything remotely like sign language or any kind of language. They just they compete in the normal way they might in the wild.

same as dogs as a matter of fact I think dogs are more human probably than other dogs can communicate with that with their humans, right? That's a more human than one living chimps. I think I would say a lot more actually.

That whatever more used to understanding humans and making themselves understood. Yeah and Jay and then Michael and then maybe we'll move on to the cooperation aspect and the cultural aspect Jay.

yeah. I hope it's already to ask this I was quite surprised by the distinction between um culturally I don't know anything about this but culturally Evolution and symbolic culture being separate things because throughout what I was hearing about coming

across new resources, meaning that conflict goes down meaning the I guess that there is there's a space for different behaviors to to be For for Barnabas to come to different behaviors. I'm thinking about the experience of the different individuals and these groups and the things that they might be responding to and I guess one question would be does then sort of a climate of violence or climate of peace or abundance certain things as a result of individuals.

Um behaviors does that not count as a symbolic culture? No.

Disease and want to say anything or this one is finally.

Yeah, okay, very briefly.

Here as an archaeologist.

the things we sort of immediately recognize as are they really are like us that could be my granddad who painted the Bulls in Alaska or that could be my grandmother who was buried a hundred thousand years ago with red Oaker.

Or when we see the first beads.

So that's how archaeologists diagnose symbolic culture? And that's relative. That's very recent.

That's right at the end of that time chart of.

Ape and hominin evolution over the last six or 12 million years. It's like a matter of a few hundred thousand years.

Now given all that flexibility that we've seen in chimps.

behavioral flexibility in terms of sexual relations and power relations and how that maps onto is in response to resourcing I think it is going to be at the very end of the timeline that we're going to really come across these major distinctions.

That's so maybe that's not for today. Really? I think that's maybe next time. We'll talk about it and but in in terms of the like questions on the on the workshop, I had some questions about do they dream do they share their dreams chimps. Do they play do they dream? Do they share their dreams? And we could think about symbolic culture.

In terms of a virtual reality where people are again sharing something in imagination and we don't have any real evidence whatsoever that there is that type of of kind of content that expression of, what what is in one chimps mind that they're trying to get across to another chimps mind that something that's in their imagination and that's Yeah, you would say Chris what's clearly chimps do often want to in, signal to one another what they intended to do what they want. I'm gonna trim as we've heard earlier. Jimmy wants to be groomed will point to the point of it. That's its body with hopes The Grooming will happen.

So that very physical and indexical. Yeah, that's right. That's right. So James do want to be understood sometimes and they they want to make what they're thinking sometimes available to another gym if it's if that's gonna be helpful.

but supposing a chimpanzee, I mean, we don't really know whether how much they dream and it's I don't know that are feeling they don't really dream in sort of pictures the way we do but given that we've got language which were and as we speak to

each other and also as we speak to ourselves as we as we think to yourself kind of linguistically all kinds of images come to mind because that's how language works it works to kind of metaphor, but I have a feeling that chimpanzees probably Don't dream in images too much or if at all, but anyway, the point is even if a female chimpanzee did dream about a banana would the other chance be interested in a dream banana in a hallucinatory drama. I mean another was our chimps interested in one another's dreams and I don't think they would be I think they want real bananas. And the point is there that simply please like other animals they live in in the real world because we humans we do live in the real world, but we also live in a world or shared face and fantasy and religion culture theater all the stuff that's as most meaningful for us in many ways isn't the world tables and chairs and rocks and stuff. It's all the stuff which are deeply meaningful to us because we are we've been making this thing called religion and languages actually for navigating within imaginary worlds, and that's what makes us so radically different and I've just I just want to stress one point because so many people Miss understand what modernism is all about. It's It in terms of I mean it is true that Darwin himself.

was had all sorts of prejudices of the time of his own time and it was just like so many Victorian gentlemen, he was he was racist sexism pretty pretty unprecedented many of the reviews he had but still he was a genius and invented the theory of natural selection, but too many people I feel kind of misinterpret this whole dominantism has kind of this. I don't have a ladder of progress and all that all that kind of nonsense and in actual fact, as soon as we look at the kind of things that Ian has been researching in terms of the occur record. It turns out that for example African people Have always been in the lead of everything and there's nothing more extraordinary than language and African invention and religion and African invention really, kinship in African Adventure. You could go through all the things which are invented by Africans for an advance of evolving humans and other parts of the world and although it's true that Africans didn't invent slavery in colonialism and private property all the things which matter most to us.

Were invented by African people way in advance of all the rest of us and I think that should be remembered and in some ways that's sort of Turns Upside Down stumbled as some of the sort of prejudice and associations linked to sort of Darwinism and people just haven't caught up with what with the kind of things we know now. So it was imagine for example that symbolic culture was invented by Europeans doing a period called the operating Revolution 14,000 years ago. So the idea was that yes, we evolved in Africa, but we didn't get smart until we hit Europe and that's that I did still around but actually Africans were smart long before humans living in Europe or smart.

Yeah, and yeah, we should really emphasize that I mean if anybody had any.

cons, I'm sure nobody here did have any such concept that any of those old Victorian ideas that there's some ladder of progress and that there are some parts of of human of human kind somehow more closely related to chimps is just completely Um just not backed up at all by modern evolutionary Sciences just no way and every member of

homo sapiens is equally distantly related and we've worked particularly with African hunter gatherers and those are African Hunter gathers living in today 21st century. Just the same human beings as we all are and so there's no way that any part of homeless sapiens is more closely related to chimps or no boats. I think that's very clearly understood by everybody here. and yeah those were all ideas that belong to in a time of colonialism and imperialism that, we haven't abandoned yet, but it's definitely an era a different era and we want to talk about more about chimp ahead and operation. Sorry.

Can you make this be a good time to also insert the caveat about the human centrality of this discussion overall relative to gyms and grenovels. Okay. Do you want to say anything about that? Or well not as expertly as you or Chris would say but this is doing something that we try to make sure that we raise in the course of the discussion that we are limited by the fact that we are human and as much as we can experiment and study and observe ultimately really really really don't know what is going on in a bonobo's mind or what is going on in the Chin's mind and I'm using analogy of the Blind Men and the Elephant where we're feeling about we're experimenting we're making hypothesis and testing them and proving them of this proving them. But ultimately what what we have is limited by the fact that we are humans and we will never, well as far as we can now be able to see things from A team's perspective to really determine what the dream about if they dream and how they communicate that so just wanted to make sure we highlighted that Okay, thanks for that that reminder her net. I mean it's it's inevitable that we're going to anthropomorphize and in many in many of the experiments that are done particularly in captive with with captives with lab chimps in research programs. Like the ones that Michael thomasello especially was conducting in Leipzig and it's so it's almost impossible not to put in court onto chimpanzees or bonobos something about the ways that we think about the world. So if anybody read through Michael Thomas Ellis, why why don't Apes Point chapter even the fact of pointing is something that's an extremely human thing to do.

Which may be quite alien why should a chimp necessarily produce this kind of gesture? Why should it be what they do and why should we expect that to be what they do but nevertheless it's very interesting to try to examine. Why aren't they doing that? Why are we doing that? And what does that in? What does that tell us about certain, differences in terms of cognition and relationships between chimpanzee individuals and human individuals and we've got a couple of questions Michael and Zan Zan.

Did he want to ask Michael? Oh, well, I know friends the world that was mentioned earlier and he did a lot of work and the morality of bonobos and I was thinking about just, yeah that emotions love and care for each other friends and that the humans do that not just with each other but would other species so I was trying to think there's any examples of, chimpanzees bonobos, whatever else just kind of thinking like Coco the gorilla had a pet cat I think friends devel also mentioned some stuff about bonobo

that adapted an elephant and an animal Century if I remember correctly. I hope So I think maybe that's sort of a similarity that points to.

moral behavior and over moral morality religion I see is a little bit further down list, but this idea that, it isn't just about us but what we do affects the world around us and affects other species and effects, other things besides just us, other animals. I don't think have that ability to look outward to the world and say, dogs not gonna say if I dig this whole house that gonna affect the lawn, it's just gonna dig the hole Where human and maybe a chimpanzee but Noble might look at that and say well how's what my actions going to affect? The outer world not just how it's going to affect me.

Yeah, and that that's very interesting question and that Zan do you want to add something in? Sure. Thanks.

Yeah, I just wanted to go back to what Chris said early about.

That some dominance occurs more successfully when there's there's scarcity when there's no event abundance and I was wondering because for humans.

there's there's definitely the there's a manufactured scarcity through capitalism and states and all these massive institutions. That's people have created to assert dominance, and I was just wondering I fed there's a parallel with with chimps. Is there like institution making? Or like a creating scarcity Terrace or dominance or is that not happening? And I cannot say direct Jerome Lewis is a wonderful expert and all that all of that and he's described what he calls the scarcity, Miss and it's the myth that we we still suffer scarcity in the world and he takes you the hunt together as he works with in in the western part of the Congo who can't understand hunger and starvation and the reason is because they'd always share and Jerome's pointed exactly what you're saying. If only we would share the way Hunter gather to share.

They wouldn't be scarcity. There's enough for all of us.

but of course as you say capitalism invents and creates and maintain scarcity because without the scarcity, we won't be only competition with each other and of course capitalism itself would collapse. So I'm I mean congratulations you're saying exactly what we do think and we and we do that is enough for all of us, but and but we need to share and it's the one thing we don't get to under special these days is is sharing. I mean increasingly all the all the qualities just intensifying the tiny proportion of the world's population monopolizing the world's wealth and that's actually not too far in principle from the kind of arrangements you have with some of these very hierarchical common chimps. So in many ways capitalism is nearer to chimps Society than most other people and certainly that much dear that Hunter gather that's who furthest removed actually from all of us from type of competition and conflict because they're so they're so into sharing so egalitating by almost by Instinct.

It's just it's great.

Are it gives meaning to your life? It makes you feel valid and useful and you background if you've got background noise.

here just somebody mute Thanks, Dan and Katrina you hadn't spoken you.

Yeah, I was just thinking about the way that chimps have had so much more focused than bonobos. And I'm and I'm wondering a is that just due to their geographic area and that they were just easier to study and then and then I also wonder how our self understanding might be different and how the views of people like random or Steven Pinker might be different if bonobos had been the primary area of study and the way that we now understood ourselves.

But it's absolutely true because of all these wars in the Congo.

It was very difficult for primatologists to do the kind of studies and safety the kind of studies that were done among common chimps and it was mostly Japanese primitively this very brave that began to study bonobos in the wild and there's no question about it. I mean our views of our closest relatives would have been radically different had we started with the bonobos and said it was a common chips that Jane Goodall and Richard registered. So absolutely yes and the speaker at the radical anthropology class on Tuesday evenings, which have there are people here who don't know we generally run class which is available on zoom on Tuesday evening's we have Lucy cook.

Who is the author of bitch? And this is a book looking at the way that science has a very patriarchal institutionally science has looked at the evolution of female strategies and across species and she when she talks about bonobos and chimps. She is very much talking about this issue that the patriarch is focused on generally much more male dominated chimpanzees and has marginalized and we can take Richard Wrangler as an example of this patriarchy is marginalized bonobos or has belittled the idea or or, dismiss the idea that there may be female dominance in Inverness. and yeah, it would have really Opened up a quite different perspective. If we'd had a much more balanced understanding of this range and variability of the potential of chimpanzee strategies or Mr. Short and have we got I was gonna say just suggest that we say something about the issue of sharing resources and cooperation both for chimps and bonobos and the question of economics and work and yeah check was previously saying there's no family structure as such no nuclear family structure anyway with but chimp males.

As fathers do they behave as fathers to what extent do they behave as fathers? Do they contribute economically what sort of cooperation it and do as Michael was was suggesting.

Is there any chimp or bonobo concept of a kind of public good that they're activity would affect the whole community and therefore they maybe need to adjust their behavior and what about that aspect? Do you either Michaela check one is say anymore or anybody? Or that should be gonna say something else. Yeah, if I may but it's well, it's related to the question you asked but just a small reminder that it's very dangerous to to let a guy from from Eastern Europe to Gathering of left sympathizers from the West as I have to make a remark on the on the capitalism. This current is scarcity of resources. Well, I think it's making life easy to blame things on capitalism more on any other system because I have lived under a system which was not capitalized and I can assure you that there is sources where where managed much worse than under capitalism.

So maybe the problem is not the kind of a system.

Maybe the problem is our dominance and competitive elements in our human nature, which we are trying to explore here with determines somehow to construct systems which are at the end of the day.

Ineffective or not sufficient to manage the resources which could be sufficient if they were well managed which leads us to the resources, right? and I don't know much do the team shares.

I think it's the most important questions here because the hunters gathers share that's that's a very common trait that food is gathered or hunted individually, but short collectively so there is there is no no Advantage actually no sense in nuclear family, which is another Paradox because the hunter is not feeding is not providing his own child better than than any other child, but I think Sims don't serve generally do they so do you want to talk about that Crystal? Right here. And if you've got your hand up, please go and No, no you talk to that. Yes, um.

I mean, you're quite right.

Chimps don't share I mean what I mean the example to look at will be where? There's often being called their Cooperative hunting.

but if hopefully if you've read the tomasello paper he touches on that there and he says like this isn't Corporation as we understand it of a shared goal.

Sort of it's more.

Sort of contingent decision-making at any particular moment. Where should I be to maximize my chances of getting hold of some of this meat this monkey that all excited about and for a from a female perspective.

most of them are sort of they've got these reproductive burdens young Youngs, they're not likely to be present when the monkey is killed and those who are maybe closing, closing in quickest on the site are going to be maybe young females who maybe just reaching sexual maturity.

They're not carrying infants and so on.

They might have a chance of some of that meat.

In return for sex a kind which has been dubbed to kind of prostitutional scenario.

But that's is radically different from from what we know from hunter-gatherers. So and that and that's about the closest we get to Cooperation I think in, you have you have these alliances. Yeah. No, sorry. That's that's wrong because I mean Christmas talking about again, but it's like contingent all these females are pissed off about this.

Male bully sort of trying to intimidate a subordinate male and trying to discipline him.

but But so those two examples are the closest we get to cooperation, I think.

That's immediately have we ever observed? They are truest Behavior between chimps which would suit this model that I'm offering something to you.

Hoping that one day you might offer something to me. Was it? Was it ever observed between James? No.

Well that very hang on.

Wait a minute with grooming press right. There has been an analysis of because like other monkeys and apes chimpanzees particularly chimps males use grooming an enormous amount to cement bonds social bonds and to create alliances and this is relevant to the meat sharing also, but it has been an analysis of grooming being a kind of currency of reciprocity. If I do this for you, you'll do that back for me and also between males and females that if males will groom and FEMA and maybe offer protection to females females maybe receptive to males that kind of reciprocity that the problem with reciprocity is always one of Currency, and how do you how do you monitor the exchange process? It's very difficult. It's very cognitively demanding actually, and so we've hunted gatherers.

Sharing is usually not a matter of reciprocity at all. Somebody brings a food back. It gets shared it.

Nobody's counting who has had this bit who has had that bit with a chimp Cooperative hunting and when the kill of the monkeys been made in that tearing about apart this little monkey, it's horrible and eating it like almost there.

As Ian said you've got to be right there to get a piece of that meat, but the male who may be able to hold on to the monkey will give benefits to his allies. He will he will hand pick let allies take pieces of meat and this is again a type of way that alliances that are used politically get cemented and so there's levels of Corporation.

Purposes of creating quite nepotistic alliances and the sort of cooperation that that may be underlying their Cooperative hunting and but we also get examples of operation that are quite remarkable and I've mentioned the tool use medication. We've got quite a lot of information about chimps use of medication there their abilities to find and select particularly vermicides and can't remember the time the proper term now leaves that will take away parasites that will remove parasites and they they have a kind of Medicine Chest.

But also they have been observed recently using applying insects catching and applying insects to wounds or lesions on and they will do this with other chimpanzees. So it may be as kind of favor or kind of something part of their grooming strategy or part of their grooming repertoire that they will apply medication potentially to other chimpanzees and who might be relatives or friends. So there's there's this level of cooperation on a quite personal individualistic sort of basis.

But what is not really evident in in chimpanzees? I mean, the other aspect of cooperation of course is the male alliances that are patrolling territories and are kind of reinforcing the boundaries between one group and another group and that definitely is another example of cooperation again amongst the males as a light allies protecting what they consider to be their territory their females from any outside and influence. So we've got some remarkable the remarkable examples of cooperation.

Any any more contributinal comeback for that Jay did you want to go and then maybe we should think about the Thomas solo a little bit.

Yes, so I was I think caught by the idea of or the way that you talked about.

Grooming as as a currency and reciprocity going on there.

Um because where my mind went was, what we know about or what I've been reading about Vegas nerve stimulation bringing your nervous system to states of Rest by soothing techniques, tapping yourself here by holding people on that kind of thing and that that kind of experience of having somebody of like close touch being expressed as a currency was really interesting to me because I don't know if this this is useful thinking or not, but When I hear currency, I sort of hear.

Something divorced or separated from, what a sensing body is going through and that I don't know I Just have been stuck since since that that first question that I asked about.

You know, what? What medium were we talking about about chimp experiences and how much like internal experiences is actually in there.

Right and okay. I'm yeah a better explain a little bit there and you're you're absolutely right The Grooming and those kinds of behaviors.

Are understood very much in terms of reduction of stress touch and chimpanzees and what bonobos tend to have much more sexual expression with what Chris talked about the GG robbing, which is particularly a way of females doing a bonding. So this is very much sexual acts.

I mean, it has sort of intense sexual pleasure Associated to it and whereas chimps tend to do this intensive grooming and really really getting stuck here really focused grooming and an intimate used as ways to sometimes to reconcile when they've had fights.

They they can repair their relationships by getting into these very intimate trusting that situations. And so that's often a male male thing quite quite a frequently and it's well known that that talk type of grooming reduces with endorphins reduces stress, and it's it's very much known that And but people studying primates in terms of primate ecology behavioral ecology.

Do talk into it is alienating. You're absolutely right, but they do talk in terms of the currency.

That it's a form of exchange. How do you prove? that you are the friend of another primate Another Monkey or ape by spending your time with them and spending your time your valuable time doing grooming.

As a way to show your friendship and reinforce that Bond and so that's where the expression occurrences is coming from and of course it it is an emotional response and an emotional relationship.

but these very darwinian perspectives evenly through perspectives are trying to work out, .

What the relationships between animals within social groups these these primates these monkeys and apes have very complex relationships.

Which for most other species.

only occur in like pair bonds but amongst primates these kinds of the intense friendships and body relationships go beyond pear bonds and not just necessarily your pairs. They can be your relatives, but you can also make friends with non-relatives and it's

through these these mechanisms that that that gets done that that happens. I don't have that helps spawn to it and we've got more questions from Helen from I don't have so much a question as a comment because grooming does show up and I remember it was you who wrote this paper camera in the way similar alliances work among some African communities the women getting together to read each other's hair and take care of each other. It's a fundamental way in which they demonstrate loyalty to each other and form the alliances that help them navigate the patriarchal societies that they live in.

Hmm. Yeah, and some of the people who did a very a lot and a lot of work on grooming with monkeys and apes they were also looking at cliques where humans were doing great. We're doing hairdressing or that kind of thing as well and saying well there's similarities here between the ways that humans respond on the ways that that our primate relatives respond. Absolutely and I agree with you. I think I think things like share doing hairdressing.

I mean my experience in Africa is of so many so many the beauty salon was the actual core is so many villages where people gathered and it was a woman's space where they gathered and it was so much being shared and I think that's really really important sharing of beauty tips sharing of Cosmetics sharing of of hairdressing. I think it's Absolutely critical, right? I actually have some experiences of that because the hair salons will go to here an environment where women from different classes really get together you'd have these very wealthy women coming together with women, who are not so wealthy and it was just a space to share experiences and perspectives and Knows, of course a dominant of, the people who had more resources and things like that, but it did really turned into almost an egalitarian space where people just listen to each other and talk to each other quite interesting.

Yes, and I imagine that that within that space relationships become much more galatarian the if somebody did have lots more, wealthful power. It kind of got left at the door to some extent and that It was usually a difference to the Madame of the sound the woman who owned the establishment and .

Train the girl there was a lot of respect to her. But also the relationships that she had with the other women and who were her friends and who weren't really her friends and it was open.

I observed a lot of this as a teenager of the young girl there was always interesting to kind of sit and go to different shops in different parts of the town. I lived in and just see how that Dynamic played out.

Yeah, your natural Elder Anthropologist. I think it's a perfect place to to do some anthropology then what watch people watch there and Catherine, did you want to or Michael Catherine and then Michael? yeah, did we talk about Cooperative? I Yeah, we haven't really said much about Cooperative advice or about tomasello. I don't know how many people did watch the yeah, shall we I can show a couple of pictures of those Cooperative eyes if you're interested in that because there is a very fundamental.

Aspect and mechanism and we're going to come back to it maybe later as well with the Cooperative breeding.

Should I shall I do that? Yes, let's go for it. And if I can pick up my oh, where am I? No, that's not the right one.

Where am I where's my? Oh, that's this slides. Okay, and what have I got here? Let me just open it up. Can you see? All right. Yeah, I just had some slides contrasting.

Chimpanzees with a fantastic muscles compared to the bonobos who were very renowned as these kind of hippie love making apes and rather more grassile.

Let's see if we can go forward from that.

But it's worse remembering.

In that contrast between chimps and Lobos there.

It's worse remembering.

Rich random in his little film is talking about the orders of of frequency of violence in chimp Society bonobos Society in human society and in chimps, we understand there's a lot of violence, but they're also is with bonobos. Of course that violence is often directed females on males in fact, and but there's orders of magnitude greater incidents of violence in bonobos Society even compared to humans and one of the great books written on human evolution mothers and others by Sarah hurdy.

It starts with this.

Idea this story about what if you had a whole bunch of chimpanzees on a plane.

Just think about how humans can sit on a long-distance Hall Long Hall flight and they're very stressed and they're very bothered and they're very they're not feeling very not of good and they want to get Elbow Room for their neighbors and there's a child crying behind and humans put up with it. They just put up with all that but if you had chimpanzees in that plane by the time you landed Sarah hurdy just says you would have blood everywhere. You would have fingers and toes you would have people the chimps shouting and screaming and they would they would be in a terribly stressed state.

So this is the we having sex with each other as well what the tips? Well, the bonobos would have sex with each other.

but chimps would yeah.

Maybe different with bonobos from chimps, but but it would be a very stressful situation and I'll skip I'll skip on that that slide because that's really about well that's a picture of female bonobos hanging out together.

With their babies and usually you never see that with female chimps because it's very difficult in the wild for a female with a baby chick a female chimp with a baby. She needs to find her forage and her resources. And so she can't she she can't hang out with other females very much because she's kind of in competition for the resources or that Depends on the environment but nobody's because they have such good herbs and fruit resources are able to hang together as just showing the female solidarity going on with the bonobo group.

But let's look at the Cooperative eyes.

So the idea here on.

On the on the right. We've got a selection of different great apes and but there's a z up in the top right? There's I think that's a bonobo there and that one there's some orangutans in there as well.

So their eyes are very round shaped and the generally dark with no Corner. They're just kind of dark different coloring perhaps but basically dark with a round shape and for humans, whoever we're talking about on the planet.

We have what are called Cooperative eyes.

The reason they're called that is this this shape of the Almond with the white background that that very clear white sclera and every human being on the planet will have eyes of this this kind and what this does? Is it really makes very clear between from one human to another? Which way is a person looking what is a person engaged with what are they interested in? And somebody looking at that individual can see immediately. Are you engaged with me or are you interested in something else? You looking at something else and it makes it extraordinary easy.

It's a fundamental mechanism by which we can.

Mesh are emotional states. It's very easy for us to share in each other's thinking to share our thoughts with each other and guess what each other are thinking but it seems that Apes don't have Cooperative eyes.

However, recently some of the chimpanzee people have been fighting back on that because there seems to be a degree of variation on sclera.

So the chimpanzee on the left is a guy from gombe. He's called Mr. Wuzzle and he's quite famous amongst The gombe Chimps because he does have rather strong white on his eyes and this chimps on the right. These are from Google in the forest in Uganda and we've got a range of variation at different ages with some of them showing sclera and some of them just a little bit of light color and then others of them quite dark really quite dark and so it's it's a that that's showing a variability of how much are these eyes you with the whites so that people so that other individuals can tell which way they're actually looking.

But what is definitely it? What is definitely true is? It is that chimpanzee eyes are very round and one way we could describe this.

Is to say one way we could describe that is to say that chimpanzees and even bonobos are kind of wearing sunglasses. They're wearing dark glasses and if what it's like talking to anybody who is wearing dark glasses while you are not wearing.

Immediately that creates a kind of blind you don't know what are they thinking? What are they feeling? they're sort of blanking themselves off from you and it creates a completely different scenario for communication.

So that that's the basics of corporate of eyes, even though the chimp people are trying to fight back and suggest that there may be a level of Cooperative eyes with with chimpanzees. It seems to be very limited. There's variation.

But with humans, it's like 100% It's like what human eyes are like we modern humans have these corporate device and I would guess that neanderthals also had

such Cooperative advice and their answers. That's the setup the advantage to and I don't know derivative. So we're back the advantage of having like eyes like sunglasses and we know sort of cliché over gangster films, Mobsters within sunglasses. You want to look out for the sunglasses you want to know about other people are thinking you don't want them to know what you're thinking. So the advantage to a dominant male gorillas is that he nobody can read his thoughts and a good thing if you want to be transparent and then you don't need those eyes. You want the kind of eyes which give away what you're thinking.

so monkey and ape and particularly great ape Society.

Gorilla Society chimpanzees, even those hippie bonobos.

Are very well described as being Machiavellian? Individuals are incompetent they are hustling. They're competitive. They create alliances just like Machiavelli describe political Alliance formation and but they are they're cooperating in some respects in order to compete and the eyes are suited to that kind of social environment and that isn't to say that humans are never Machiavellian evidently we are but we're also capable of what's called inter-subjectivity this ability to mesh our mental States and that's really underlying the article of Thomas cello talking about the critical difference between chimps bonobos.

Great apes on the one hand and ourselves on the other great apes do not have what's known as shared intentionality that they have an idea of we together that they have a shared goal compared to our Readiness to understand each other's thoughts and work out. What do we want to do together? What are we going to share together? And there are many many experiments done by Thomas sullo and his colleagues in the Leipzig Labs where they would do these games and experiments with chimpanzees in the morning and children young children pre-verbal young children in the afternoon. And to to get a kind of really a handle on the comparisons between your chimpanzee cognition and child cognition and it's and the fact that they were really identifying as key and critical was this aspect of shared of willing of children's willingness to and, understand cooperation their Readiness to understand cooperation and particularly very simple experiment with the with the buckets the baited buckets.

Where this is about the pointing gestures where the human experiment is.

So one experiment would one experiment would would hide.

Sweeties or goodies or treats in one of the buckets bait the buckets. Then another experiment would come in and make just well, first of all, they'd kind of indicate by Shifting the buckets and then they would use gestures and gays by looking at the bucket where the treats were.

for chimpanzees This whole procedure was just puzzling. They they didn't understand it at all.

Only when a human would grab lunch for the bucket did the chimp sink.

Ah, there must be food there. So the chimp would go for the bucket where the food was.

With children as soon as the experiment was pointing at the bucket. The child was reading that gesture.

Will they're helping me. They're telling me where's the where is the food that gestures for me? It's it's helping me and so Thomas salary is bringing out.

This aspect that chimpanzees do not expect to have help they don't they're not motivated to share. They're not motivated to tell each other.

about where there is food because they're just emphasize the you you be Studying there is a experimenter.

With two buckets in front of you one's got bananas in and if you point to the one with a bananas to the chimpanzee you go for the other one. You'll know you must be lying. They they responded at worse than chance. So you might be right that actually thinking maybe you're trying to trick me. I mean they could be as Machiavellian as that even.

There is another story of Thomas which is, it really is telling the difference and that he tells the story of a whimpering chimpanzee child a chimpanzee child that's like lost and doesn't know where it's mum is and the other female chimps that they know who that child is.

They know who the child's mum is and if one of the female chimps knows where the mum is.

It would be very very easy for her to lift her, to just gesture in the direction to indicate, but she won't.

She just doesn't bother she might know but somehow she just hasn't got a motivation.

To let that child know.

Just no motivation to help or to inform and if you imagine that situation in any human society, it would be completely impossible.

To imagine leaving a whimpering child without trying to work out who who's child is that let's help the child.

That that is such a revealing story about the differences the levels of difference of of cooperation.

Within chimp society as an example and Human Society. I mean anywhere you were on the planet doesn't just exercise. It used to be imagined that they're just too stupid or something like that. They haven't got the cognitive capacity to point the point is that in grooming when you want somebody to groom youth here or there? You've got you've got the capacity and but of course, it's you're being selfish. It's in your interests but to point for somebody else's benefit. They kind of can't be bothered. It's nothing to do with capacity. They've got the capacity. They just can't be bothered.

There's no group. There's no sense of a wee.

There's no group level morality. The different females don't kind of love and care for all the members all the children of the group. If you like in the way that any group of humans would tend to obviously there's a very ability to set as well, of course and to go as incredibly supportive of one another's children. In fact, they didn't very

often. There's not even a word to describe mummy for a child without meaning all the different mummies the kind of distinguish between the different carers and they're all called mummy or daddy or whatever. It is in the language and when we're nearly reaching time, but Helen did you want to take over a bit? Right. Well first to thank you for that amazing presentation and the slides and, really making that distinction about how the eyes flee in now, I'm curious even experiment with monkeys that have visible Flair with gyms that have visible Sarah would differ perhaps from those who don't and what what that my result maybe someone somewhere has done it. That would be interesting to see it's only just opening up. I mean, there's the part because the Gummy chin needs to be one like two percent in Bombay.

Whereas in the gogo, it seems like 15% have more white sclera. So they're racist possibility that it will be a, different percentages in different types of environments.

Possibly and there's also differences between orangutan populations Borneo and Sumatra. So this could play back.

Differences of willingness to social cooperation it could play back. So actually it could be proof that Cooperative. I hypothesis. In fact interesting. You got lost research on that now to keep an eye on that and want to make sure I highlight Lucinda's question in the chat does this change in different environments and cultures? and our chin small corporative in times of Plenty. I think we kind of address this to some extent. We you miss the early part of the evening. All right? Okay, and then I Then there's also one more comment from Lucinda, which I wanted to make sure we got to about being careful of not falling out of the idea.

That humans are also animals in how we talk about these things because we we have that buyers that we will pick on sometimes.

That we are not animals and, we have lots of foods the contrary. So just wanted to make sure we got your comments in there Lucinda and Michael you seem to have your hand up as well. He's yeah.

Just wondering you're talking about all this in terms of cooperation and in their subjectivity, but to me, it seems more like it's about manipulation and prevarication. You know, you're talking about this social currency. Now, they're not just grooming each other for building relationships, but they're grooming each other towards some sort of goal. And then goal could be something that's helpful for the group. It could be something that just helpful for them. It could be something that's honest. It could also be something that's dishonest.

You know, one of the main differences between communication and language, is that or difference between an open call system to close call system is that an open call system, you could prevaricate you can lie. You can be deceptive and it seems like with this Cooperative eyes.

I mean I think of them more like manipulative eyes.

Or this Cooperative Behavior, it's more like menus because manipulative Behavior whether that's for good or bad.

You know, I mean, it could be manipulating for the good or for the worse, but I'm just wondering if, maybe we're thinking about this in terms of cooperation when maybe we should be taking about this more in terms of manipulation and I had dear Lucinda. Do you want to come in on that? I have some comments. Yeah. Yeah, I do because I think that I think those are value judgments that are being made rather than practical applications manipulation versus cooperation. That's a value judgment on outcome based on outcomes and selfishness or not in a way. So I'm not sure if that's a useful distinction to make and just to go back to the my comment about whether I was curious about which kind of relates to this a little bit still is I was wondering whether because chimps have different cultures in different environments and I was wondering whether there's any data on them being more Cooperative in an environment of Plenty and actually their culture being different in that way as well if it's more matriarchal or more or the women or the females have more power these exactly that recently. Yes. We did cover that to the beginning of This evening. I think you came in the building. I did unfortunately.

Yeah with with bonobos is obviously at the sort of end of the Spectrum in terms of the abundance of resources that enables females to really Hang together. Yeah, I understood that.

I was thinking more about chimpanzees specifically though. You were talking about chimpanzees operating differently and different environments of abundance or of competition and so there was more specifically about chimpanzees and not bonobos versus chimpanzees kind of thing. There is a difference a third Forest chips about the famous much more likely to form alliances so gender relationships so much more egalitarian if you like not exactly but much more relaxed and it's just that, but it was our chippies. They're on a spectrum and the Richer the resources.

The less the male dominance because the female's conference together therefore form alliances and therefore defend themselves against male attempts to beat them up. I mean what one other aspect that we haven't really covered but it's worth mentioning here. And is that which sex actually has more tool use and it tends to be chimpanzee females who do much more to use and kind of inventions of digging Wells and things of that kind why because it is females under the pressure of finding resources. So famously the community and in Thai Forest where they have the Anvil stones that have an archeology of maybe thousands of years and some of the sights whether chimpanzee mothers have been cracking nuts over the generations and showing their little Offspring so their little offspring of watching and they begin to learn that is the Form of transmission that is operative. There's also fungoli trimps in its Senegal, isn't it? Isn't it fungoli with a very dry environment where there is Spears? They actually use Spears for spearing bush babies. But again, it's females doing that rather than our image about it must be males doing that and is females doing it because females are the ones who desperately need the resources for raising infants with very large brains. And so those aspects are very strongly biased towards females, but I wanted before we we kind of wind up to respond to Michael and on this issue of manipulation of signals

and communication. It's something which we've thought about a great deal and which definitely Chris will be coming back to in the fourth in this series The Language and laughter.

Series a talk at the end of the series.

Grooming can't be dishonest grooming is a costly worthwhile signal you are giving another animal time and attention. There's nothing dishonest about it.

You're proving that that, they are worth it to you through that. There's this well-known Theory from Robin Dunbar about gossip and grooming, which I had a lot of discussion with over the year over the years but linguistic communication Replacing grooming is replacing a very, solid signal that's hard to fake with something that is in imminently deceptive eminently deceptive potentially deceptive and easily manipulated. I completely agree with you on that, but when it comes to the eyes Whilst I have no doubt you are right that humans in evolution as they became.

Capable of lying of doing incredible sophisticated tactical deception and nemesis.

They were they could use eyes in all kinds of manipulative ways.

But initially in the evolution of our sort of shape of eyes with the with the clear white sclera compared to chimpanzee sunglasses eyes, and this could not really evolve unless we had very trusting.

Types of relationships doesn't mean all the relationships with trusting but that within bubbles.

Certain there's certain relationships had to be very strongly trusting to enable Co-op device. We are going to talk more about the implications of Cooperative eyes next time when we're going to talk about gender relations in human evolution, and I particularly will have more to say about it, but Yeah, just as a immediate response and I'm not sure we can carry on a lot longer but let's take any questions we've got now any research and what is the research and mirroring behavior in chimpanzees and other primates like do they engage in mirroring behaviors? I mean do they recognize themselves in the mirror? No, no, no.

Very how like, one.

Thing people are talking.

To you others, .

I I recall a little bit in Sarah hoodies.

Book her great book mothers and others which I cannot recommend too much for anybody here and she's talking about how very young chimpanzees again. They're in experimental situations where they're separate their orphan chimps, and it's rather.

It's not a natural social situation.

But with very young chimpanzees, she's so 11 10 11 week old young kids and they are very malleable in their responses and indeed they they will if you've kind of stick out your tongue at one of these very young babies. They might stick tongues out back to you.

Do what babies do what human babies do.

So she's talking about how that is a capacity.

It's something there's a latent possibility within chimpanzees.

But as the chimp grows up, they lose that they no longer respond in that kind of way, which is the natural way for human babies. And I think that's that that's one aspect of mirroring that that has been at least research it in researched in rather. So in rather pathological circumstances, I think remember we need to stop soon. Yeah, we do. I mean Jay you have one last contribution and then we should wind up.

We're running to.

sorry, I really really interested by the idea of trust and sort of building building trust and something came up again through grooming and through I think it was mail chimpanzees grooming each other after conflicts who goes once again that rang an attachment Theory built for me, all All the psychologists worth their souls on Instagram are making infographics saying if you have conflicts with somebody and that you engage in those touch after that. It may be something which you actually don't need if you're trying to build a hill relations with somebody I guess if something which which that brought up for me, but sort of as the idea of trust As something which just makes sense when you say the world.

It doesn't make sense.

Yeah.

Stop we need to stop. Yeah, do Helen and Katrin just wanna wind up for us and I guess certainly.

Well just to thank Chris Camila in again for your amazing amazing research and contributions. And for everyone who had a question a comment. We really appreciate you bringing it and I really really enjoyed this and I'm looking forward to next time Catherine. Do you want to talk about the next couple of sessions? yeah, I was just oh my baby trying to find my workshop My worksheet here. And here we go. So next time is April 22nd same time, although because of daylight savings in London. It'll actually here in the states be an hour later. so check your clocks first, but April 22nd to be matriarchy or patriarchy gender relations in human evolution and we have two more sessions after that one towards the end of May looking at Cooperative childcare and one towards the end of June looking at laughter and the origins of language. So you guys have been an amazing group.

Putting yourself out there and asking questions and it's been really fun to be learning with you guys for these last couple hours. Absolutely and we have had much. Thanks for all the questions. They've been up see wonderful. Yeah.

So wrapping up we have a question of similar table of similarities and differences between James bonobos and humans, which we will send out with the link for the recording and that's about it for today. Thank you all so much. Once again, this was incredibly fun. Thank you.

Thank you, Captain Helen for helping us through this all the experiment. It's been very good.

everybody

Part 2

https://www.youtube.com/watch?v=D1uhes_zcCw

Chris: ... I ended up doing a PhD thesis on on the subject and at University College London and then turned it into a book. So this is my my major book *Blood Relations* and if you look at the subtitles *Menstruation and the origins of culture* and I'm not going to go into it all here, but nobody previously had ever thought that well, I mean pretty much nobody even thought that women had anything to do with human Origins, but as for menstruation being a sort of critical factor, that was absolutely unheard of really and I won't go into why I came to that conclusion, but simply very very briefly. Simply say that for humans.

We all have in all had together a societies other Society real all of us have some kind of religion around the world. I don't necessarily like the term religion because hunter gatherers.

Don't have gods that control things are dominate them. They have they have the trickster and they're much more happy and joking about their divinity.

But across the world, there's always this idea which I think is a very lovely essential feature of all the world's religions, which is that some things are sacred.

Not everything is a price and as soon as you look into that idea that some things are sacred you realize that the idea of sacredness is intimately connected with the idea of Taboo things are taboo when they are sacred and so often this is pointed out a long time ago, but amyl dirkham at various other major figures in study of the origins of religion and it quickly became clear to me that the most taboo thing of all is blood and particularly menstrual blood.

Just leaving all that aside for the moment. Just simply say that.

All the standard narratives, but human Origins from Darwin onwards and even today actually are about man.

Man, the hunter man, the toolmaker man of the Thinker man this man that yeah, so all about men and of course the excuse which has been used all these all these years.

is that and I sort of agree with this this idea that there's certain things that women aren't very good at I think that's absolutely right. There are certain things that women aren't very good at And one of those things is violence.

I think if the world was run by violence if violence was What mattered? Men would be better at that than women. I mean obviously women can have guns and knives swords and stuff and weapons and women with weapons with against an online man would probably win but in biological terms May the male is better at violence and the female And from that it's sort of sounds the reason really if human social life has

always been one in which violence counted in other words at the end of the day when decisions are made, they're made through threat and violence.

then it's not much question males will tend to rule over females and actually in the case of our closest primate relatives the chimpanzees and now to Common chimpanzees the kind of chimpanzees, which we've known about for a long time that Jane Goodall in which other studied there's quite a lot of truths in the idea that night is right for those those relatives of ours. I mean common Timothy's a very competitive the males.

A very fight each other every man every male dominates every female at least in the area where Jane Goodall and studied did her field research to the Gumby stream.

so if it were true that humans evolved with our capacities and our I don't know skills and accomplishments for example language if we if we also developed a social system where Violence was a fundamental ultimate principle.

Then it would be kind of a no-brainer males have always dominated society and it doesn't matter how much you wanted. So we changed things now you can't really change human nature if human Nature's kind of picture for us by Jimbo Dean nature than male dominates his natural and so therefore it was absolutely brilliant when primatologists began to discover are equally close chippity relatives the bonobos.

This is an absolute must-read book for anybody. I would say but over as unique in mind brain and behavior by Brian Hare and Senior, Emma, Yamamoto because these are chippies who are in biologically almost identical certainly genetically pretty much identical.

From identical to Common chimpanzees. They've only diverged from common sympathies a million years ago and guess what? They are matriarchal and not just matriarchical but actually the in this book it's explained the most effective darwinian Theory to explain what goes on in bonoba societies is called The Offspring defense hypothesis, which means that little toddlers are the ruling cast and the little toddlers are able to just um cry a little bit make a bit of a noise and they'll scare the biggest male away. The reason being that every little toddler is carefully watched by its mum and are all around her are her allies and they will just beat up an email who threatens their kid and so therefore the idea that we have male dominance because of our genes.

Is it completely is completely collapses? It doesn't make any sense, whatever and I'll if you like later on we can discuss what it is exactly about the environment that benev is entered which which led to this complete almost like a revolution that that's generated turning upside down of male dominance resulting in little babies being pretty much the privileged person society and having more power is in many respects and then males That's it for now.

Okay. Otherwise, I'll go for an hour or so. Okay. Thanks. Did it did anyone have any questions of to Chris might be good idea of if anybody felt like horse gaming? and if not, oh Peter.

Hi.

Just very quickly.

This seems to bring up.

the question of a distinction between cultural and natural selection and my conversations with Bob Pollack at Columbia.

Last year he suggested.

That we should use a term cultural selection and he pointed out that ideas can change things much faster than a generation.

So yeah.

Well, it's so happens that cultural Transmission in great apes but let's stick to chimpanzees.

Is a fundamentally dependent on the mother of spring bone. So chimpanzee.

Young Learn from their mum.

They don't really learn from Dad.

I mean you can go into why so there's no question that cultural transmission goes much faster than than, genetic change.

but we need to look at the social if you like the gender Dynamics, which Enables cultural transmission and in particular enables what we call the ratchet effect. Now there was this some situation which written with humans where Cultural Innovations are not just sort of invented and then forgotten.

but actually accumulate so you get accumulation of cup of So, I mean there's no question that you're right there. But as I say To me that's a very basic observation, but it's still a bit of a mystery in this. We have a Siri to explain how it is that cultural transmission took off in the way. It was humans. And when I'm arguing is that male dominance wouldn't have facility to that because Offspring learn from mum and it and in the human case to a certain point in evolution the female and said, I'm moving out on reaching sexual maturity and having to live in an area where she haven't got any kin and in particular haven't got her own mom.

Not in our case Evolution that the female of the species living with mum down the generations living with mum living with mum living with mum and reason for that and reasons why certain obstacles to that had to be overcome. I'm just simply saying that the cultural transmission and cultural selection in turn depend on sort of more basic factors and those have to do with sex and reproduction and production, sex and food But you would agree that it's a selective process.

That competes with and possibly superseded the natural selective process.

Like if humans have been driving their own bus, yes, of course, but Peter we also need to ask the question. When does that really start to happen? And I think Chris is right to say that gender politics is going to make a lot of difference to the answer to that.

yeah, plus also I'm not sure that we ever quite thrown Naturals or sexual selection out the window and Mark did you have a question? Yes. Thank you.

If I'm correct in my memory and understanding of the readings and other things I've read chimpanzee mothers.

Keep their babies very close to them because of threats of others around them. Yeah, but and of course humans as Sarah Hurdy is explored very much involve others in mothering are bonobos in between in their behaviors, or they more like chimps in.

It's the mother alone raising the child The Offspring. They're a little bit in between but basically female bonobos don't trust others really to carry their baby when living with non-related females and I think that is the critical bit.

That if there are other females are not their relatives, they're not despite the fact they do make strong bonds.

That they're still not raised until there's children. So both of these creative relatives of us that the common chimps and the pygmy chips or bonobos. The brothers are single moms and that means a huge huge constraint on the kind of brain those babies are going to be born with because as soon as it's not getting a lot of green baby, it's very demanding and a very quickly you reach what's called a gray ceiling of something. Like I don't know 650 Cc or something. We're going upon them. No single mom can possibly cope. And so unless she is living with her mum and getting support from her mom and also that would of course if you are living with your mom as a female, you've been living with your sisters an sc. Do get what Sarah had he calls this share childcare, then then brings us went increase and the fact that we've got these very large brains proves.

Actually that we we must have been living with mum. You must have been getting having support from the grandmother. That's the grandmother effect and that would lifted his the lid off great size really broken through the gray ceiling.

Shall I do some little slides on that what a brilliant idea to give a little bit of substance to it for anybody who's not I mean, I we've had a in the reading links that that we sent out just to say that that we sent out a link for a Google Drive version of Chris's book and I can't emphasize too much. What a classic blood relations Is for anybody wanting to look at these narratives of human evolution, which tended also always to focus on man the Hunter and really Cris did did a quite revolutionary turn to focus on female strategies as very critical and again this Century Sarah Hardy's book has been absolutely overturned the field and created this huge feminist turn along with the grandmother hypothesis and the other reading I mean, this is the critical issue, we we're trying to explore matriarchy versus patriarchy which is kind of extreme statements of different one sex or the other taking taking over and but what I would like to my my piece there was we sent the links out was about gender egalitarianism and I just like to quickly run down the evidence if you like that our ancestors in terms of genus homo And the more that we come close to the present in the last million years particularly since homerectus with the large Brain humans that these ancestors were living in increasingly egalitarian contexts. And I think there's very strong evidence because there's a whole set of features of our anatomy.

psychology our life history, which basically I'm just going to share screen for this and they basically Would not have evolved without.

having an egalitarian social context that means that if if they're being can you see can people see? I can see one line which says it get a chance. I'm gonna I'm gonna take so you gottarian features.

are if if there had been significant male dominance in human evolution is very hard to understand how we would have got the bodies and the brains that we we got.

So let's just start with one of the features. Oh There we are.

One of the features we talked about last time which is cooperative eyes the elongated shape of our eyes with the white sclera background, which is something that all humans everywhere. It's it's a an item of fixation and humans and Cooperative eyes are very much the scaffold For the psychological aspect of human species of intersubjectivity our ability to mutually mind read to read each other's thoughts and understand our thoughts in terms of what other people think and we are with our eyes with we're very open for people to look at. What are we thinking and to understand? What are they thinking these These are features that really evolves they go together and it's very hard to understand how these features would have evolved in in societies with significant rank differentiation dominance submission such as chimpanzees chimpanzees do not have Cooperative eyes. They do not have into subjectivity nor do bonobos there.

We read last time Michael Thomas sellers piece and Chimpanzees are very interested in understanding what other individuals are thinking.

But they're not interested in letting other individuals know what they themselves that individual's thinking. So, they're not meshing mental States. They're not empathizing to that extent that they let each other know what they feel and other aspects are psychology.

Is extremely what's been termed counter dominant and this is particularly a terminology. It's been used about hunter-gatherers.

That hunter-gatherers society's egalitarian hunt together as a societies people resent.

Anyone trying to tell them what to do. They resent being, in any way coerced or exploited and it's been described as counter dominance that there's an agree a kind of agreement and One individual says is agreeing. I won't dominate you. If you don't try and dominate me and that ends up with a rough egalitarianism. And again, if we think about chimpanzees really there isn't I mean a chimpanzees may not like to be dominated but there's a lot that dominant submission and the ritualized features of dominance submission and kind of smooth kind of keep the oil the wheels of chimpanzee Society.

I think it's it goes against the grain for humans more than it does for chimps and these two features are about our Chris was talking about our mothering.

Collective child care as we said with the gray tapes like chimps and bonobos.

They really mothers hold on to their own babies. They don't hand them over. They don't let other individuals look after their babies.

This is not true with monkeys monkeys are quite at ease with letting other.

An individuals look after their babies and at the root of that is probably the fact that most old world monkeys have female kin relations. They live with female kin.

So it's a very significant aspect and that implies as Chris was saying that there's probably a history in genus homo or female kin residents which would have facilitated being able to hand over a baby and to another female. He was probably a relative. So the whole grandmother hypothesis would go along with that with who would be for our mothering who would be the best support for a female in the first place.

Would be her mother.

That's the most reliable.

Candidate to help her and so the grandmother hypothesis and likely living with mum and as Chris suggested that is what would have enabled going through what he talked about the grace ceiling. I'll show you the brain size and how that changes through Evolution that really is the story of human evolution that enormous brain expansion. It is two three and more than three times chimpanzee brain volumes.

The other aspect that we can talk about in respective egalitarian features that that they seem to have evolved to distribute chances of mating over a much wider pool of males than simply dominant one or two dominant males and so this is evidence in women's bodies of their sexual physiology and we just mentioned a couple of aspects there.

concealment of ovulation So that really men or males are just not very well aware of exactly when a female is actually near ovulatory fertile. Well women are concerned Homo sapiens, and this is quite different and distinct from chimpanzees or bonobos who who have large Easter signals bonobos tend to have rather continuous Easter signals. Whereas chimps have much more demarcated Easter signals, but those signals act as they they can inform the dominant male just exactly when a female is really fertile.

with our concealed ovulation males just don't know and in addition to conceal ovulation.

We have rest activity that can go almost all around the cycle.

That is being able to have sex almost all around the cycle or not have sex.

Decisive deciding either way and so-called continuous receptivity of course bonobos of famous all so for a lot of sexual activity and but even bonobos do not have so much of their cycle as as we have available for sex and I've mentioned synchrony there and I'll show you the principle of synchrony because again reproductive synchrony.

Means that more males are involved in the mating system. So it is supporting egalitarianism in the sense that it undermines dominant males and that slogan one woman one penis.

Comes from bayaka hunter-gatherer women which they use as a kind of chant and they're dancing their chanting. They they want one woman should have one penis. If men are useful. Everyone should have one at least what they're saying is they do not want to be in anyone's hurry.

They don't want to be like two wives for one Hunter. This is not what they want and I'm just going to go ahead to show.

how synchrony and synchrony and cycles, that would be we sometimes think of menstrual synchrony. But if we think of ovulatory synchrony synchronizing fertility Cycles, this is actually what it does. I'm just going to jump ahead.

That's the simple principle of synchrony if you have females as kind of clocks there and females are at different phases.

Then if one male is a bit dominant, he can pick them off one by one.

but as soon as the female synchronized he can't do that and suddenly all these other males come in the system.

So this is very egalitative. It's egalitarian in terms of spreading reproductive success among a number of of males there.

Okay, it's not going to work exactly like clockwork. But the more that females tend to synchronize the more males should come in the system and this is well known amongst primates. It's it's not a mystery and just briefly to have a look at the brain expansion.

because and this is the gray ceiling that Chris was referring to here.

We're looking at a chart of which is really the story of human evolution of the three million years with these different levels of brain expansion starting off with these are fossil specimens for australopithecine species and with roughly similar volumes.

This is the brain size the actual brain volume here on this axis.

roughly similar to chimpanzees or maybe gorillas great ape And yeah, what that's representing is that those specimens those species were basically single moms.

Doing all the work.

Mom's raising these very large brand any great tape has a large Brain and the mothers are producing all the energy requirements for raising that large Brain Offspring. She's doing it all by herself chimps. Do bonobos do gorillas. Do australopithecines on the evidence of this. It looks like it.

Come down after two million years and suddenly our ancestors becoming homerectus smashed through They smash through that gray ceiling.

So this is telling us this is something revolutionary. It's a huge shift and it's telling us that mothers were no longer alone mothers had others supporting them and that is a characteristic for Homo erectus that that is the basis of kind of Sarah hoodies arguments about Cooperative breeding and what she describes as the onset of into subjectivity mute your mind reading and but then we come down after a period which is kind of roughly similar a bit above two times chimp brain size and inside this last period of 5 7 800,000 years the very large brained humans nowadatlles are selves their ancestors.

Accelerated past three times chip volume to these very high brain sizes. So something happened there for mothers to enable them to have the energy to to go through to raise offspring that it's like the lid comes off the energy available and okay, so yeah, I've mentioned.

Whoops.

I've mentioned the grandmother hypothesis with them and Sarah heard his mother's and others there and what we suggest is that gender politics, we talked about reproductive synchrony as an aspect of egalitarianism. What we'd suggest is gender politics.

Must be very critical in.

enlisting increased levels of male support for the mothers if in the first place grandmother and female relatives whether initial supporting structure for the mothers in with *Homo erectus* and with the latest stage of *homo sapiens* ancestry.

We're talking about males getting seriously involved seriously supporting female reproduction and producing a lot of energy for mothers that enable them to have these very large brained Offspring. This is again just as smashing through the gray ceiling would be a revolutionary aspect of human evolution.

This is again a completely revolutionary transition.

male chimps hunt they're mostly male chimps that hunt and female bonobos may do a certain amount of hunting, but it's not a lot and But male chimps don't provide meat to females females if they want to get any part of the meat of these little monkeys that these male chimps are hunting have to run after they've got to run after and a female who's carrying an offspring. She's not going to be the first one there. It's not going to help her.

So female chimps are well known for using tools to get proteins and fats like termite fishing and nutcracking and so forth that is like their sources of of proteins and fats of high energy foods that will support their reproduction.

But if you look at the difference here, this is an absolutely radical difference with Hunters.

These are Central Kalahari.

Oh hunter gatherers bringing.

A large game animal hems back all the way back across the desert to the camp where women children older people are waiting and going to be able to eat the foods that then gets distributed.

So this is a complete and utter change.

It's it's a huge revolutionary step and how did that happen? How did females what was the strategies of females in creating that and situation is part of the question that Chris in blood relations and myself and Ian have been working on for a long time in our researchers. and we think there's a model that really explains what happened inside the last half million years and so this is highlighting why menstruation matters so much.

If you take out and see if you conceal ovulation.

Any male who wants to track females fertility he doesn't have much.

He doesn't have that signal so he can't track female fertility in the way that a male chimp can track a female Easter signal.

But there is still a big signal left that is indicative about fertility in the near future and that is menstruation. So if you have a coalition of females, you might be relatives or friends and one of them is menstruating whilst the others lactating and Pregnant

and so on and the males are going to know that this is potentially a female who's going to be fertile, and she'll become a Target which creates a lot of conflict amongst the males and creates a lot of conflict amongst the females, too.

Those females are probably her relatives.

They're going to want to protect her and make sure that no male here is a bit dominant who wants to try and get hold of that female take her off on Safari sequester. So they're going to want to protect her.

But what we think the answer was for females when this situation arose and as that brain size was going up and up and up with our ancestry with our ancestors in Africa.

Is that females decided to collectively appropriate the signal of menstruation and create that as a Chris has talked about the aspect of sacred the aspect of taboo create that as a signal no.

Which is then intended to tell the males there and you're not coming you're not coming anywhere near us until you've gone away and done some hunting.

This is actually very egalitarian from a point of view of not just the females but also from the point of view of the males because this signal when the females are making a kind of line a picket line if you like saying no by joining that this menstrual signal with Cosmetics to say we're taboo and it cuts out any male who's a dominant male who wants to try and track female fertility find a fertile female and then move on a dominant male who's not going to do the work? This is kind of a process of its cultural process. But it's also a sexual selection process it.

It means the females are choosing males who work? and the males who work are choosing cosmetically decorated females because those females cut out the dominant males.

Okay, I think I've said enough now and Helen you had a I'm going to stop sharing until we hand over to Ian to say some more but Helen and anybody else would like to ask some questions.

Yeah, so I am curious about the transition that happened. So we have bon apples who are these female dominant if you want to put it that way societies where the needs of females and the children are coming to play quite a bit.

But then despite that we still see the situation where the females are not quite willing to.

Do Collective child care and has there been any exploration of why that is the change that first question, but also wondering if having talked about between you cosmetic correlations, we might want to have Chris talk a bit more about the nutrients because they that the strategies that women use to create these coalitions where part of what if I remember these curriculum's product what was disrupted when bills men in society started to understand these strategies and co-worked some of these practices and have simple Administration. So maybe explore some of the needs and have Chris talks was about that some more.

so first question and then a solution Or just a very brief comment. But I mean that is the key question. I'm having I mean, it's absolutely the key question if but if I've

been about great take relatives that's got such hierarchy. Why didn't they go like the whole way I mean is very difficult for female gray tapes action disease.

To establish this pattern that we did which is to stay with mum when you're having sex and others when you really when you reach maturity and you're gonna start getting pregnant to stay with Mom and the reasons we think the reason why chimpanzee famous move out and actually why bonoba females move out is to get their head out of the way of their older brothers and fathers who keep hassling them for sex. So with chimpanzees There's absolutely no incestor. Boot. I mean the males want sex with, anything that moves kind of thing and the females absolutely don't but the way that the chimposite female will make sure she's not hassled by male relatives who are dominant over her is to just get the head out of there even though there's a big cost because she's now going to be living in a locality where she doesn't have kin and that side of things the bonobos share.

So I'm obviously there's a huge Lotus things we can say but in a nutshell the binobo female strategy is lots and lots and lots of sex and the human female says they was not lots and lots and lots and lots of sexy was lots and lots of sex but being very careful about who you having sex with then make sure that you remember no is just as important as yes, so human females developed a collective no sex strategy around menstruation and Bernard was don't really have a no strategy except of course that that, but the body of a bonobo or a gym kind of signals now anyway, but in the sense that sectors only possible when you've got a swelling so there are some periods when the bonobos that, just simply because sex is impossible physically. I'm having sex but the human case because we didn't even have that the evolving human female was continuously sexually receptive, of course in principle that meant she needed a collective conscious way of signaling no against rape, but there's a lot of things involved in that and which and anyway the human female went in a sort of middle of the road Direction where no some things are sacred namely our bodies when we don't feel like it was just as important as yes.

That honest has that answered question there because some other questions in the chat as well and did anybody want to ask more? And Alicia and if you want to comment screen to ask your question right out, it's about women naturally synchronizing.

menstruation So huge book on all that.

Yeah, but to be a little up to date.

Yeah, I mean.

Do you want to go Christmas like you want to go? Well, I mean, all right. So let's talk about period periodicity. We evolved in Africa and one of our the reasons why we were even social at all because living in large in a group, it's got benefits of course, but it's got cost as well. Why did evolving humans live in increasingly large groups is actually for safety in numbers.

So when you're living Clump together, you can be more safe against the dangerous predators around and that and the big cats like today's Lions except that they're even bigger attacks a big cats. They are completely lunar.

Not only people don't realize that lions are lunar when I'm when I say luna what I mean is they're lazy and they don't like chasing after you at the great speed and they'd like to just pounce on an animal including a human in the dark because they've got brilliant night vision. And so during the course of human evolution. We humans are hopeless night vision lands are brilliant night vision and so this so the we would have been aggregating for safety in numbers every dark moon when we couldn't see at night and then dispersing more easily around full moon and the human female menstrual cycle adapted to that lunar Rhythm. So a lot of people just think that chimpanzees have been there was another great apes have a menstrual cycle. Well, they try to do but you shouldn't really call it menstrual because the word menstruation means moon change and bonobos have a 40-day cycle which has got nothing at all to do with the moon and chimpanzees over 36 Days cycle. Nothing at all to do with the moon the one great ape which is getting exactly the length of cycle. You would predict if synchronizing with each other using the moon as a clock. We're adaptive in The evolutionary pass the human female who's Everest mental cycle length is 29.5 days exactly the lengths of the Moon that takes to get go through its phases as seen from the earth. There's another primate the orangutan which is very very close 29 days and it's very likely that that's again to do with the moon because the rain females live up in the trees the mouse live the males are often too heavy and can't be in in the cheese quite the way the freedom was out. But all I'm saying is That yes, the question is exactly right in my own view. There's not a Shadow of Doubt in The evolutionary past.

human females synchronize with each other as part of their solidarity and to disagree sexual opportunities among multiple males of communities explaining one sing any kind of reproductive sink.

Anything will do that and although that doesn't happen today is still some evidence. That's under some circumstances human females who live together and work together and on with each other may have a tendency to synchronize the statistics are very unsure about all that but I've got no doubt in my in my mind that one of the reasons why all of the world's Hunter Governors and other indigenous people one of the reasons why they always link menstruation with the Moon is because in the evolutionary past it was linked there was a good reason why women would menstruate together up to a point obviously not obviously very few hun together women would be menstruating any one time and be most women maybe be pregnant and all those things. Can I bust in a bit Chris but very good at fasting in on these things and I'm now going to let her bust in. Yes. And Alice.

She was asking don't we think it's the same for Apes? Both chimps and potatoes have different they do not have lunar lens Cycles. That's that's for sure. They probably because of their Easter signals. They're reproductive Cycles longer and but the key point in the model that I was showing is that males have a better signal.

For tracking fertility, which is the big Easter signal.

So males aren't really interested in menstruation and we don't tend to get ovulatory synchrony for chimps and bonobos. It's a bit unusual that there might be some overlapping and there might be seasonal effects, but it's not generally found and though there are primates that have got reproductive synchrony significantly and but yeah in the model that I was showing obviously for human females for human women today and for our ancestors in the past and into both intervals, maybe four years chimpanzee into both intervals between one baby in the next as five years.

Three to four years would be quite normal for hunter gatherers and so what you're not going to have is all women menstruating together like clockwork because some will be pregnant. Some will be first year breastfeeding some will be coming up to weaning before they stop menstruating again. And as Chris says hunt together women do not have anything like as many periods as women in Western livestock because they're doing a lot of breastfeeding and they start having children earlier generally than women in Western Lifestyles. But what that means is when menstruation happens, it's very significant. It's very significant for pointing to the likelihood of fertility. And for most time together a culture's menstruation has this very significant aspect of fertility and power as associated to that culturally and so that's why we're kind of focused on menstruation as a key signal and Are there any more questions because maybe it would be worth letting Ian have.

some more discussion on this but it does that clarify the question Yes. Thank you.

Great. Thank you. And I'll tell you I was wondering is down the line after we have in speak to you. It might be worth revisiting how the ways in which some of the men and some of these societies try to cool what menstrual practices and signals and what the implications I'm sure we're gonna finish with with that with the matriarchy stories.

I'm Chris is going to come right to that. But let's try and work out the egalitarian Origins first because I mean I that perhaps the single feature of human cognition.

which actually says we must have had a prolonged phase of egalitarianism in our ancestry is language language itself our capacity for language and we aren't gonna maybe say too much about about that today because we've got a whole session for language language and laughter right at the end of this these series and in June, but, this that that Yeah, that this whole what we call a symbolic cultural revolution Incorporated of course language linguistic forms of communication. And do you want to Take over a bit in on any of those aspects so something.

I don't and to gather of fertility or the archeology of the pigments or whatever you are in. Yeah, let us know who you are, and I've got slides if you want them, right? Mmm.

Yes.

I've been looking at what I considered to be the archaeological record relating to the evolution of collective ritual and I think this is what we're talking about here.

is If we can go back to Camilla's slides, we're talking about that second period of brain size increase and I'm going to be start off by.

just giving some archaeological background Can you bring up that yes stop that we're in size increase. So from after a million years. Yeah, so it's around with early Homo erectus that we start to see.

Good evidence.

for meat eating tool use in Butchery and as the graph is showing here this this breaking through the gray ceiling.

That's not the only that the increase in brain size isn't the only thing that happens then.

Also, it's there's an increase in body size and that's more pronounced amongst females than it is amongst males and one reason it's thought.

that that happened is that to feed these larger brained offspring females needed to be foraging over larger ranges.

now so there's still Reliant.

Not not to the same degree as with australopithesize, but they're still Reliant. No, very largely on their own foraging effort.

yes, we are seeing evidence for hunting but critically what we don't see in this period for over one and a half million years. We don't see any evidence for campsites.

In fact, we don't see any evidence for any kind of signaling either signaling Behavior.

So they are in clarify what you mean by signaling Behavior, maybe people well anything anything? other than Stone tool use I mean, what I'll come on to talk about is the early use of red ocher and I think that is really the beginning of sort of well, there are two kinds of signaling that happening late late in.

From around half a million years ago one does relate to stone tools, but the main line of evidence relates to pigment use, but I'll come on to that shortly.

the important Point here is that the likelihood is is that females are tagging along with males. Everyone is foraging together moving across the landscape. They probably have protected sleeping sites, but they're not they're not campsites. They're not places that people are bringing back resources and sharing them with with others.

So effectively it would be a bit of a stretch to infer a recognizable sexual division of labor.

from the archeology of this period now around a million years ago We begin to see a few changes. We find the first indications of controlled use of Fire.

At just one or two sites one called vandivert cave in the interior of South Africa.

But it is very patchy evidence and yeah, this is so this is like it's a very wide cave like a double railway tunnel that goes back 140 meters into the hill.

But in these early periods of occupation, it's only the front of the cave that's used. This is going back about two million years and the earliest evidence for controlled use of Fire.

Is going back a million years there.

now that A bit later. There's a site in Israel called.

Geisha benokov, it's about 780000 which is again providing evidence better in good evidence for controlled use of Fire and this is more like a campsite.

But a recent publication is showing that they were regularly cooking catfish. The site is beside a lake and they do originally when it was first published 10 years ago so that it was exciting for the evidence of fire. Use the evidence for the cooking of fish is just in the last last year, I think.

But it's it's again a sort of isolated instance.

It's not until.

Well in Europe in the near East it's not really until about 400,000 years ago that we begin to find consistent evidence for campsites.

So if going going back to the previous Slide the brain size increase one. Is it the previous one? It's a couple.

right, so here we're talking about.

What in this graph at least looks like the sort of exponential period of increase where? We're increasing brain sizes are increasing basically from around a thousand cubic centimeters.

Up to about 1200 and then in the last period up to about 1500 cubic centimeters.

So and this is over.

A relatively short period just a few hundred thousand years and this is a shared pattern both between our cells and Neanderthals and the recently discovered denisovans in.

Central and Eastern Asia so and as I said, the evidence for campsites is also a shared.

trait amongst these different lineages and that there are a number of archaeological changes. We're seeing here first of all evidence for yeah massive am Committed the navim. Okay. Can you talk can you mute please? And then I'll meet again.

Everyone's muted. Okay, sorry, right evidence for systematic hunting of large animals, whether it's a mass kills or the selective hunting of of prime age adults also begins to rapidly accumulate from about 400,000 and a major technological changes as well the end of or the beginning of the end of hand axes and the beginning of of points and Blades tools that that could be potentially halted and perhaps most intriguingly.

This is when we see the first evidence for pigment use.

Between 500 and 300,000 years ago in Europe in India and in Africa.

But even from very early on.

there seems to be a bit of a difference between the African and the non-lafrikan records in Europe for that very early period we just have one site in India. We just have one site.

In southern Africa, we've got three or four sites associated with an industry called the forrest Smith, which is Transitional between the hand axes of the Julian and the Middle Stone Age with its points and Blades and this is also associated with the earliest evidence for half did stone-tipped Spears and Some of this evidence is coming again from that site. I mentioned earlier with the early fire use Thunderbird cave, but now some of these pigments are coming right from the back of the cave.

Where it's so dark that you can only use it with fire light.

So what we're inferring there is that this is evidence for some of the early group ritual display using bright red and other and Brilliant pigments so going back to Camilla was outlining the sort of sham menstrual what we used to double sham menstruation hypothesis.

I can't hear you Camilla.

Female cosmetic coalitions. That's okay simple.

which is basically if one member of the residential Coalition of females starts to menstruate What what do the other females do about it? Those females who are most reproductively burdened they are as Camila was saying either pregnant or breastfeeding likely chances are.

They are the ones who most need male investment.

But the males are liable to be focusing on this female who is giving them reliable information that she will be fertile imminently.

So the basic idea is that they started using.

artificial substitutes sharing the blood around and that what ritual Collective ritual is doing is like it's the whole song and dance performance.

Trying to get over a message that the males don't necessarily want to hear. So you is going to be quite a costly convincing display.

We're serious.

Piss off and don't come back. And do you bring the bacon? essentially No cuddles now knows me Brian. No cuddles. Yeah an easy way to say it. Yeah not bacon really be why it could be what pig? Yeah, that's tasty now.

So that I spent my sort of the last 30 years tracking the record of pigment red pigment use.

in Africa and it's initially very sporadic then begins to pick up around 300,000 years ago and about 25 years ago. We published a joint paper with Chris and Camilla.

predicting that there should be we've predict a shift from irregular use of red ocher to habitual use at around 160,000. And the reason we made that prediction was that there were two main reasons one was that to do with the brain size story that it is recently become apparent that it was.

At the time they thought around 200,000 years ago.

homo sapiens evolved in Africa and that Seems to have been when the brain size.

maximized but the related reason was was more ecological to do with climate conditions that in within the tropics and subtropics that the period of scarcity is the late dry season. This is when there are very few vegetable Foods left. The fruit has finished there is little if any, honey and you become an animal fat becomes more critical.

So the pressure the pressures on these female coalitions to harness.

Even greater levels of more and more reliable levels of male investment in the forms of collective big game hunting should really kick in during in while in dry seasons in general but dry seasons would be even more severe during glacial Cycles now, our current understanding of our speciation is that it's a process spanning from at least

300,000 years ago up until about 150,000 years ago and that through that process brain size increasing continued.

also through that problem that period like best part of 200,000 years the majority of the period is it falls into two glacial cycles and the second of those between 190 and 130,000 years ago.

Was particularly severe and prolonged and seemed and for the most part seems to have been.

fairly uniform in resulting in dry conditions across Africa so dry season seasonality dry season scarcity of carbohydrates would be even more pronounced.

At this period which is just when brain sizes have maximized.

So this is when we predicting that these female ritual cosmetic displays.

What? had to shift from the kind of context dependent performance into a matter of Habitual ritual.

Now when we first proposed that we could we couldn't test it. There wasn't the date that there wasn't the evidence available in terms of well-dated sites.

Just last year.

Paper was published but independently of us.

Doing a Metro analysis of the African Oka record and they identified three main phases sort of starting off that as I said around half a million years ago, very sporadic finds both in East Africa and southern Africa and then what they term an emergent phase Which basically spans our speciation? and then right at the end of of our speciation they identify a shift from irregular to habitual use at around 160,000.

so it's not often that you get to.

make a prediction that which can't be tested at the time and 25 years later. What do we find? It? It looks suspiciously.

Light confirmation of that prediction now the authors, may not agree with that interpretation.

But at face value, that's what it looks like.

Thereafter and just to say and they they strongly agree.

with interpretation that the Oka represents a ritual tradition Yes, yes and they argument agree with that. Yeah, and in fact the real The power of their argument is precisely the point of convergence between social anthropology and evolutionary anthropology, which is the durkheim tradition about the importance of group ritual. They see it. They interpret the OCA record in terms of group ritual and they see habitual group ritual as the basis of symbolic culture.

That is to say shared fictions.

the ability to declare that some things are sacred.

starting with our bodies being able to say no.

we could and it's out of that that you can then you you create your first Gods your menstrual taboos your your religions if you like And very shortly afterwards.

at around 142,000 we get the earliest consensual evidence for symbolic culture in the form of shell beads in Morocco the beads that bismune. Yeah and then and then thereafter from around 100,000 other lines of evidence.

Engravings on ocher like like this famous piece from blombos cave in South Africa that was published in 2002 and this engraving tradition all the early lines of symbolic evidence relate to Red ocher in one way or another whether it's as residues on the beads the substrate of the Engravings the earliest burials with grave Goods the paint in the paint palette so that you don't have a slide here that but like abalone shell talents dating to 100,000 again from the same site blondboss.

I think that's so and this is all before stop the share and come out. Yeah. Okay, and this is all before some of some of our ancestors left Africa.

to colonize the rest of the world and eventually replace our sister lineages, but in court, incorporating them within our genetic.

Meta population like so we have now detail and denisovan DNA in population non-african populations.

But we would argue that they were.

carrying with them this Hallmark of symbolic culture of Habitual red ochered body painted Collective rituals so great. Fantastic and can I just put in a couple of questions before we open it up because There's this tradition when we were writing in the 90s. There's this tradition about the human revolution.

Which in the 90s was talking about Europe? But of course we were trying to talk about what happened in Africa and with your work and in Africa and Then in around 2000 2001 whatever mcbriety and Brooks attacked the idea of the human Revolution with the revolution. That wasn't and said that there was a protracted process in Africa with all kinds of different things happening in different parts of Africa and then very recently there's been again an archaeological review from scary and will which is titled the revolution that still isn't.

So here we are and we've recently published to defend the idea of a symbolic Revolution that humans had a symbolic Revolution and so what is the position around that can we just say a little bit? Why is symbolism necessarily revolutionary? Yes this scary and will scary and will paper is is a very nice paper, but It's it's a bit is slippery. Basically on the when they say they title their paper the revolution that still isn't it's as if they're addressing.

questions about human Origins, but the scope of their paper is coming right down to 30,000 years.

It's not addressing.

Speciation and it's not addressing symbolic culture specifically they're talking about how how we interpret the variation in the archaeological in the African archaeological record throughout the Middle Stone Age and they do a good job of that showing local trajectories.

They site thatchalkus is pigment paper, but they totally ignore its main conclusion because they're not interested in the possibility of qualitative change the tech that

change chain went when quantity changes in quantity become changes in quality. They don't actually I don't think they hardly use the word symbolism. They don't use the term symbolic culture.

So why do we think symbolism is necessarily revolutionary in terms of social political context because they're really talking about culturally Evolution without any gender politics without any kind of political angle to it. But what are they missing there? You know, they're obviously reliable in their discussion of the archaeological evidence. What are they missing? Press you can also help if you yeah, I mean basically that.

archaeologists tend to ignore Symbolic culture because they think oh, we can't infer meanings. We can't we can't we can't.

That's way beyond our.

Pay rate just giving up.

Yeah. Yeah, they I mean You could more cynical view of it and say they know where it leads if they go down the OCA record and particularly now with this stepchalkus paper.

Mmm, I mean Chris would be probably better dressing us. Okay, go for it what Chris? Why is symbolic culture necessarily Revelation in 1975. An anthropologist called Dan sperber.

There's a lovely short book for which you can all sorts of surprises called rethinking symbolism and he was describing his fieldwork and didn't I won't go into it all but it was in them. It was in Ethiopia, wasn't it? And he and he was he was told I'm all sorts of things which is he's okay. That's fair enough. I mean about about how they had a garden how they sometimes hunt how they how they look after that animals and stuff and he just said he sort of made notes, but he wasn't all that interested when he was told that all the leopards in the area were Christians. He, he's picked up his ears. Oh the leopards of Christians that's really strange. And in this part of the world if you're a Christian when you Slaughter an animal, You throw it to one side and it has to be to the left side.

I think I'm right to sing. Can't remember the detail.

So remember said I'll give intimate the lepers when they kill an animal. They always search to the left side and he was told yes they do and I won't do it into but he's here he ended up with his feelings saying They tell us things and it's not symbolic. And the reason he thinks it's not symbolic. It's because when it's like a no brain, it's obviously true, but when he hears something which just Can't be true. I mean Christian leopards have I can never be Christian. He came are it must be symbolic and so he came to a wonderful definition of symbolism anything which is obviously not true, but everyone believes it.

That's symbolism. If it's, so similar to things which can't be true. But but everyone believes them and so they kind of are true in the sense that they're, part of religion or some some system it is not sort of physically true but true in some yes. So that's institutional institutionally.

We would probably say these days.

So anyway critical point is that that monkeys and apes don't don't do all that stuff. They they're very clean on when they hear a signal and knowing that it's true. So, dominant team make a plan too. And that's that's evidence that this particular chip is getting quite aroused and a signal from an animal which isn't true won't be welcome by anybody else in the group. So all animals sing with the kind of true in a sense the symptoms perhaps a little bit too simple to say the symptoms, but the costly singing of animals is evidence of the truth.

Signals in language everything we say is it how do ? It's true. It's like Words achieve. How why do you believe them? And the critical point is I'll end on this as if a symbolism to work.

There has to be an extraordinary amount of in-group trust such that even if, it's not true. You're still interested in what it says about what people are thinking fantasizing remembering dreaming and so on and so forth. So everything in similarism is is false.

But it's but we have sufficient in-group trust to take it that the person giving us that forced information isn't lying. They're trying to tell us something about another another level of reality which the level of shared fiction shared imaginations hopes dreams remembrances and so forth and animals just don't do that and a short way of saying that is to say animals don't have symbolic culture. They don't have language. They don't have religion. They don't know art all those things that are kind of fake. But we humans three we're more interested in those sort of things. Then we are in reality. No one ever died for it. I don't know a table or a chair or something, but you people die for Flags.

so things which are symbolic are more important in many ways than things, which do So to to enter this world of shared imagination symbolic the symbolic domain in some sense. We need to overthrow The Brute Worlds the world of brute reality and in doing that that is a kind of political revolution of overthrowing.

Dominance relations themselves that any one animal is going to be able to dominate by force and because all the other individuals are able to gang up against any one that threatens to dominate by force. It's perhaps worth mentioning Christopher Burns and ideas there. So this is about reverse dominance and not just counter dominance of one-on-one.

Relationships and so we we think that we can't talk about the symbolic Revolution without also entailing a social Revolution which entails a very significant egalitarianism and definitely a gender egalitarianism. So we'd argue language is itself a key indicator of the egalitarianism of our ancestors that we couldn't have evolved language without it.

So that makes sense and do we have questions because we've said quite a lot, but people may be Those in want to talk to how red ocher was procured in geographical areas where it didn't occur naturally and I have a full question to that and there is also a question from here in the chat.

Yeah.

Very late in the day.

I finally got most of my research had been in southern Africa where you've got abundant.

Outcrops of red Oaker and it's abundant in the archaeological record.

But what about central Africa and in particular in the Congo Basin where you where rockout crops of any kind few and far between and there's virtually no record of okay use and when I started looking at the ritual use of red substances amongst forests hun togetherers What we found is is that they're using a redwood terracapus. So you'll see in exactly the same way as East African and Southern African populations were using red ocher.

but that's for the moment at least never get not going to be archaeologically detectable, but presumably that that pattern that we see.

in depth shaucuses maps of Africa where we saw the Oka record We can substitute Okafor.

Redwood throughout western Africa, certainly throughout the late place to see many other around substitute Redwood for broker either way.

Yeah. No what you mean? Yeah, yeah, it fills in the gaps so that this would have been a pan-african phenomenon because we know people were likely in the forests, but they wouldn't have had Oka they would have had other.

That's and then kind of sorry, which is a slightly similar but that they do have some ocher sources there. So particularly in the western Kalahari you find people using both or interchangeably right and that there is a good question that Stephanie did you want to talk about ask the question or if You read it. You're happy. Okay, and so Stephanie's asking about you a ritual as a category and symbolism. We're saying humans are unique in symbolism. What about the riches that animals have okay and Christy when it deal with that. Oh, you're the expert women and Yeah, this is very very good question because there is a lot of animal rituals or what I would call ritualized behavior and somebody else is making noise. Could you could you quiet so we got single Channel? And thank you as so there is a lot of ritualized behavior with animals and Chris was just talking about an Ian was mentioning.

What I known as costly signals.

So animal ritualized behaviors we can think of Mating behaviors like a couple of Ibex Antelope going Head to Head bashing each other or red deer with their horns create this is already deer doing roaring to demonstrate their size this kind of ritualized and there are many other types of ritualized behaviors many of them are sexually selected but there are also ritualized behaviors between prey animals and predators where prey animals the famous.

pranking behaviors of gazelles and Impalas they put they when they get spotted by A lion or a wolf a predator. They instead of running away. They jump up and down in the spot and you think why are they doing that? And what, why don't they run away the reason they're doing that is that they're using what Chris said they're using reliable hard to fake signals to show to the Predator that they are super fit

and if they're super fit, Predator go and Chase somebody else don't chase me Chase somebody else.

So that that signaling actually serves the purpose for the animal.

That's the prey because they don't have to run away and it serves the purpose for the Predator because that Predator doesn't want to chase the fastest fittest animal the Predator wants to go after the secret animal.

So there's kind of signaling communication happening between even different species pray and predator and many many examples in sexual selection with signaling between males and females and so forth.

But what we say about it is that these rituals if we call them rituals for animals.

They are hard to fake. They are costly and they completely deal with.

This world of reality. They're known as indexical signals because the animals are demonstrating with a some Behavior which is an index of that actual Fitness or that some quality that they possess.

So it's really within the real world.

Whereas when we're talking about human ritual and an Ian could tell us so much about hoisan people's rituals with ocher and pigments.

They are invoking Supernatural Concepts.

They are invoking another world.

So humans are are collectively.

Imagining in the world or traveling to that other world in the course of the rituals. The rituals may be costly and perhaps you could tell something about the Elan bull dancers as a kind of a key archetypal ritual for a girl's first menstruation and but the elambulance which is danced a number of days around a girl in a menstrual heart and where their May indeed be use of red Oaker passed around the women who are celebrating that that occasion.

They will be invoking Supernatural and a supernatural entity of Eland.

That is summoned by the girls the girls' presence the and the dance with special song special music and the girl through the power of her blood is able to carry the community into the other world, which is known for the German class as first creation and a kind of time Beyond time when nothing is fixed. Everything is changing. It's a kind of dreaming position.

so we really distinguish between Animal rituals there is continuity from animal rituals into human rituals. But we also distinguish human rituals for this Collective.

Sharing of concepts of the other world. It's entering a virtual.

Shared domain a domain of virtual reality and we have no evidence at all for any other species doing that or referencing any virtual reality.

Is that enough? Can we do? That's such a thorough answer. Thank you. It really helps me. Thank you, but it's a great question because it gives us an evolutionary continuity between stuff that animals do and stuff that humans do So, I think it's important and have we got any any more questions for some of the Could you just

come back a bit on on David's question about about the costs of procurement? I was talking as a sort of.

massive landscape scale comparing Congo and Kalahari with Southern and Eastern Africa, but of course even within Southern and Eastern Africa, there are going to be some places where you don't have local okra outcrops and what was beginning to see because it's only in the last 10 years really that that has become possible to Source where oakers were coming from and there's preliminary evidence that from very early on at some sites.

People were going to to considerable costs to procure high quality ochers.

I have in mind. I mean, they haven't done a proper sourcing study yet, but I think there's very good circumstantial evidence the site called border cave in kwazulu-natal which goes back quarter of a million years right from the beginning.

the earliest pieces of ocher there are certainly not from the local environment and the most likely source is going to be over a hundred kilometers away and so I think this speaks to this point about the costliness of early group rituals. It is part of the way of displaying those costs that you you go to all these effort this effort to get the best quality pigments. And of course, we know this ethnographically that the classic example is in is in Australia where parties of men would go for week.

We for many weeks on OCA procurement trips.

involving round trips of 500 kilometers because I mean it's important to remember and this is Ian's work. Of course that we think of mining for precious metals mining for gold mining for Timeless the first Super valuable precious substance mind forward great, great great experience was this okay, which had to be as nearest possible to blood red and on the subject of costly safely and of course in any, any Cosmetics when you think about the, the first uses of silver the first uses of June of gold the first use of time into that archaeologists Discovery, you don't want to be wearing something which looks like it was buttons in some keep store. You know, you wanted the whole point is to look costly no point is that where stuff which is gold or silver diamonds to show that you're not cheap and so the costly this is a is part of its.

You know part of the display is I mean it's I mean in some areas you want to be quick and efficient with things but not when you're putting on your, your your adornments they need to look costly and be costly, in a hard to fake way. And if it's quite clear. Yes, it wasn't some bit of mud sort of picked up around the court took all this all this effort to get there. Of course the women value it far far far more because they the last thing women want to look like when they're Coalition is some it's cheap.

You know that that is the opposite of what you want to look like you want to look really really costly hard to get and all those things because that's part of your pride your value yourself it self-esteem and we all so emphasize, where whereas some evolutionary psychology arguments posit that women using ornamentation makeup and so on our kind of competing with each other and therefore feminists take a very dim view sometimes of of Cosmetics as something that may undermine.

Female solidarity and when it comes to this indigenous ritual use of Cosmetics, these are highly collectivized occasions that that women are sharing women are using this they're demonstrating their solidarity with the Cosmetics. It's not a matter of individuals that at loggerheads with each other. It's a matter of demonstration of their Alliance in the ritual and that Cosmetics are displaying this and so we don't want to lose sight of that female cosmetic Coalition principle. It's it's very much a collective and yeah, I just wanted to take him and I don't know what you think of this but I've got here on my phone a little and a little snippet of Egret Lewis.

Um among the Ben jelly illustrating what's going on in these rituals. I mean in the past we called.

We call them sex strike. I mean if you're if you're all beautifully adorned and you're all, and as a whole bunch of women proving that you really are very very desirable but on the other hand pretty hard to get and one way of describing all that is that you're not at least periodically certainly when a girl's menstruating and she's been In treasured by all have Guardians and female companions your your periodically I mean one word that I use in my book Blood releases is on strike, which means no sex until you men behave and as in was saying, go away and get them and find as ever find an animal and come back with it to camp and we'll think about it. I play this community just if well, try it out. I mean some people might get it's very interesting. Yeah. Well, I could go in the direction that Helen was suggesting towards the matriarchy stories and towards why do men take over the signals what happens with gender relations this little listen this little clip is about two minutes. That's all and it doesn't illustrate anything doesn't illustrate anything in between talking about doesn't it does what interesting does illustrate that in a very egalitarian Hunter gather Society? Things aren't so perfect. The Young The Young Lads can be extremely insulting and sexist and of course the girls as well, they can girls could be extremely insulting and sexist. That's right.

It's just it's just that because you have one one Coalition sort of frankly another the men in a way ritually in a playfully boosting their solidarity and muscular power and everything else showing off that they're men, but that would get a bit boring a bit intolerable if it's an outstand, they're welcome the women do it as well. So I just wanted to I'm hoping this will work. It's just so it just so brilliant and So when we visited the adventure in 2019 the women danced and Goku.

Which was after wonderful Festival followed by the young men dancing short, which is sort of a display of masculinity and testosterone I would say so the young boys were running up and down the camp and they were insulting girls vaginas calling them to be calling them halls and insulting them as not being hot as not being tied and all sorts of things and the women grew more and more Angry the boys also smashed a bottle that they had against a tree and continue to insult the girls vaginas and women's vaginas and then and Elder woman's daughter she spat on the floor and she said in a very loud voice take your vaginas get up and let's get out of here.

We are leaving them to populate with my Palm Bay. We are leaving them to them is a forest fruit.

Is hard on the outside and has a soft Center and in their Creation with it was said that the men populated with these fruits to have baby boys.

So the women got up actually quite a few girls also a very angry and then an elder man man came towards this old lady and he bowed in front of he pointed to her womb and he said to her son lucky.

Which means diminish the fire in your belly your anger.

We do know pointing to her and her warm that life begins only in you.

Wow.

What's going on something? Did it stop that was it was not well actually noises.

That mind but that was it wasn't it? That was just that that's an example of a collecting withdrawal of sex because men were misbehaving and it's just so so much just sort them out. That's the way to do it. And of course once once the elderly man had bowed before that in the way the matriarch the elderly woman who took control at that point then everyone sort of calmed down and the dispute was over but it's just so nice that because nobody's saying this in a hunter gather Society everyone's all being politically correct and everyone's behaving themselves and everybody's being respectful and stuff. I mean, boys or boys girls You're not gonna get that but as long as each side is roughly got the same, ability to fight each other and it's kind of playful at the end of the day and it's and violence is absolutely Outlaw and that is a fact there's no way if those boys have used any violence against a woman they would absolutely that's that would, that would be the end of it. So, I'm just I just thought of the beautiful example. Oh, yes. Yeah.

Wow of sexual I mean I call it sex right those those when that woman said right take your vaginas away.

They're gonna have to copy. It sounds like a sex right? I mean that sounds like a striker and total gender solidarity. Yeah.

hmm I've just got that out of in greater than the other day. I was just ran at Jerome's place in Brixton and I just thought and waiting for the waiting for English to write it up in the book or something. We wait for long be dead before it gets out there just say a little who are Jerome and Ingrid because not everyone will know. Okay. So Jerome Lewis and Ingrid Lewis a couple who with who had had children out in the in the in the Congo so they've done more I would say probably more non-stop field work in agenda again Italian forest and again other society and I think it's true to say that anyone else and there and so if you really want to know I don't know what it feels like to live in a society which is genuinely free genuinely communistic. Everybody's sharing and life is just so joyful. Everyone singing I don't know they can tell you how it all works. It's like you, the way I think of it is they've been to the Future and in the sense of humanity has the future will have to to something like that. They've been to the Future and it works and, and it's they're still moreness morning went to the same monofinican who's speaking here later on morning next month and the month

after you did feel work in the same region and just to say what you have is you have a matriarchy and the Goku was just after the Goku that that this incident that England was talking about happened. So when when the women of Stormed into the cam all looking very sexy taunting the riding the men making fun of their their parts making for saying they're no good in bed and all that stuff and the men have to put up with all these insults and it goes on for a while and then everything settles down and then the men think okay, right, we're gonna show up we're gonna shut our stuff and they do this stomping and showing all their muscles and stuff and then and then so when you get you get to you get the women's rule and then the men's rule they get matriarchy but only for a while and then you get patriarchy but only for a while.

It's it's each Camp makes sure that the others don't overdo it don't outside it. So the main factor will last for a week or 10 days and then the patriarchy will last for a week or 10 days and more Finnegan had this wonderful description of it all and she ended up calling it communism in motion. In fact, when you've got communism don't just sit back and think okay, everything's perfect. You know each sound is going to be pretty Vigilant to make sure that things don't go pear-shaped and you have to sort of fight your corner and in a way what happens is that the revolution the human revolution is endlessly deliberately lost and then regained and lost and regained and we interact think that that would have been on a lunar basis roughly every dark moon you would have won the Revolution and every full moon you kind of lost it on purpose but, that's fine because then you have lots of sex and it's okay as long as you win the revolution again next new moon next time.

hey, can we just in the last little bit think about this matriarchy myths phenomenon because there's so many traditional stories including from egalitarian hunter-gatherers including that Ma pombe's story.

That women originally had in them are probably story. It's a story about how women originally held a Genji and who now is the spirit belonging to men? And with the Hudson women originally held epime and but you have exiled examples of medtrial chemists from various parts of the world, which keep making this claim that women first of all had the power and what about Greece? And what did they mean? What are they cast attention or what do they say about what hopefully answer Helen's question about what happens when men do take over and what happens when men do take care in the first instance is that in order? Because because menstruation is the only way you can simply you can signal that you've got sacred power so cosmic power when men take over and the men want to Signal we have cosmic power. We have sacred power.

Guess what? The men have to menstruate and at first sight that seems okay. Well, how can that happen? But actually men can menstruate sort of if they've got, a sharp shell or a stone and to to cut the boys as they come of age and make them bleed. And then what happens, is that the men? Repeat in their own ritual a whole girl's first menstruation ceremony, but this time with the boys and then in fact when the men stop doing these things and menstruated collectively to assert their power.

They do it in a menstrual heart.

But of course is that turned into what they call a men's house? Now the this don't think please that these that's a sort of strange the collaborations which happen in different parts of the world. It's far far more important than that in every part of the world.

where men in a hunting Gathering Society or a society has moved to gardening and every part of the world where the men monopolize ritual power.

They will not take it as natural.

There's no idea that anything like the request an idea where in the west we tend to think oh Melvin's natural and men think the opposite. They think that it's the natural thing because we don't have to menstrual cycles and therefore they can connect up with each other and through the moon and it might be cool witchcraft thing.

Women's bodies are made for Supernatural power and Men found it really difficult. They've got a artificially try to menstruate and they know it's not really the same thing but they make an effort but everything they men do to have power is intentionally and consciously copying what women do and so the first men's houses which quite clearly they're the first churches the first mosques the first temples then they're mental houses and I'm not it's not just me saying that the men themselves say so coming I got time to read out this there's a story here you want. Yeah, absolutely go for it. Okay.

So this is from the certain. I'm honor Kiera del Fuego the origin of the hay in the hay is this ritual ceremony rather than like a Genghis of the bengetti through which men assert we have the power.

In the beginning witchcraft was known only by the women.

They practiced it in a lodge which no man dead approach the girls as they came of age were instructed in the magic Arts learning how to bring sickness and deaths to those who just please them sickness and death means if a menstruated girl just looks at the man that's stable or something that is witchcraft the men lived in abject fear and subjection. Certainly they had bows and arrows at which the hunt yet. They asked what use of such weapons against witchcraft.

The turnier women don't forget. This is a men's miss the man. I'm justifying them Monopoly of Rich your power so that of course they turn the table is completely make up ridiculous story about tyranny, the tyranny of women bore down more and more heavily until at last one day. The men was old to fight back. They decided to kill the women where upon their ensued a great Massacre from which not one woman escaped in human form the main spirit that little daughters and waited until these have grown old enough to become wives That's these women should never be able to band together and regain the oldest Tennessee to men in your Greek into secret society of their own and banished forever the women's Lodge in which so many we could plot said being hatched but in my book characters, yeah, I've got about 50 of these stories the kind of variations of a theme from Africa from Amazonia from all over the place and it's just it's just so so clear that the original form of if Religious power almost like Royal sovereignty actually was as a result of women asserting their

power the power of their blood in our hearts once a month. And so when men did take over the grammar of which your potency was not something they could change they had to have to always like pretend to be doing what women used to do one mean one, of course forbidding women from doing it. So once once men claim that their Administration and their child breast is is powerful and beautiful and creative is then describe women's menstruation as polluting dangerous harmful Etc. Now that's that's rather one side because of course in only Society the women have their own alternative version, but don't really increasingly over history the men's version began to sort of take care of it because unless you unless we could to rise out once a month. So the step is there a potency It wouldn't work. It had to be the previously had to be that of women's own bodies and the moon when you just get a sort of.

a carnival Feast of fools once a year and the rest of the year is male dominated that isn't so that isn't so good.

So so you're saying that losing a lunar type of Rhythm in favor of a seasonal very strongly seasonal Rhythm. We could of course a car with farming and Horticulture and pastoralism Tendencies and would have been the reasons for that sort of shift. Yes, that's right hand together as and the instance of marvelous brilliant work on this hunter gatherers in the critical period of human evolution and emergency savings.

hunted by the moon So the collective big game hunt would have been a once a month event and that put that corresponder perfect to the fact that women could send them in out on by just .

Refusing sector during the mental period on a once a month basis so that and by the way all the rock art calendars and stuff tell us that Luna time was, Critical with of course with with agriculture. You can't sow the seeds and reap the Harvest. Well, it's about it takes a year. So seasonality takes over and that's why in the myths.

The transition from matriarchy to patriarchy is depicted as a as a the destruction of the moon's power was subordination of the moon to the new which is the power of the Sun. So you get the sun Gods the sun Chiefs the sun man ever all over the place. You get the sun triumphing over the moon just as men triumph over women.

So so we are actually believing at face value what the indigenous stories claim? That there really is truth to that story as I say when the men say we stole these secrets from women.

Namely we when we cut our penises or our nose or nosebleed whatever it is you do is to prove that you're initiated and always involved Blood by the way, and it always the men always say this is menstrual blood. They always say that and one way or the other.

When when when men say we are rubbing women of the power which is theirs by menstruating and giving birth because of course they have to all this thing about being twice more.

You know, what the idea is, women just give birth to flesh. Well, babies need to grab and have a soul. So the Priestess to come in the men have to come in give birth to the baby all over again. And so but I'm simply saying when men say we stole these

secrets for women I believe them because it's they're not talking about the distant here prehistoric past. They're talking about what they're doing in the here and now they are stealing women's power and try to fill monopolize it for themselves they're doing it. So I believe them and I don't I don't really understand.

Why not the anthropologists don't take these stories that seriously and in fact the fact that they don't take their stories seriously in my view is shameful absolutely shameful. It's just one one more example of the way in which indigenous knowledge is disregarded. It's disgraceful.

There's been no what they're doing and you can argue the perhaps they had to do it. I mean, it's hard to know how they could have survived if the game.

Scarce it was all sort of reasons why you have to make a transition to? You know to guarding and an agriculture but to me these stories.

A version of truths they shouldn't be dismissed. Obviously that obviously the idea when the men say, oh, the women were tyrannizing us it a little scared and outside. That's that that's nonsense. We know from what the work of Germany and Ingrid but having a little bit jelly the women yes this sort of too nice that the man but it's playful the women. No, they come onto they take over the camp. They're lucky the strutting their stuff they, and the men yeah, the men are a bit embarrassed and they've been uncomfortable but they put up with it to cool that kind of tyranny. But of course when the men take over and it impose a real journey, including all kinds of sanctions in some areas, where you get to be a patriarchy sanctions like g***** and stuff and I'm to say that that no question that sort of thing did happen. Then the men justify there.

I'm very unpleasant Behavior by saying well we're only doing to the women what they used to do to us and by the way, there's no other even attempted explanation to explain why it is that men menstruate. I mean, it's well known that they do it's well known that sub incision is a former male menstruation and nose bleeding all these things but there's apart from our explanation, which is that it's true what they say this cheating stuff from women.

The Western anthropologists they just they decide it's a bit difficult to answer the question. They've been uncomfortable. So that's ignore it.

I forgot.

So, what did that did that help you question? Helen did we want to Expand that. No it did it. It absolutely did and I I'm always just struck by how how much that story shows up everywhere in the world in a pretty consistent session and Agree with Chris that it speaks to the truth, and it's baffling why it's not been.

Examined some more. I remember when I was doing some research for the talk. I gave the civilizing influence that theme came up over and over and over again, and I kind of shunted it as like this is interesting, but I don't know if I want to weed into this right now, but it's it's Probably something that and I just say hey, that's thank you so much. But but to me, when those men initiated men, tell them to the upside down the stories about things. They started a thing called education, which is still going on to

me the world's universities which used to be theological colleges and all sorts of to me there the whole education system is even to this day designed to conceal from women one in very important thing, which is that women's own intrinsic power.

So make sure that women are afraid of their own power and won't go there particularly when it's around menstruation and childbirth. Make sure that the idea that women can drive power from being women.

That's descriptive that is absolutely legitimate. And so what those initiated men in Australian cases set up a kind of education system called initiation to me. It's still around.

Yeah, and a lot of yeah, so good.

Which is a lot of the stories also involve like you said really demonizing what the women would do with the power and making it seem like, it was just not right that that kind of knowledge and power would be in the hands of women and I think that's that's that fear you're talking about. It's like that this was drilled into, the man and into the woman's saying, for you to know these things for you to be able to do these things dangerous and we need to be Watchers over that.

it's pretty crazy, but yeah, thank you so much.

Thank you your words and they mean a lot to me what you just said means a lot to me.

I think it would be nice to try and get another series together which is focused quite a lot on the folklore and stories and tries to to address some of this in in more detail. So many so many of these stories have one way or the other is called a monster is something it's a snake or some other kind of monster or cannibalistic female of some sort and yeah, so it's a so clear that these Patriarchs they they produce monstrous image of the human female the human female especially if she's Collective becomes this the dragon this the snake that one other sort of monster and, the world has to be made safe from the monster you therefore you have to you have to slay them up. So you're cutting his head. Usually it's got lots of heads this monster you've got to cut them all off and it's perfectly clear to me that monster is of is a false image of female coalitions. The monster is the monster of mature. That's why it's many headed because as Sarah Headley pointed out children should be or were and ought to be in the future looked after by lots of others and patriarchy was always worried about lots of mothers, especially the Branded together. And so you have to drop the heads off and a bit difficult thing. But these these Saint Georges and people who slay a dragon What they're doing and they're making the world safe from for marriage marriage, patriarchal marriage where a woman is like the property the man and he's got conjugal rights over.

They're making that by slaying the dragon and they make the world safe for marriage private property the family and patriarchy.

Was always baffled me is how even in matrilineal societies where rules of inheritance and how families link up and connect with each other and share resources as based on connections to mothers how this patriarchal dominant mindsets to find its way into

into the fabric of society. I was reading a paper yesterday about the pictures of women in folk war and they were this was a discussion of Linda folklore and the Luna are very material Society. But and but then you look even at the Proverbs and the stories they still paint this pictures that limit women, only to the fear of being a wife and being a mother but when it starts venturing out of that sphere it becomes dangerous to be a woman in any way she performed so kind of taking taking what works but they're not allowing the full manifestation of it to come through because then it would destabilize the patriarchal framework.

Yeah, they were just starting to talk about a very big subject there and the question of because it is certainly not true that every matrilineal society gives women.

Very high status necessarily. It may also operate as status for men and but in general principles of natural any will probably give women significant autonomy and comparative to principles of patriline at least but you're very right about about ideologies like the London which are there after all ideologies that come from States the foundation of states and kingship and which yeah, so there's a whole there's a there's a deep history with with these Miss to discuss I'd say and we almost surely need another series to to start talking about all that and where we could look at some of your work as well. We'd be really great. Absolutely. What would be lovely to hear some of your stories? Yeah, the research are you how you've been affected by them? And how you yeah, how they affect you as a woman. I'd be really to have a talk by you and all that. Yeah, and we need to set that set some of that up. We see what's been so horribly missing is that but so much of this stuff has been done by, people over here mostly white people and that's that's even mostly men might be and it's about time we had your voice and others like it and we really do need that. It's such a breath of fresh air for me to hear you speak in that way.

No, thank you. And thanks to rag because a lot of the questions. I have an insights I get while reading the myths which might just be stories.

But the cultural underpinnings of these stories come from my exposure to the work that you folks do. So. Thank you.

Well, let's meet you because you've you've thrown a lot of light for us as well and so much of the African folklore as well. and you've done some beautiful talks for us and I don't know we're probably gonna need to wind up for this evening because we've reached time and can I ask darsha of darsha's here? Have she just gone to say hello? Because Dash is going to come that gonna be one of our lead. Hi. Do you want to say hello Joshua because we're going to Have used and your work featuring next time which will be May the 20th and maybe you could just say a tiny bit just to say hi and just whatever.

Hello, everybody. Wonderful discussion. Thank you so much Ellen and Chris and Ian and Camilla is just beautiful. My contribution will be to examine what does it mean to raise children cooperatively Cooperative reading? What are the actual characteristics of that? And how does that influence brain development? That's kind of my area and our capacities as human beings. We've lost a lot of that child rearing those practices

that we evolve to have and now I can we can map what goes wrong. So I'm gonna kind of focus there and probably suggest and speculate on other things like the right our Jaws have been shrinking from the lack of breastfeeding in the last hundreds of years, which creates all sorts of sleep problems, which westerners are having all over the place and orthodontic problems. So that's quite interesting I think.

To pay attention to that aspect of the skull as well as a brain case.

Wow, thank you. I look forward to it. Thank you. So and next time is going to be thinking about with with Dutch's work Central did Cooperative childcare make us human and we're going to bring as well more than Finnegan with her work and observations on the evangelist the egalitarian hunter-gatherer people that we've heard about a bit tonight and with her experience of exposure to typical Angela Collective child care. And so that should be a really interesting session. And so I hope everybody who's joined us tonight. We'll be able to come back on that occasion and please sign up on Eventbrite for that. I don't think it's all sold out at this stage. But if you've got the links for tonight, they will be the same links again in four weeks time so you can use those again and so thank you so much to Helen for facilitating and Ian and Chris and everybody for joining us and everybody's I think that's gonna be it.

For tonight. I have a could I talk to Chris Knight for a couple of minutes before we hang up? Okay. All right. So under if you wanna do that. Yeah, let's go. I'm closing the meeting without closing it.

I'm not gonna press the button. Okay, those who want to hang around obviously has nothing nothing privately. But anyway, okay good.

This is thanks everyone for completely a shot in the dark.

My one of my favorite aunties raised her family in Uganda.

ending with Amine dictatorship she was a close friend of Diane Fossey here and shortly before she died. My aunt told me.

She said they used to go to dinner together occasionally.

The last time they had dinner. She said Diane said to her she was worried about her gorillas because they were being pushed farther up the mountain and they could no longer grow garlic and their babies were getting sick.

I've I've never heard that anywhere else. I've never been able to substantiate it.

um, so I just since you're an expert in primate, I thought of Well, actually I'm here. I'm not a field working premarities at all. Everything. I've got has got from other, colleagues and books and stuff. But of course the great apes have a very sophisticated medicine chests, so and I did I mean I did sort of supervise one of my students and Andrew Fowler who's Studying that in some other people are studying that as well with focused.

Some of the primitologists are close friend of our so I'm not a total surprise that these Mountain grillers were using wild garlic.

I don't quite know what other observation to make I can't say anything to intelligent really. that's that's great thing. Okay capuchin monkeys also known to have a very

wide range of medicine treatments as well. And of course chimps, so there are many of them.

Well what she was saying concerned cultivation.

Which is what hooked me.

That's easy. I didn't get it. I just said they culture they're farming the they actually were growing garlic and it in the context of some work that I'm doing now for the past 10 years.

You know, it strikes me that if they find a loaded firearm, they're not going to learn to shoot people or or form armies or anything. I mean, it's not like some leap of development. It's going to happen, but there's something there's something back in there where You know, there's this possibility and I just get as clear don't fussy was telling you Aunt that the mountain gritters were growing arming. God said there were unable to grow their garlic.

I never altitude. Oh my God.

He's sorry I didn't I wasn't listening.

Yeah that bit that's critical. Well, I mean, yeah time frustrative should have known but I mean, I suppose this thing to find out is whether I mean, there's now there's Mountain Riders are doing kind of okay. I get an aren't they? They've been increasing their population that's over 10 years. It should be possible to find out whether they actually it's very notable that those mountains and gorillas have a lot of flexibility. They've been adjusting considerably in their social grouping to the situation of warfare and the situations. They've been coming across it. It's very remarkable that flexibility actually Well, thank you very much. This was fascinating my very concerned about the imminent Extinction of possibly of life itself.

real and the more I get into it I can't write fast enough to keep up with the acceleration now.

But I've I'm zeroing in on the possibility that human beings.

Can make a cultural leap.

Into a new way of being which will be restorative instead of destructive to the planet. I today just being up in London with an Extinction rebellion and demonstration of really lovely festival with my kitchen grandkids.

Very very big in around Parliament here in London today. I would say this probably ended up being 70 80,000 people.

So I'm really with you on that and I think everyone has the right to be.

Scared but somehow.

We're just we've yeah, I mean, we've got an not spread panic if Panic means people to sort of give up. So have somehow or other could have stayed.

Not optimistic about what will happen if we don't do things but optimistic about our ability somehow the last very moment just as you say man, it's just work some extraordinary Revolution. I suppose partly basically, on knowledge that it was through a revolution, perhaps rather similar kind of revolution in at least some formals since we're all sorts of climate.

Stretch and Asians, well aware of in the process.

We became human so I thank you so much. It's it's a very long conversation.

Yeah. Yeah. Okay, and I haven't see you next next move. We're trying to we're trying to organize things on them on a monthly lunar basis.

Sit absolutely because talking about things isn't enough. We've got to start doing them. So that's why this particular series is Moon scheduled.

Saturday morning the new moon the Saturday in the new moon is the time.

Okay everybody. So see all the next time next moon. Goodbye. Thank you very much. Thank you. Bye. Yeah.

Thanks.

Part 3: Did cooperative childcare make us human?

The old proverb says: 'It takes a village to raise a child', and in her outstanding book *Mothers and Others*, anthropologist and primatologist Sarah Hrdy argues that cooperative childcare was a key step in human evolution, and the basis of the evolution of mutual mind-reading.

What are the implications of becoming human as the 'babysitting' ape for childcare today? How did this important transition revolutionise evolving human society?

Sarah Hrdy 'Meet the Alloparents' https://www.naturalhistorymag.com/html-site/0409/0409_feature.pdf Darcia Narvaez 'Growing children and adults: What does species typicality look like?' <https://culturico.com/2021/04/24/growing-children-and-adults-what-does-species-typicality-look-like/> Mary Tarsha and D Narvaez 'The Evolved Nest: A partnership system that fosters child wellbeing' <https://pubs.lib.umn.edu/index.php/ijps/article/view/2244>

Morna Finnegan, author of many articles on gender, ritual and power; Darcia Narvaez, Professor Emerita of Psychology, Notre Dame University; Camilla Power, long-time Senior Lecturer in Anthropology at University of East London

<https://www.youtube.com/watch?v=ueF7kS32gaA>

Camilla: Good afternoon from London everybody to the third one of our series becoming human and today we're going to focus on the area of cooperative childcare.

Did cooperative childcare make us human? Does everybody want to introduce themselves?

Chris: Well, I'm not one of the key speakers, but my name's Chris Knight.

I wrote a.

Pretty good book actually.

I think when I read it again in 1991, called *Blood Relations; Menstruation and the Origins of Culture*, it hasn't had too much impact on those topics, but it's just often described as...

Camilla: John Hawkes flagging it up the other day.

Chris: Yeah recently, it's been gaining a lot of currency, which I'm really pleased about.

I'm also usually described as the founder, a few of us founders, but the founder of Radical Anthropology, which is London's longest running evening class going back to 1978.

Camilla: OK and I am Camilla power.

I've been organizing this little series.

I'm an evolutionary anthropologist, so I'm particularly interested in the emergence of symbolism, symbolic culture, ritual, etc and we so that's kind of my general area, but I'll say a little bit today about Sarah Hardee's work and then hand over to Dasha.

Would you like to introduce yourself, Dasha?

Darcia: Sir, my name is Darsha Narvaez.

I'm a professor emerita of psychology at the University of Notre Dame in Indiana, USA and my work is kind of comprehensive lifespan development of morality and flourishing and I'll be talking about that.

Morna: Thank you Camilla, Darcia and Chris.

My name is Morna Finnegan.

I'm a social anthropologist whose field work was with Ben Jelle Yaka up in the northern forests of the Republic of Congo.

I'm I'm interested in everything that that people have just mentioned, so the relationship between menstruation and culture, their relationship between cooperative.

Child rearing and culture.

I'm really interested in the relationship between women's ritual life and their pro-creative uhm statements and coalitions and I'm interested in morality as well.

So I'm really looking forward to hearing from others.

Camilla: Thanks very much.

Does anybody else want to say who they are? I mean, it's quite nice if we have an idea for why people came along or what they're interested in.

If anybody would like to.

Michael: I will introduce myself.

I've been a fan and colleague of Darshan's for a decade.

Probably I'm I'm a documentary filmmaker, not an academic, and back 3540 years ago it became apparent that your voices need to find ways of getting beyond the academic community and being expressed in the common domain and how do we reach parents? How do we connect with parents, which is always an evolving challenge because they're on this timeline they're on this conveyor belt, their interests change, so it's really quite challenging to take these ideas and present them in ways that actually capture the meaning for the current crop.

So, I've been doing interviews with people like you for 35–40 years.

I have a small nonprofit called 'Touch the Future', which is the archive of these interviews.

They began with Ashley Montague.

He was my first hit.

What a delight to spend time with him and be friends with him.

David Baum was a colleague for a number of years.

When Gabor came out with his book on Addiction, I went up to Vancouver and met with him in his home and interviewed him and tried to bring his voice forward as many and in many ways as I could and I have a little project hopefully in the works with Darsha and Gabor to create a dialogue between the two of them about a whole full range of topics that I think would be stunning and again it's to give both of them a different platform to share their vision.

Darcia sent me the invitation.

Camilla: Oh lovely.

That sounds great.

Sounds like it might.

Might get some attention.

Yeah.

Any anybody else before we get going.

Otherwise we'll launch in.

Peter: I'd like to go quick.

Peter Barus.

I'm working on a book for several years now and what I'm really interested in.

Is that there are so many disciplines and areas of mastery and activism and healing and so forth that appear to me to be converging now on a, on a very close examination of the human condition, and all seem to be pointing at the same thing.

It's it's incredibly complex and the noise of the of the attention age is such that it's just not.

Public discourse is apparently oblivious, but I don't think that matters, and I think that if humans evolve.

In a way that allows us to avoid extinction, we may not even notice.

How we did it.

Camilla: Any more people who would like to say orient themselves? If not, maybe we should just crack on.

Well I'll say something first and then we'll have a space for any discussion and then Darcia, and then we're going to go out with Morna hopefully, which will lead to a long, rich discussion, I should think.

So I'm going to talk about a little bit about Sarah Purdy and put the context we put out that very nice brief intro article for Sarah's from 2009 when she published this fabulous book, Mothers and others.

Which I think of as as a Bible, really one of the greatest books ever written on human evolution.

Sarah Hurdy should be way, way better known than Steven Pinker.

She's or anybody, such as the likes of Yohan or what's his name? Harari.

Anybody like that.

Who's been mega bestsellers on issues of human evolution? That Sarah is a real evolutionary anthropologist with many long decades starting work.

With.

Primates with little monkeys langa.

Peace and applying her understanding of monkey sexuality to perspectives on the evolution of human, of women's sexuality and she's produced a whole series of books with starting with the women that never evolved.

Going through Mother Nature to this culminating classic book, mothers and.

As and she's really paying attention to the big question of why why are humans so extraordinarily, what's been termed hyper Social or Pro social? Obviously, humans can behave horribly and badly.

To each other, but the default for kind of human nature is not to do that.

The default for human nature is to be able to be very highly cooperative, even with people who are complete strangers and she starts off with this picture of humans on an airplane as her.

I think it was about the era when they had that film snakes on a plane.

So instead of snakes on a plane, she's thinking of apes on a.

Plane and she's just thinking about when you get on a plane, how, it's tricky to get on with your.

Near neighbors and you're all feeling uncomfortable and fidget.

Thing and you don't feel in your best your best mood, but nevertheless you do your damndest to be cooperative, not, not always, not always, but you do your most to be cooperative and helpful and then she contrasts that picture with, well, what would happen if you were in an airplane with a bunch of chimpanzees? You'd be lucky, as she says, to get off with your fingers or your testicles or your toes intact.

If it came to chimps and just as Richard Ranger was saying, the amount.

Of of levels of actual incidents of violence with chimps are orders of magnitude greater than would happen in in the same kind of of of group of of.

Yeah, same kind of group density of humans.

So she's asking, well, how does this arise? And amongst the theories that are being proposed are.

Ideas of so-called Machiavellian intelligence that as kind of brain sizes get bigger, neocortex expands, increase of intelligence, and that this would be giving rise to Machiavel intelligence is about sort of cooperating to compete in some senses.

It's very it's got a very competitive edge and apes, great apes have theory of mind, and they try to work.

Out.

Predictively.

What other animals are going to be doing to try to get that little edge of advantage? But what they're not doing, which we talked about in the earlier episodes of this, that they're not doing, is letting other apes read their own minds.

So what Sarah is saying is so, so special to humans is this aspect of mute your mind reading? Also known as intersubjective.

The the and connected with the shape of our eyes.

The the mechanisms of being able to read eye movement and eye gaze as as a basis for sharing attention, joint attention and so that inter subjectivity is critical and Machiavellian.

Intelligence which is really about one way mind reading.

Not being receptive for another another individual to read what you what what you want, what your emotions are and another area that's been posited as a way to explain our super sociability.

Is has been Groupon group conflict and this has been really trendy.

The idea that humans develop morality in relation to the need for group solidarity against other groups and I don't know how many of you have been watching this chimp empire and go go chimpanzee.

Community Netflix documentaries, which have been absolutely stupendous in, in my view, they're amazing for for watching chimp behaviours.

But there it's quite clear that chimpanzee or chimpanzee societies are organized in terms of the opposition between groups of chimpanzees that are in in really ferocious competition with each other for resources.

And.

But but humans do not have this level of of group ish.

Not not this sort of.

You know.

There there can obviously be with human groups hostility to outsiders, and that obviously does mean.

Debate in many human societies, but it isn't intrinsically human, and it is certainly not an aspect of human hunter gatherer societies, where there's a tendency to want to create far-flung linkages between communities rather than any kind of territorialism.

So I'll just read a quote from early in Sarah's book about.

This way her attitude to this, this idea that's come from many people like Richard Wrangham, people like Steven Pinker, I could go through a whole list of of different people who've argued that warfare, Groupon group competition is the source for morality and group solidarity and this is what? Sarah's saying here.

She says well, I'm not going to say competitions unimportant.

This comes from page 20 of mothers and others.

What worries me is that by focusing on intergroup competition, we've been led to overlook factors such as child rearing, which are at least as important, in my opinion, even more important.

For explaining the early origin of humankind's peculiarly hyper social tendencies, we've underestimated just how important shared care and provisioning of offspring by group members other than parents have been in shaping pro social impulses and that leads to her the theory that she expounds.

Through the book that what is it? What was the social context giving rise to to these extraordinary this extraordinary development of hyper sociality and pro sociality and fundamentally babysitting we became the babysitting great ape that mothers.

Could give over their babies.

Could get a break by giving over their babies to others to take care of, at least for a for a time and that enabled mothers to freed them up for all kinds.

But it was.

But it's in setting up this triad of mother.

Baby of a career that all kinds of specific, interactive and becoming intersubjective behaviours arise to keep all the members of that triad in touch with each other and their behaviours that lead to an evolutionary trajectory.

Of meshing mental states of wanting to mutually mind read each other and share emotional States and understand what what each other is feeling in in quite specific ways is is what she's arguing now.

This has all kinds of implications.

It's got implications in terms of what kind of society, what, what kind of social contacts our ancestors lived in, because from a point of view of great apes.

It's very difficult, in fact, for mothers to simply hand over very vulnerable young primate babies to others and the prime reason why it's so difficult for great Hapes to do that is that.

They do not, generally speaking, mother great tapes are not living close with female relatives.

Generally speaking, mother great hates are likely to have moved from a Natal group and to be in amongst.

Strangers fundamentally, and they don't, or and they do not necessarily have the sufficient trust to be be able to to let another individual where that's female or it's certainly not a male great age.

If you seen the chimpanzee empire, you'll you'll you'll be quite aware of that.

Male great ape is not a good candidate for handing over to infant care.

But there are exceptions.

There are very interesting exceptions and I was talking on Twitter with.

Jill Pratts, who is the director of Mongoli Senegal Savannah Chim project and she said she was putting out tweets about a particular young female chimp that they were all expecting to be going emigrating because the young female chimp, before she's going to get pregnant, she goes, she leaves the group and goes to find another group and in this case, they've been watching this particular individual, I think a named Luna and Luna turned out to have already had an offspring.

So she was there in the group where her mother was.

So I was asking Jill, well, are there any? Is there any evidence of some grandmother's behaviors happening? In that situation, and she was saying, yeah, there was so interaction of mother daughter.

The little info.

So it's just showing that there is this plastic capacity in the situation where mother with her mother and then an infant as the kind of core unit for this, this cooperative childcare, to start to to begin.

It's possible to happen and in her book also, Sarah heard he's noticing situations in zoos.

Again, captive chimps or bonobos, where that situation may arise and of course, there's the famous family from Gombe, the F family.

Where chimp female chimps were not the favoured F family, the females were not moving out.

They were sticking where their mother was and that was a huge advantage for those female chimps.

So in our evolution, if we or in or our ancestors.

Were great apes and great ape ancestors, but hominin ancestors who was staying around where? Their their mums were and that would have been a huge advantage, particularly for hominins coming under pressure of increasing brain size.

We looked last time at the degree of increase of brain size and the idea of the so-called grey ceiling that we can see in the fossil record.

So the idea of the Gray ceiling is brain size can only rise to a certain level.

If a mother is raising the infant completely by herself.

If she's doing it by herself, there is a ceiling, a grey ceiling on the extent to which brain size can increase because she has to produce all the energy required by that, that that infant, that that infant that's targeting, that adult brain size.

So we can see in the fossil record for all the fossils prior to two million years.

Fundamentally, they're underneath that grey ceiling.

It's indicative.

That those species of osteopetrosis, eines and even some early **** have not yet gone, they have not.

Yet gone past that great ceiling, it's indicative that mothers are still doing a large amount of the work by themselves.

But with early home own, particularly the emergence of home erectus.

Our ancestors smashed through the grey ceiling and the only way they can do that is through some version of cooperative childcare.

Involving and the best candidates for being involved in that childcare to start with.

Would be the mother's mother, as in line with grandmother hypothesis, but also her oldest daughters, potentially and then of course, sisters would be cooperative to each other.

So we can we can look at particularly monkey models where females generally.

Are living.

They may well be living in the same troop as their mother with their sisters.

Helping their daughters, this is quite common for monkeys.

Monkeys do lots of babysitting because of the female kin coalition set up and so it becomes very important to understand cooperative childcare in terms of this, a long evolutionary.

Trajectory, but for genus ****.

Of very close female kin connections and that that is kind of the core social social unit in our evolution and of course that goes against a great deal of the kind of prejudices of expectations of, well, great tapes.

They always emigrate from the group and.

Most human societies are patrilocal and females.

Lead the group.

But of course, as Sarah analyzes and she knows about in the book, she's talking about the much more recent analysis of hunter gatherer societies, which have shown that actually no patrol locality isn't characteristic for most hunter gatherer societies.

Certainly not African hunter gatherers and that there can be multi local residents, a lot of flexibility around residents.

But there's also a life history effect whereby when a young woman starts having children, she's highly likely to be in the same camp as her mother and my experience.

With the Hadza feel it, with the Hadza definitely following work by James Woodburn, who also had these findings as published in Manhunter.

You know, they're they're a core female kin frameworks, really.

Mothers and daughters are very likely to be together in camp.

You also get kind of claves of of close sisters or cousins or that are matrilineally related to each other, even though perhaps later on.

As a as a woman has children, she might then move more towards where her husbands kin are.

If that marriage has has maintained itself, and she will.

They might move around, but but female kinship sisters, as well as highly cooperative.

In fact, there is some evidence, so it's not well.

Published of Hadza sisters sharing breastfeeding.

Doing this sort of very intimate shared childcare, which is is well known, practice among Central African hunter gatherers, some some Central African hunter gatherers as well.

So yeah, I don't know, Chris, if there's anything else I haven't said there about Sarah Hardy and there's so much to say from her book, but these are some of the kind of key aspects of this really important theory of of shared childcare as quite fundamental to.

Human evolved psychology.

Chris: Just briefly to say that so much.

So-called knowledge about great chimpanzee behavior comes from Gombe, from Jane Goodall and of course Richard Wrangham, her student and that it's so clear that

if the resources are scarce and the females need to be quite separate from each other, because otherwise there be resource competition and there are now, therefore isolated.

Then what happens is that you get the group of.

Males.

Imposing pretty severe dominance over all the females, but it's equally clear that if we go to another part of Africa right over to the Thai forests in the West where the females aren't struggling against each other because there's plenty to go around and they do form coalitions, then the females are able to stand up for themselves and the males.

Maybe a bit dominant sometimes and not particularly well behaved, of course, but the scale of male dominance is is drastically reduced.

Until then.

Of course, if you go across South of the Congo River to where some chimpanzees managed to.

About a million years ago and there was a wonderful, richly resourced area of wetlands and marshes and all sorts of Lily bulbs and stuff, and you can see bonobos today in those areas.

Of course, the females get so bonded that they end up with a matriarchy.

So the critical thing is that there's no sort of genetically determined.

Social structure common to chimps, it all depends on circumstances and as Camilla was mentioning the chimp tempi, which I absolutely so recommended is absolutely an astonishing piece of of filming.

Astonishing piece of research.

There are two groups.

1 is a very big group with lots of males and the other.

The group and when I say lots about 15 or 20 males patrolling their territory in a rather militaristic way with severe male dominance and even in the same area, just across a few trees away, there's another group with only 8 miles, and because in their case they really have to have a lot of solidarity to sort of compete against the the.

If you like the enemy group.

Then the males.

There's no one's dominant.

All the males are more or less egalitarian, and the females work with the males do the same kind of patrolling.

There's not very much male dominance, and the females actually go hunting together with the males.

So.

It's it's just.

The the, the, the, the message is nobody should think there's any kind of genetically specified social structure.

It really does depend on circumstances and the circumstances which enable the maximum amount of gender egalitarianism, even among chimps, never mind humans where there's abundance.

So where you've got real resource abundance, you're gonna get equality and where the scarcity is gonna lead to the kind of conflicts, which then of course intensify that scarcity as their own points out, you get a sort of self fulfilling prophecy with scarcity where.

Scarcity produces inequality, but the competition then intensifies the scarcity and the and the exact opposite dynamic.

When you have an economy of abundance or even super abundance, as, as we know from the Congo people, where the people, as Jerome points out, and I'm sure more will, can support this, they don't know what scarcity is.

The idea that anyone could possibly starve.

Is a concept they didn't even have in their heads.

Camilla: I just want to add a little extra point.

Some say something about.

Male involvement as well, because what's interesting about the whole cooperative childcare model is that actually it it kind of shifts the trajectory towards.

Uhm.

Male strategies becoming increasingly similar to female strategies in many ways that that the more that males get included into childcare coalitions.

For instance, we're when we come to hunt together camps a a woman's had a new a newborn baby.

Just just Bob and that baby in in the that day will go around every member like 14 people at least will be holding that baby that day, which is something almost inconceivable among great apes.

It's completely inconceivable and it will include men and not only the probable father.

And.

Yeah, so so this is sometimes been termed biocultural reproduction.

It's like it's it's reproduction that's kind of free of the biological brute facts if you like.

Though of course, in an evolutionary trajectory, we have to be paying attention to. Facts of kinship and who's related to whom? For for getting the behaviours.

Doing.

But in these female cooperative coalitions, of course, will be born.

Males will be born male hominins, young, young, evolving humans and what will happen with cooperative childcare is the inter birth intervals get shorter as the mothers get better support and as they wean youngsters very young, in fact, humans tend to wean children very young compared to great apes and so brothers and sisters will tend to be much more.

Similar in age.

Than great apes would have bigger gaps between the siblings and brothers and sisters will also tend to be staying in the same groups.

Residents as, as humans take longer to actually grow up to sort of sexual maturity. So these are life history effects.

That come out of.

Of cooperative childcare as well, so brothers may be quite critical in particularly this is an almost a novel relationship.

Brothers and sisters, having these long term relationships which don't so much happen with great apes because one or other sex will tend to go at sex maturity.

Relatively early and because there's a lot of age gap between them.

So in some ways male behavior that not necessarily associated to pair bonds.

About male behavior associated to sibling bonds may be quite a critical novelty in the evolution of of cooperative childcare and people like Karen Kramer have argued that we can make a case for cooperative childcare proceeding.

The emergence of pair bonds in humans and humans.

We can't really do it the other way round.

You can't get pair bonds 1st and then cooperative childcare.

You get cooperative childcare first, then you might have arguments why pair bonds could be established out of that.

But but Cooper? Childcare maybe fund the founder, the foundation and potentially males involved in those coalitions maybe related males rather than Pebble males specific.

I think I've said enough now.

Chris: We need to move on, so I think it's Tasha next.

Darcia: Right.

Camilla: Is there any comment? Maybe if people have questions or comments or?

Chris: OK, you write some comments before we go to Dasha.

Camilla: We could have.

If there is any.

Chris: Just we've been 35 minutes already.

That's just a bit concerned.

Camilla: Let's go Dasha though.

Yeah.

Darcia: Alright.

Hello everybody.

Good to be with you.

Thank you so much, Camilla and Chris's wonderful introduction there.

I'm going to share my screen and share the PowerPoint, OK.

So I'm going to talk about what we call Humanities evolved nest.

It's the hunter gatherer childhood model, according to Melvin Connor, we use the term also evolved developmental niche in our fancy academic papers.

Because someone said Nest is too, too primitive, it's not so.

All right, now we're changing.

We're going to use evolve nest to just rings true for a lot of people.

So Mike's question here is, is the evolved nest essential for developing our species nature? So let's find out what I've been working on for maybe the last 20 years.

What has gone wrong with humanity, and how do we repair ourselves? My area, as I said, is pretty interdisciplinary.

I've had multiple careers and came late to studying world development and have realized.

That it has to be the answer to this question is a transdisciplinary 1, and so we need to understand all sorts of things before we can shift away from the path we're on.

Well, how do we know really that something has gone wrong? I use a lot of data from the United States because it tends to export its ways to the world, and it's just getting worse and worse by the day.

Mental illness, violence, drug addiction, suicide, shrinking lifespan, everyone under-age.

60 today is that a health disadvantage compared to the 16 other high income nations, our child well-being is ranked near the bottom of the high income nations, and we just had a poor report come out this.

Week on the epidemic of social isolation and loneliness, which started even before the pandemic and has continued getting worse.

At the same time, humanity is destroying their habitat and habitat for all life, really and of course, it's not all humans doing this.

We've got massive breakdowns in Earth systems, ecological disruption everywhere visible, wildlife decreasing by 50%, massive poisoning of soil.

Air, water, animal bodies, oceans are filling with plastic.

There's climate instability.

It's it's going to we're going to skyrocket the temperature in just a few years, so we've we've been around for 2 to 6,000,000 years depending on how you count it and it's the last 5000 years, something went off the rail, our 1% of our existence, we have been Earth destructive and self-destructive.

I would say so.

This I'm I'm giving you very condensed information.

You're moving rather rapidly because there's so much to.

To integrate so we can you can ask more questions later about things, all right, but how do we know that humanity hasn't always been kind of the way we are today, always been self-centered and aggressive and felt miserable through life? Well, to answer that question, we need to understand our deep history and we can examine the life ways, the well-being and the human nature of those whose cultures extend back for 10s of thousands of years.

They're not causing these issues and they're not miserable.

So who would we look at? We look at those who represent our 95 to 99% of our existence as a human genus, depending on our new.

County.

Small band hunter gatherers, the Sun peoples, for example, have been in existence for over 150,000 years in Central Africa.

These are nomadic foragers with few possessions.

Their immediate return societies by and large versus delayed returns.

Societies like ours, where we invest in cultivation of plants, domesticating animals, and we accumulate resources and actually hoard and these pneumatic forages are still in existence around the world, of course.

Under duress from globalization and other pressures.

So what do they know? Well, they provide a model for repairing ourselves and this again takes transdisciplinary perspective and what is that overall? What's the requirement that we need to take up and that is about reconnection, we need to reconnect to our nature.

To nature speaking broadly, so to that ourselves, what does that mean to be connected to yourself, to others actually also to the cosmos, to the universe and we need to reconnect to how we Co construct the world.

By the way we act, think, feel.

And and so how do we do that? How do we reconnect? Well, we need to follow what I call the species typical pathway that's found in these regenerative communities, those small man hunter gatherers.

What does that look like? I call it the Wellness informed pathway, which is different than we.

We talk a lot about these days.

Trauma informed practices in the United States because so many people are traumatized easily, triggered into shutting down or getting angry.

But people have to understand that that's not enough to be trauma informed.

You need to also be Wellness informed so that we can actually meet.

The needs of people and fulfill their potential.

So we have two gaps.

We have the gap at the bottom of our development which so we've been missing these things, right and that is to meet human basic needs and foster thriving thereby.

But we also have this top gap where people are missing capacities that we find in small band hunter gatherers is heart mindedness, a sense of connection and flow with other.

Years and an Earth centered living.

No.

How they? They're not out there destroying and exterminating other life forms, right? Because they know how to get along and keep things flowing and in balance by and large.

So what is? What are our basic needs? Well, we know these are just a sampling of things that we know that animals as animals, we need nourishment, warmth, protection and safety.

We need to feel at home in the locale.

Every animal wants to explore where they are.

So they feel place full essentially.

We're also mammals, though, so we need affection and play and included in the group social mammals in particular need extensive bonding, community support and social enjoyment, and then all sorts of human needs that are unique to us that Sarah Hardy noted the.

Importance of inter subjectivity, that sharing of mind, heart, emotions, cognition with multiple adults, not just mother, right, or mother and father, and the immersion and communal life.

How important that is for developing our nature, meeting our need.

Apprenticeship making, meaning from the stories we're told and practiced the ceremonies we participate in, and the ability to expand the self through healing practices and other community celebrations.

So what does this lead to? Well, it leads just human thriving.

Now, if you look at the list here, I know very few people that exhibit all these things, right? But this is what we are is documented among the small than hunter gatherers, the.

Bushman, the Sun peoples pre conquest peoples according to Richard Sorensen and we can see the thriving individuals have quiet minds.

They're innerly, happy and even childlike, gleeful.

They're vital and fully alive.

They have full autonomy.

They're not bossed around or.

Self doubting.

They have expect honesty and are honest.

They have a good sense of humor, lots of laughter, outstanding memories and senses can learn things in a snap if they will it and can build habits that will they have no how for getting along in the particular land.

OK, they're ecologically attached and they connect to spirit.

They have aware of awareness of reality beyond the manifest and in relationship, they enjoy being with others and enhancing their well-being.

They are relationally attuned and responsive.

They have empathy, listen unconditionally or communally oriented, authentically helpful, exhibit unconditional love and forgiveness.

Of course, nobody's perfect.

It's not universal all the time.

These things, but by and large these are common characteristic.

So they're generous.

They expect sharing, they're deleterious, they respect ancestors and future generations.

That's just goes without saying in a way and the responsible in essence towards.

The web of life.

Now these things are, as I said, on an average probabilistically characteristic.

Well, they also develop a certain way of being with others relationally attuned.

That's this ability that chimpanzees do not display, right? They're relational attunement.

They're fully present in the moment.

They show a small ego because they're aware of this, the common self, the sense of connection to others, which is developed and primed.

By the evolved nest, which I'll talk about shortly and develops this sense of secure attachments, which is beyond just mothers to multiple others and to the natural world through companionship, care and this communal imagination.

When needed, they're able to think beyond the face to face, and do so with a greater egalitarian respect and sense of responsibility.

Their agency and communion with others flow together.

It's not us against them or me against you.

It's us together in the flow.

So all this is constructed postnatally and finally, the last part of the Wellness informed pathway I suggest is that we end up with Earth centered living know how when we are nested well which I'll talk about in a second, we have a sense that the thing is right when it tends to preserve the integrity, stability and beauty of the biotic.

Community it is wrong when it tends otherwise just have a deep sense of that as we grow into maturity.

So the path to Wellness then follows this cycle of cooperative companionship, which starts with companionship, care from conception, and feeling, and welcoming and support, which builds a healthy psychosocial and neurobiology, which I'll mention quickly later and leads to adults who are well and wise and then these adults create community, Foster and maintain a community that attends to basic needs and keeps this cycle going and this is what we can see.

Then in the societies that are regenerative in the societies that are fostering what I call our human nature.

So what does that companion care look like? We call it the evolved nest and I could speak for hours about the evolved nest and all the components.

Let me just say it's the every animal has a nest.

We do too, and it's this set of social and ecological circumstances, typically inherited by members of the given species.

Which are matched up with maturational schedule of the.

So it's one of many inheritances beyond genes that we have mostly these characteristics are over 75,000,000 years old.

It's as if evolution has done the experiments on what is adaptive, and they're provisioned by a community.

The community that Camilla was talking about of.

The aloe parents and the aloe caregivers and it's especially important the nest in early childhood because our our young, our newborns resemble fetuses till of other animals until about 18 months of age with rapid brain growth and body growth underway, but especially the brain is shaped by the experiences that are being.

Provided by the members of the community.

So baby needs need to be met quickly to foster a well functioning brain.

The evolved nest then involves soothing perinatal experiences, so welcoming gestation and pregnancy.

Birth is calm and nourishing and no separation among the baby.

No painful procedures and no infant circumcision.

You know, and all that stuff that happens in medicalized birth in the United States and then on request.

Breastfeeding for several years, the average age of weaning across the world.

So these characteristics come from all the hunter gatherer studies around the world.

That have been summarized in the book by Hewlett and Lamb's Hunter Gatherer childhoods in Melvin Connor's chapter especially and then I've added a couple more that were not listed there, but that are common.

Around the world, so on request, breastfeeding, the average age of weaning is about four years, and that's because our immune systems take about that long to develop and breast milk has all the building blocks for the immune system and many other things and I can say so many things.

One thing that's interesting is that our jaws have gotten smaller in the last hundreds of years since industrialization, when women stopped.

This is European skulls primarily.

When women stopped breastfeeding to go work in the textile mills and you can see the.

Laws that are different in size and it's caused sleep problems because the palate is too narrow and orthodontic problems and so we can see that there are significant physiological effects of the different aspects of the component or the components of the nest.

Positive moving touch we know is so important.

Animal studies show that when you remove a a baby from a mother, that all sorts of systems get dysregulated and humans aren't even more sensitive than rat babies, for example, and no negative touch.

It should.

That changes the trajectory of development.

We have longitudinal studies showing that spanking is like physical abuse.

To children, they become more aggressive and self-centered and so on.

Positive welcoming climate.

So that throughout childhood and throughout life, actually you need to feel like you have connections that you matter, that you belong.

So all these components actually except for the 1st 2 are part of the nest for everybody.

#5 is self-directed social play.

This means not organized sports.

It's children running around and creating their own play their own chase or climbing trees and so on.

All sorts of genes are turned on, expressed through this and all sorts of self development, wonderful things of self-control and all are developed.

Allow parents or allow mothers is Sarah Purdy has turned it really vital for this because you don't want to just have one caregiver.

You don't become as flexibly attuned and ability able to relate to multiple others.

If you only have one caregiver and these people then are supporting the mother as well, so that she can be present and not overwhelmed, which.

Yeah and then responsive relationships meaning in babyhood, meaning keeping the baby calm, which keeps the biochemistry in a growth mode, if you just stress a baby, you're leaving them alone or leaving them to cry and that's going to shift trajectory into either slowing down growth or growing the wrong things.

The self-centered aggressiveness that we see so commonly in the United States in adults and then #8 is nature connection and nature immersion so that you build a sensitivity and relational attunement to the natural world around you.

Where where, where your locale is and you feel concern for it and responsible and then also healing practices.

So routine ways of getting rebalanced physically, relationally.

Communally with the natural world and.

So on so, that's just really fast.

All right, So what does? Well, why is it so important? Well, there's a constant interaction between nature and nurture and childhood and life, especially epigenetic things are happening.

We are develop development in plastic.

We're dynamic systems, so whatever happens in the early stages of a dynamic system affects the trajectory later on.

So it's really important to get to set things properly.

I think the evolved nest may be a keystone for developing our human nature because we are biosocial creatures.

Our biology is shaped by our social experience, and our sociality is dependent on how well our biology works.

So carryovers are Co constructing all sorts of things emotions and cognitions, which in the brain are intertwined the sense of self, the social self.

Moral self.

Is this a am I a good person? Am I a good creature? Is it safe to be here? So is the social worldview is also affected relationships? Are they trustworthy? And so on and in effect, babies need a womb with a view.

This is Montagues actually Montagues term.

The external world experience, exterior gestation and that's what we don't provide much in the United States and what happens when you in those early years? This is Jane leadoff, the accidental kind of anthropologist amateur, who was astounded by the iguana and how differently they were and in all these characteristics I mentioned and flourishing and thriving that we don't.

If she didn't see in the United States.

It's she was with them in the 50s, but didn't write her book until the 70s and this is a quote from her.

The feeling appropriate to an infant in arms is this feeling of rightness or essential goodness.

The premise that he's good, right, good and welcome.

Without that conviction, a human being of any age is crippled by a lack of confidence, a full sense of self.

Spontaneity of Greece when the Dalai Lama first came to the United States, he asked what's wrong with everybody.

Well, they are not getting this nested care and that's been going on for decades and maybe centuries and so they're lacking that sense of confidence and grace and then it leads to various problems and one of those most significant aspects of not provide being provided with evolved nest in early life is the right hemisphere under development because it's scheduled to develop more rapid.

I think.

In the early years and it's related to self regulation of all kinds, vagus nerve, endocrine systems, stress response.

Inner subjectivity, that ability to mind meld and take perspectives, emotional intelligence, and what's going on inside yourself and interpersonally, your sense of empathy, your sense of being in your body and being here.

All these things are.

Associated then with the development of the right hemisphere, and are underdeveloped when early care is not.

Nested it can develop throughout life, though with play and spontaneity in the present moment.

So it's not hopeless for us, who missed out on the nest, right? And we also the other aspect that gets missing then from that early under care lack of nest is this sense of spirit and Colin Turnbull, the anthropologist, has this quote about the unbutt and talks about the awareness of spirit that enables one to accept differences of manner, customs, speech, behavior, even of belief, while still feeling an underlying unity.

It is awareness of spirit that enables one to avoid the conflict and hostility that arises so easily from such differences, so that again, that's a right hemisphere directed.

Aspect of being human to be really connected to the cosmos.

So what happens with the degraded nest? Well, you're going to have dysregulation of all kinds.

It's going to seed ill health, mental problems, physical, social, moral, because you're going to get have this righteous morality where you want to dominate others and you're disconnected from cell phones, community in nature and I have this moral theory called trime and ethics.

I talk about this based in Paul Maclean's Triune brain theory, which identifies global brain states, which is what this is based in.

We're born with survival systems.

These emotion systems that all mammals have.

Unknown Speaker: Of.

Darcia: And the stress response system as well.

It's intertwined.

These are innate and but were mammals and the mammalian aspects of our capacities to care or love and play with others have to be grown postnatally primarily and our executive functions and our ability to think well are also grown.

Was natively highly affected by our experiences, so these are the abilities then that.

Enable us to think about things outside the present moment to abstract to, imagine, interact.

So on so with good development, with nested development, these things, these abilities control the survival systems so that they get activated accidentally.

Ohh, that's nothing there.

That's just a shadow.

It's not a a lion after me.

Ohh like and then you calm down right away and you spend your time mostly in this heart.

Centered what I call heart centered imaginations, your mammalian aspects, your social, mammalian aspect is really dominant, and you use your executive functions when needed.

But it's also always rooted in your sociality.

Now what happens with under care? The lack of nestedness? Oh, before that.

Sorry.

So I think our human nature is actually what I call this social engagement ethic in a communal imagination ethic.

This is our moral nature that we evolve to have with nestedness now without nestedness what happens is these survival systems.

And.

Because there's early toxic stress, so you're enhancing the stress response.

You become threat reactive and easily triggered into shifting blood flow to run away, right or to fight and that doesn't help you think, well, it would be open hearted or open minded and it actually shuts down your high priority thinking then and controls.

Your ability to imagine alternatives at the same time.

If this has been an experience in early life.

Your mammalian sociality doesn't grow properly.

You don't get enough experience with empathic others to develop your loving and caring systems, or your playful, interactive, flexible systems and what you end up with is your ethics is self protectionism face to face.

You're either going to be oppositional and.

Kind of fight, or you're gonna withdraw because you don't feel safe and then when you use your imagination, it's going to be more about controlling others.

What I call vicious imagination or just attached relationally and emotionally detached.

You just think about your thing.

You go in the ivory tower.

Right.

You think about? All the models and stuff that don't have you relate to people face to face, and that's too hard and what happens also is you can see this been in the Western world that we are stuck in these root metaphors which Chuck Bauer is called a straightjacket.

It's really hard to get people out of this and where is this coming from? Where are these coming from? These very familiar lists of things.

They're it's an underdeveloped.

Frame enhanced survival systems and enhanced left brain ego consciousness.

Right.

So this left brain is very much about control.

It's very much about categorizing and sorting and hierarchy and that's where we are now.

So we have patriarchy and.

Dualisms of all kinds West and the rest right, and the twofold logic either or instead of either or both and fourfold logic and all these things that are driving us crazy and increasing inequality and misery and authoritarianism is part of this.

Violence and cruelty is moral behaviors against nature, children and others.

So which pathway, which human nature are we going to support? The current trauma inducing pathways while we're on, we don't meet basic needs.

We foster ill being and then we end up with individuals and communities that are toxically, stressed and their hearts, their spirits are locked down, they cannot reach their potential and they have a lack of no hall for holistic, compassionate, regenerative life.

The alternative, of course, is our Wellness promoting pathway where we meet basic needs, promote health and with thriving develop heart minded individuality individuals sorry and community and I know how for holistic, regenerative compassionate lifestyle.

That's my story.

So a lot of what I've said is in this 2014 book neurobiology and the development of human morality, evolution, culture, and wisdom, it's for college graduates, really.

For that reading level and then these two books.

Restoring the Kinship Worldviews from last year and *The Evolving Nest* coming out in August, these two are written for non academics, so please send me a note or ask me questions about anything.

Thank you so much.

Camilla: Thank you for that.

Are there any questions.

Darcia: That was very fast.

Very dense.

Chris: My own feeling is that it would be good to have more than next and then because then we can have an open, really free open discussion about absolutely everything.

Darcia: I guess there is one question.

Morna: Is that Peter?

Peter: Oh, that was for me.

But we were going to wait until later.

Is that right?

Morna: OK, what, everyone? I mean, let's see what the consensus is, but I feel like.

What? Garcia has just said is so powerful.

You know, I will.

My entire presentation is kind of a response to what Darcy is saying, but I feel like I don't want to lose the thread.

I it would be good to take questions now to come back to what she's just given.

Us.

Chris: You're in charge then, Mona.

Morna: Yep.

Peter: Oh well, thank you.

I took notes as you went and the first one had to do with this idea that.

Hominids have been around 22 to 6,000,000 years in the last 5000 have been Earth and I had recently been boning up on network science and super criticality is a term in network science which refers to a moment when.

A network consists of nodes that are each connected to another or others, but not in large components with a lot of connections, and then when that happens, the next connection might be 1 node makes 3 connections and then all of a sudden.

It.

Has 1000 connections and so if it was the Internet you're talking about, the development of social media, for example and I thought there's this question.

There was this Neolithic revolution theory, and there's all this, like, how come we went along for hundreds of thousands of years and then only 5 or 7000 years ago, we suddenly went nuts with all this explosion of technology and so forth.

Well, maybe the.

Brain just got to the point where.

It went super critical and when that happens? The trajectory as you talk about of evolution is kind of thrown up in the air.

It would be very easy for humans to sort of get stuck on a track, which is which I don't know.

It was just a thought.

I've got lots of other notes, but I'll restrain myself.

I want to put you in touch with Gavin Anderson, unless you already are.

I see a lot of alignment between you and what mcgilchrist is saying, and one of the marvelous things about it is that you've come up underneath some of the things he's talking about, like Co creation.

He's very big on the idea that we don't create the world and the world doesn't create us, but it's in the in the moment.

We Co create the universe.

So I thought that was fascinating because.

You know, you guys probably didn't know each other for 40 years and here you come with this same general idea and of course your views on the development of the right.

Brain are.

Right up by Gilchrist alley and I think that you share some of the same sources, one big one that I can't remember the name of at the moment that the Gilchrist.

First, do all the time.

So anyway, what a what a powerful and loaded and weighty presentation.

I'm glad I took notes and I'm going to study it.

Thank you.

Darcia: Are longer presentations of this information with more detail online, so if you go to evolvenews.org.

Peter: I'm slogging through your books and it's not because they're a slog because I'm an old person with a deteriorating brain.

Darcia: The process, the ongoing co-creation is process philosophy.

Alfred N Whitehead and others talked about that, but maybe the anthropologists want to say something about.

The shift and Neolithic shift I think there's a degrading of the evolved nest back then had had something to do with this shift, but I don't know if you guys want to say anything about that.

Chris: There's the movement from the moon to the sun.

Darcia: The shift from lunar...

Chris: You can't sow seeds and reap them within the same months.

But you so you get a seasonal emphasis instead of a monthly emphasis.

I mean, that's a very short way of saying it, but as soon as you got the sun instead of the moon, you've immediately disempowered women and then that's the individual.

Camilla: I'd be very skeptical about any kind of argument that tried to say farmers and hunter gatherers have different brains and ascribes hunter gatherer to some sort of primitive level of it.

I would really reject this kind of thing.

Having worked with hunter gatherers and I'm sure more their brains are absolutely as creative and aware and modern and contemporary as any human brain.

At all.

So I describe it to social contexts and conditions and patriarchal tendencies of control.

So there are some situations and conditions where men can be can be men's dominance can be pushed back against and other situations and conditions where the odds are stacked against women.

If women have difficulty in maintaining collectivity and in certain farming.

Situations, particularly with the tenancy of farming communities to send women to patrol local.

I just.

That would be a a way that women.

'S.

Power base would be eroded and I would suggest that that's that's a starting point for analyzing.

These this different balance and the whole kind of feedback process of status and control being being being so male dominated and being that that being the kind of the reason for human existence the going to very ego centered.

Type of sort of epic hero mentalities.

Darcia: Yeah and let me say one other thing I meant to say and that is that the Unnested Ness affects male brains and male development more than female.

Because boys have less built-in resilience and they take longer to mature and we provide less.

Nourished, nurturing to boys, and so you end up with this survival systems in charge and they what else are they going to do? They don't, they don't.

They haven't built all that relational human flexibility in the Unnested Ness.

Yeah.

Michael: If I may please darsha one of one of darshan's papers that she wrote that that touched me.

I just love it and it's called the missing mind.

That was part of the title of it, the missing mind and she went back and.

During the axial phase, this is Louth, S Sue and Confucius Way back in the BC's and again, I'm not an academic, so forgive my lack of accuracy with the dates, but she described what was the normal state of mind at that and in one of her slides.

She put at the very beginning a quiet mind now, so we have to differentiate between our cognition or what we call thinking or thought, which in my view is evolved as a defense mechanism.

To to meet the meet the current challenge.

So thought is really fundamentally defensive and in this in this paper that she wrote she.

She really described how the whole state of mind was completely different than what we would consider our normal state.

So most of most.

Modern mind is dominated by linear cognitive thinking, worrying, projecting, etcetera, etcetera and Darcy.

If you could maybe just touch on that because this lack of nurturing predisposes the explosion of this thought process.

Which is predictive and controlling and defensive etcetera, etcetera.

So you have this perfect storm going on that has evolved for.

A long time.

Darcia: Yeah.

So one of the characteristics that we can see in the.

Thousands of years ago is the ability.

This is the western world, mostly of described by historian Marvin Bram and others, that the orientation to die differentiate from others, to always find what's connected and what.

What unites you in instead of the left brain? You know, how are you different from me? What category can I put you in when I meet you? So this ability to be polyphonic polysemous I don't know how to say the.

Word, sorry.

But to be very multi perspective taking and that's something that we lose when the left brain kind of takes over because it can only deal with linear progress and linear kind of causal kind of chain thinking, so I think.

Yeah, they and you can.

John Young talks about his translator.

He asked when he was with the Bushman.

They asked a question and five women talked at once to the translator.

The answer and the translator could take it all in, was able to express what each one.

We can't do that, can we? We can only focus on one thing.

So there's a diffuse attention that we've lost or we we underdeveloped and other capacities.

Yeah.

Thanks, Michael.

Chris: Not not.

Camilla: Question with Mark and then should go to mourner I think.

Mark: Thank you very much for your presentation and for those of you organizing this meeting.

I'm been working on a project.

It's gonna appear through Bloomsbury Press as a book next year.

Probably on.

European churches and Chinese temples as neuro theatrical sites and it touches on many of the areas of your presentation.

So I'm excited to learn about your work, especially because I look at the family paradigms of patriarchal maternal and trickster figures.

In those religious sites and comparing West and east.

My question though is because I'm also very interested coming from the background of theater and film studies, as well as performance studies, how current screen media are affecting what you're calling the evolved nest.

Darcia: Well, if we take each aspect component of the nest, like birth experiences, the screen media well, I don't know what you mean by screen media, but I know that.

Do you mean social media or do you mean movies and TV and everything?

Mark: I I'm thinking of what I grew up with television and movies, but how when my children were growing up, it was the beginnings of video games and dial-up Internet, which was slow.

Darcia: OK.

Mark: And now what I observe in my college students, that they've been, especially since the pandemic raised from a very young age, as I understand it even babies with handheld screen media as the mirrors that are substitute nurturing transitional spaces, but their friendships, their social media.

Darcia: Yeah.

Mark: And liking connections are very much through.

You know TikTok and Instagram, where it's the screen reflecting or giving value to my.

The and not as much the interpersonal as you pointed out, holding spaces or touching of actual humans, right?

Darcia: Yeah, I was gonna.

There's multiple effects.

I think I was going to say if we were just to talk about birthing that watching Hollywood movies makes you think that it's a horrible experience and you have to have.

Painkiller and, the doctors know best and all that crazy stuff like that so.

Most doctors haven't even seen obstetricians have never seen a natural birth.

They think that the medicalized birth is normal, so it it shrinks your imagination when you watch things.

I think this was a critique by gerrymander many decades ago saying if you watch a kiss in a movie or on TV.

That actually impairs your own experience of your first kiss, so there's all that happen.

Now in terms of developing the brain and being in front of screens, we know the American Academy of Pediatrics has recommended that children not be exposed to

screens until after age 2 because it's related to attention hyperactive or ADHD attention deficit disorder and other attention disorders because the brain is developing so rapidly, right and it just is not the.

That the flashing light of the at least the old TV's affects the brain and other things it's you can't do experiments on these things.

So it's all correlational.

But in terms of the screen, I'm reminded of a historian, famous historian whose name I forget.

He says he took his students to Ellis Island and wanted them at night and they could look at the Vista of New York City and the lights and everything.

But there was this huge photograph of the same thing on the wall, and the students took pictures, selfies of themselves with the picture instead of with the real thing right there in front of them.

So there's an orientation of of being.

The world is the screen, right? So you've now shrunk again.

Imagination and capacity and when we're with people, we have to adjust and you read faces and the screen doesn't do that.

The screen is just reacting to things and so you don't develop all this.

Flexible.

Intelligent.

Unknown Speaker: That's.

Darcia: Other people might want to say something.

Mark: But thank you though for that, because I also see what in what you're doing and what I'm trying to do, a recognition of how it's affecting our brain circuits and so maybe that left hemisphere enhancement and right hemisphere deficit is also increased by the screen media and the types of.

Figures I focus especially on melodramatic.

Hero victim, villain types, so thank you.

Darcia: Yeah.

So the survival systems are going to be oriented to dominant submission.

That's the way the world works, right.

So you're going to be oriented to hero and the villain, and you gotta kill those people and eradicate whatever it is that's evil, good and bad.

You know, all this black and white.

Camilla: You don't get a lot of grandmother hypothesis in.

Hollywood films let's put it that way.

Darcia: No.

Oh, it's more.

Kids are resilient.

It doesn't matter what you do to them.

Camilla: Can we go for more now? I think because we've got about 40 minutes left and I think we want to have some.

Chris: We'll leave 5 minutes for discussion at the end, yeah.

Camilla: Well, let's let's go with with Mona's stuff and.
Try and bring some together.

Morna: Yes.

Thank you everyone and thank you so much Darcy for.

Just filling out so beautifully or Camilla said.

I feel like the two of you are by yourselves.

You've you've basically said it, but I'm.

I'm gonna try and put a wee bit of skin around it now and I'm not gonna talk for long.

I think because we have a really interesting discussion going.

I hope I won't talk.

For too long.

I will say that and then I ramble on.

But yeah, I mean I I've been thinking so much about this virtual hug.

That our kids are currently getting to as a substitute, of course for real touch real kind of deep body connection and I see how my own kids are suffering in that and yet compelled by it because it's.

You know it, it is.

It is feeding some part of the brain in ways that at least they're getting some sense of.

You know, quick hit fulfillment.

Rather than, if we look around at the society we live in, no fulfillment, right.

So it's better than nothing, but it's really a virtual virtual hug or a virtual pacifier.

In some ways, for the younger ones.

And and I've been thinking about that for a while, alongside people like the Bengali and what it is that they're really doing and giving to their children, to their babies and to themselves and they, they are really the personification of everything you've just said, Darcia.

I'm I'm amazed by the fact that.

We have such concrete evidence for what an organic community which is empowered and empowering, looks like, and the fact that so few folk actually are aware of this data, this information, and I think it's.

More and more, part of the kind of mission that we have to be on.

As, academics, I don't really know if I'm even an academic at this point I'm I feel like I'm I'm masquerading as one, but certainly to to get that information out in ways that can can be accessed by everyone.

I mean, this is a global conversation at this point and it really is now a matter of survival child survival.

I keep saying to people if somebody told you your your kids are at risk right now.

So, what are you going to do? They would act.

People would suddenly find time to step away from their emails and their their own personal business and we all have so much going on.

But.

So rather than go off on that tangent, because what I know is that all the theory in the world.

UM.

Can't really get us to step up to the things that we're addressing here.

The need for real connection and attention to others that's healthy and nurturing unless we begin to change the ways that we are bringing up.

Our your.

Because by the time you get, to, to addressing adults, there's there's so much work that has to be done to try to get back to that feeling state and in other ways there's there's actually.

It's amazing how how this resonates with all of us.

So.

The the Ben Jelly.

I think.

What? I'll what I'll do because I want to come back to some of the things that you said.

Uh.

Garcia.

But what I'll do is look at a couple of slides from this public talk that I was giving a couple of months back, just trying to sketch out some of.

My ideas about why we need to be looking really closely at societies like the Benji for a non academic audience and I won't talk too much around those.

Because they weren't prepared for this in particular, but.

Just to kind of give some give away but more substance to what I'm saying.

So let me see if I can share those.

OK so.

This is really a story that I've talked about before quite a few times and I want to I want to return to it because.

What we're really talking about when we talk about.

Richard Lee's fierce egalitarianism is that we kind of have two different power principles or or or.

Social principles at play and when we're looking at people like the bengeri or the join, the ways that they are cultivating this collective body, which is what they do even from before birth, we're looking at what happens when the principles.

Of the of of the maternal body and then also to some extent of the parental body and then of the allowed parental body, when those principles actually get.

Carried out into cultural form it this is what we're seeing when we look at.

The bin Jelly and what they're doing, so they're expressing the cultural principles of the female body.

They're collectivizing that sense of a cooperative body and they're pushing it out into these incredibly sophisticated social political.

Ritual conceptual form and it's really, I suppose one of the reasons that I find it astonishing that these groups have been referred to as primitive or simple, this kind of egalitarianism is the absolute best as far as I can see, that we can do in terms of.

Political, social, spiritual sophistication.

You're really drawing the full potential of the person out.

Into this this bigger body and then you're you're embedding that community body into an even bigger body, which is the forest, the environment, the whole kind of inter sociality of the other species around you and then as Darcia said, you're then embedding that in.

The realm of the spirit.

AM and yet, interestingly enough, and it turns out.

It's causal.

These people own almost nothing in terms of stuff, material goods.

They're the antithesis of capitalism.

Both politically and when we look at what they're actually doing socially, but but just in a day-to-day.

Minute by minute orientation against privatisation, against ownership and one of the so this was me talking to just why why I think this slide is really interesting.

One of the moments where I am which I returned to from my field work where I realized what I've been looking at in this picture is where I kind of had an epiphany.

About what I was doing there and what it is that I wanted to share about the Ben Jelly.

So this is mangonia.

My next door neighbor at Ambula.

It was a semi permanent camp up close to the Motaba River in northern Congo.

UM, and in this photograph, she's marking everyone in camp with Angela Paste, which is a a kind of mashed up red wood paste now, and yellow paste can be used for a variety of things it can signal.

Danger.

It can signal illness.

It can signal ritual power and also protection.

So.

In this case, I watched as this mother of two three month old twins who were at the time unwell, marked everyone in camp from from toddlers right up to the oldest people with an arc of angelic past and her Co mother, her Allo mother is is sitting close to hold her, holding the other baby and it was only a long time later that I understood what I was actually saying and well, as I began to fill out my own experiences by conversations with people like Jerome Lewis and other anthropologists, Benji anthropologist and the literature, the wider.

Literature and to reflect on what it is that it happened prior to and after this photograph we.

Taken so essentially, these girls were ill and the Angela paste was being put on physically in this really tactile gesture to the bodies of everyone else in camp as a means to share.

The illness as a means to kind of diffuse the illness outward so that every person in the camp was holding a little piece of the sickness for these tiny girls and taking on an element of their illness and carrying it and I had looked at the way everything else was being shared out meticulously.

You couldn't even hand someone a few cigarettes before everyone descending, and they had to be shared out.

Or if they couldn't all be shared out, then, everyone took turns smoking them.

But you you had to have your share.

But I hadn't thought that you would actually.

Sure.

On this level where you're no longer carrying the burden of being an individual body, you're no longer carrying the burden of being an individual ego, A discrete closed self who gets sick and has to cope with that alone.

You're now able to.

Your your entire person, including sickness, can be shared by this big community, Organism or body that that you're part of in these cooperative.

Cooperative childcare communities.

These communities full of all parents and it really struck me because I was experiencing myself as so.

Closed off and individual and separate from this kind of.

Beautiful, resonant, polyphonic moving.

You know community, this is almost like the community itself was a a big musical instrument that that was kept running all of the time.

But to to to get that insight to realize that.

You're you're not talking anymore about the will to share or maybe I'll give you this because I want to be altruistic or generous.

It's moved way beyond that level.

You're you're sharing body because there's nothing else to do.

You.

You are part of a larger body and within that.

This is also part of an even larger body, and that's part of an even larger body.

The sense of a continuum from that one vulnerable newborn right out into the universe is unbroken for the binge ally and I think for for.

Groups similar kinds of groups who demonstrate this fierce egalitarianism along with cooperative childcare practices, which are are, are so, so detailed and so insistent that.

It kind of goes right back to the experience this baby is having.

As Camilla said, even in the womb, actually these these babies are being danced because their mothers dance a lot and sing a lot.

But from the moment of birth to be given into the arms of everyone else, to be literally passed around the community and Turnbull, Turnbull tells us that this is done with the explicit aim of letting the newborn sense that it is part of a larger body, letting it pick up the pheromonal input of other bodies.

So the sweat, the breath.

The heartbeat of of multiple others and when you look at this image it it reminds me of what I was as well of Peter Garry's work with the PRO.

The Amazonian P row, completely different group, completely different.

Part of the world.

But again, we have this constant reinforcing of the idea of of what the P ROG.

Call not self.

They don't really have much of A term for self.

Their their term translates as multiple selves so even self food can't be located in in the idea of the individual it's multiple and this is very much what what the bijeli and what so many groups which, as Darcy will know, are are doing, they're they're setting out explicitly to create this kind of this experience of the body.

So.

In many ways they are working, working in a very matter of fact way against that trauma.

Experienced UM baby child adult that we are having conversations about now and at the same time.

They're still.

I think that what they're actually doing socially, politically and in terms of well-being is, is, is relatively, I wouldn't say.

Unknown because we we have a big literature now on alternative ways of doing culture and being a body and we have amazing work like Darcy is but I think still in the public in the public debates.

There seems to be a kind of cynicism about the fact that these people are in fact, the most intensely sophisticated human groups that we are aware of.

So this is something that is really crying out to be addressed.

The knowledge of what people like the Bengali are doing in order to cultivate that collective sense of self and the ways that it it shapes everything every possible level afterward.

Or I suppose part of the discussion that we want to have today.

So I'll just move to the bottom couple of slides that I used in this in this talk.

There are lots of other things that I that I would like to say, but I want to kind of look at.

The idea of morality and what I've called corporeal morality spookily close to anything that I've read of Darcy is.

What this idea that so Akela and Norm are two imbing Jelly and June 12 terms respectively, that speak really strongly to the idea of power and power is always rooted in the body, generally around the solar plexus.

Area.

The whim area.

So.

For the June toil for the Pengelly aquilan norm are embedded in individuals, but they're inseparable from the collective, so they are this kind of.

What I've called corporeal morality, but really just a physical conscience, a sense of physical conscience that's rooted in the gut area, and then cultivate it all through life through many different ritual practices.

But I argue that this begins with the.

The respect for the evolved nest that these peoples have, it's at the heart of their culture, their respect for properly creating and expanding that that sense of the evolved nest within the body of.

The the person and so for me terms like Akila or non referring to all kinds of different forces and power.

Hours in the universe of of the Binjai cosmological universe of the Bijeli or the non or the juntos.

Are really where the heat of the community is stored.

So yes, very much embedded in the physical body.

But only because the physical body of every person is a constituent kind of molecule of the shared body, and so these concepts, these practices, these, the, the cultivation of these skills is really where the bioenergy.

Of the community is is stored and the.

The beauty of these systems is.

That, that, that core energy that, that power force or sense of the self, sense of the body is powerful is being.

Embedded in the womb got area and therefore things like, this touches a lot on chris's work.

You get a real sense of things like menstruation, for example, as as a pneumonic the body itself becomes a memory center it it becomes a way to grow and remember and share these really deep concepts that will allow.

The cultivation of an egalitarian body dominated not by the principles of control, obedience, privatisation, ownership, but of the principles.

Of.

Contact response touch.

You know feeling into the bodies and of others and the bodies of the forest and then you.

Know.

Beyond that, into conversations with spirits.

UM and so I was just trying to, I mean I'm, I'm not going to talk for much longer.

I.

Was trying to.

Fill this out for people who aren't anthropologists, some of whom have no real interest in academic learning, for example.

So this was a real kind of public.

Taster pork, just to to to.

To address a a wide community of folk who who, come along to hear an interesting talk and 1 theme or another.

I think they were probably.

Uh.

Some of the people at the talk were probably wondering what on Earth they had wandered into, but by the end we had a brilliant conversation and anyway, these are some of the things that I wanted to just kind of reinforce at.

The end of this so.

What are these cultures doing? They're creating persons who are fully rooted in the body, earthed persons whose sense of trust in their own proficiency is really exceptional, and we see this across the board with hunter gatherers.

Then they're creating bodies which are fully rooted in the community, and that's what I've been talking about with things like Aquila or non UM, this kind of.

Somatic conceptual umbilical cord that extends every individual body or earthed person into a collective body, and then they're creating communities.

On the basis of that, which are fully rooted in the forest, so for the benjelloun that takes all kinds of shapes, dance, ritual practices, singing, trancing, along with forest subsistence practices which keep people in this and really, rich conversation with the forest and with the other species in it are keeping the community.

Forests so porous enough to be woven into this bigger ecological body in the Jelly terms, the parental body.

So essentially, these are women guts centered rather than primarily brain centered social galaxies.

They're operating by different sets of principles and then what does that do to our way of thinking about power and the way that we experience power the way that we share power, the way that we understand? Power because, if you if you asked my kids, how would you define power, they might apply it to their experiences of school where power is inherently negative.

It's top down.

It's obedience based.

It's to do with authority figures, the kind of power that.

People raised in these cultures begin to experience very young and go on to refine throughout their lives.

Is a completely different experience of power.

It's based on sharing.

It's based on autonomy, dialogue, and dialogism it's based on and understanding that you can perform conflict.

A bit like the chimp conflict that we talked about, you can take that potential for conflict and you can turn it into theatre at such a refined level that we talk about virtual world.

This is true virtual power.

You can almost see the lines of it running through these communities.

When they dance, it's really extraordinary to watch male and female ritual coalitions with babies dancing to each other, conversing with each other through dance and I have so many.

Memories of feeling as though I could actually see these elastic lines stretching between coalitions and thinking.

This is this.

This totally transforms my prior understanding of power and what power is.

So.

I mean, talking about morality and corporeal morality, embedding the sense of the moral in the body early on, we're really talking about power as kept as kept alive in the physical body, and then in the social body as soon as it.

Gets stopped as soon as one person or one group of people are able to take power permanently, it dies.

I argue what real power living power, power that makes us feel amazing power that makes us want to care for each other.

That form of power actually begins to die in, in the person and I think one of the most tragic things that you can watch is what? Happens to many teenagers as they progress through the kinds of social systems we've designed.

So are rooted in persons which has to be shared and kept dynamic to thrive and I argue that that's political intelligence as the body and so I'll finish there.

Really.

I suppose what I just want to say in closing is that.

This this idea of power in the body power in the collective body isn't really talking anymore about biology.

We're we're talking about the biology expanding out into this incredible.

Cultural resource and potential for for living within what Darcy is calling the evolved nest and so yeah, I think that's me finished.

Camilla: Thanks, Mona.

Darcia: One thing that just came to mind, I've been reading Neil Douglas Klotz who translates Jesus's words from Aramaic and most of the Bible translations we know come from a Greek version and the Aramaic is rich and it talks about womb.

Consciousness and the kinds of things you're talking about, which is what? So the Middle Eastern mysticism is in Jesus words, and it's similar to what you're what you've described more and I was just wonderful.

Thank you.

Like what she says.

Mathew: I would just quickly say that clots his translations are deeply contested. I love the vibe of them, but from a scholarly perspective, there's a lot of people who say like.

This is new age.

Woo.

Darcia: I love the woo.

Mathew: Just want to.

Yeah, like I'm not woo like I'm not anti woo, but just there's a lot of scholarly pushback against his very popular translations.

Unknown Speaker: Yeah.

Darcia: Well, the word for Kingdom is actually a feminine word, so he talks about queendom, which is one thing.

It's interesting.

Yeah.

Camilla: Could I just quickly come back to? To what it was.

Speaking about because.

As she was talking.

I was.

I was thinking about the use of the term aloe parent.

Which comes from Sarah Purdy being sociobiologist and of course, this is intensely individualistic methodologically.

So it's identifying this person is not the parent, but behaving as if the parent.

So it's creating a deliberate sort of.

Separating out and the more the Mona was talking, of course I'm thinking, but this is the opposite of what the Mengele's are doing, which is to create everybody becoming collectively parental to for these twins with their beautiful cosmetic sharing and.

Action expressed through the anguille and so there's something the real tension between the ways that no matter how fantastic so heard is theory is the ways it's expressed compared to the practice, the bodily practice.

Of what the? Evangeli do to actually create this common or? Collective childcare and it and it's that that.

Mention it was just one.

One other thing to talk about with the Aquila and Gonja the which is the theory of the child's growing up that I've learned about from Dasha bomb Yankovic's work also with their Mengele and so these, these little babies have to go through this process of being grown and parents, the actual parents, there's quite a lot of work from the community to make sure that with all this cooperative childcare, the actual parents don't kind of slack on the job.

They have to be intimately connected through Aquila.

The fact that they're equal.

Their moral force, if you like, which is both belonging to a person but also inter-relational, and for a woman is very strongly marked as menstrual, as menstrual cycle and reproductive cycle.

For a man in relation to hunting and then interrelated.

Dependency of that but their child as growing up is reliant on that equilar.

Until the child acquires a killer of it, of it their own and so this is kind of a a tussle between the big the whole community body and the actual parents? You know, you've gotta actually look, you're really connected to this child physical in that corporeal sense and there and there must be a such a.

You know that that's the that is the evolved Ness for the Evangeline in in, in many ways it's embedded as you say in these matrices.

Of.

Of bigger and bigger expansive bodies.

Unknown Speaker: Yeah.

Chris: Can I just? Sorry.

Well, well now as, whenever you speak, I just get kind of carried away and wish you'd do.

Wish we could all hear more of it.

OK.

I mean, we have kind of got anytime now, but just I got a question.

Camilla: Carry on a bit, Chris.

We don't have to shut them.

Chris: Why was it that when you came to Aquila? You only mentioned menstruation in connection with the work of Chris Knight.

I mean, I just think that's completely wrong.

Surely you must know that Akila if you had to pick on one of the many meaning meanings of that term.

It's menstruation.

I mean, Jerome makes it absolutely clear and the reason I stress it is because so many of the things that you and Dasha and Camilla have talked about, they they translate.

Western culture is fine about it and actually capitalist culture is fine about caring and community and song and all this stuff as long as it's kind of would it wouldn't be nice.

But the one thing which Western culture of any kind.

Including the left and whatever feminists and stuff, they won't have menstruation, they can't be treated as sort of relevant to all the things we're talking about.

So if I could just ask you, Mona, could you say a little bit more about what Aquila means?

Morna: Sure, Chris.

Yeah, I know you're you're well, basically, I think the generalities of Aquila.

Are I mean, it's a polysemic term, isn't it? So it's it's it's not just.

It's not just expressing menstruation.

A bit like nom.

I mean for Nom Nom, menstruation is at the heart of it.

The same with.

Aquila.

So it's like that the red thread, the blood thread and of course.

Why not? Because if we're talking about, OK, a scenario where you take the deep principles of.

The maternal body, let's say, and you turn those into culture.

There'll be pregnancy.

There'll be childbirth, but centrally there will be menstruation.

There be visibility that the Pingelly and other hunter gatherers talk about to, to bleed without dying and to renew oneself through blood and to be connected to the moon through through your bleeding, and to be connected to all the other women in a in the vicinity through menstrual sink and so if we're taking the template of the female body as a kind of driver for the way culture shapes out of these cooperative communities, then that's central.

But I think what's really important to emphasise is that akeela then links to every everything anything else in the bringelly world that signifies power, and that includes men's bodies, men's spirits.

You know, game animals and the forest.

It it it connects with the beauty of it is it's a web and I think understanding it as a web and at at the core of it, Chris honestly at the core of things like Aquila.

I don't know if I would put menstruation.

I think I would put a baby.

I think I think babies are the core of these societies.

Ultimately, menstruation, of course, is what happens.

So just to let you have a baby and it's it's a hugely valuable resource and signal and expression of power for young women.

Especially in these communities even Colin Turnbull's work on the beautiful ritual expressions around menstruation.

You know you you can see that.

Chris: My my point is just that Western patriarchal culture is fine about babies, but it's not fine about the.

Moon.

Morna: I'm not, I'm not sure.

Unknown Speaker: Well, it's.

Chris: What it says it's like that they say they're fine about babies, but the but the Catholic Church and all the other patriarchal religions, the thing they're not quite keen on is 2 things women and the moon and so it just seems to be quite important to be not to be too sort of new agey not to be too going along with and sort of flow

about isn't everything lovely and I don't know, there's certain things which need to be which emphasise against the stream and you're very good at doing that more now.

But I just think it's so important not to compromise.

With our culture and those questions, menstruation is a source of pride for those men.

Really, women as you as As for so many egalitarian hunter gatherers, all that shame nonsense is nowhere near anything, and it's it's critically important because otherwise women are being put down because they're women through because they've got that body.

Morna: Well, I think just just very briefly, Chris, I think also menstruation is a really vital mnemonic device because.

Generally speaking, it happens for all women, and if you kind of if, if you if you tuck all the most important cultures into that and these are cultures which are of course dynamic and oral cultures.

If you if you, if you can find things to anchor that ritual solidarity like like menstruation it's it's it's so potent it's so so important and it's so important, like you said, for women's ritual groups as well, I know that.

Chris: Thank you.

Camilla: We're we're nearly at advertised time, but perhaps some other people would like to to talk and respond or ask questions, and we can carry on a little longer if you like.

It's Peter.

Peter, did you have a hand? Up or is anybody?

Peter: I did.

I was having technical difficulties.

We've passed through a question of what's wrong with humanity.

And.

I don't want to drag us back to it, but I had.

I had something that I wrote that I like to put in the chat just a few paragraphs and the essence of it is that our culture in the West.

Is evolving very rapidly and the technological breakthrough Internet has it has two sides to it.

The side I don't want to put in the chat because.

I didn't write it down.

Is about zoom and face to face.

Connection.

At a scale of billions and billions of people around the world.

That cannot be without effect, and I'm hoping beneficial effect.

We really don't know what happens between faces and brains.

Especially when they're all the size of postage.

Stamps.

But it's but the scale of.

This is mind boggling.

So I think that's I think that's helpful.

The thing I want to put in the chat is just that.

The technological breakthrough didn't it didn't change the economic paradigm.

It just created a new market, a new dominant market.

In aggregated attention.

Which is cheaper and more portable and more lucrative than information and so the stuff that our kids are looking at on the.

Internet for instance.

The content is not being designed designed by people.

But it's being designed to use the parts of our brains evolved for interacting with each other.

So there's a robot.

It's feeding us all this stuff, so I'll put this in because it's a little more cogent than that than I'm speaking it and Mona, I just find your presentation deeply moving.

I could.

I could go.

I could listen to it for years.

I just hope you're.

I hope you're getting out there because you have really important things to bring to people.

Chris: Yeah, me too.

Morna: Thank you.

Thank you, Peter.

Yeah, I think these conversations are.

Are really essential even over zoom, which is a poor substitute for what we, be feeling.

If we were all sitting in a room together.

The conversations are really vital and the ways that we kind of keep them going.

We have questions I think as well from Mark and then from Kathy.

Mark: Yeah, just quickly, if it's a huge question, but if anyone wants to respond, I'm wondering about the pressures on women who want to be both in a career and yet have children and don't have the allow parenting resources and how that's been increasing in our industrialized technological societies, the West especially, where there's not all.

So so that.

How do you feel about childcare? Places becoming substitutions.

For maternal and grandparental.

Home domestic nurturing spaces when when women in career jobs are pressured to go back.

To work quickly.

Darcia: I'll jump in.

They can be good places if they follow evolved nest.

Components.

Most of them do not.

Most don't have enough adults, especially for babies.

Babies need to be pretty much carried all the time and on skin to skin or in arms or on backs and most places don't do that.

We have an evolved nest childcare checklist.

Or parents or child caregivers, young for young children.

So.

There are places or businesses that are trying to get babies to work and to have childcare at work, so the mom can just be there or dad down the hall from the child so that that's a better option and also having local work near your home instead of.

Commuting far away.

So yeah, it's.

Aloe the aloe parenting part is important, but it needs to be stable.

Responsive the same people over years with that child and not shifting strangers doesn't work so well for the child because the child doesn't feel known and doesn't develop the back and forth games or interactions that you do when you have a relationship you.

You have familiar ways of getting along, so anyway, there's lots more to say about that, but that's maybe someone else.

Camilla: Could could I just put in after Mark and after what you've said, Dasha.

That the kind of hunter gatherer contacts that mourners described and which I knew with the huds as well.

It does not separate into a domestic place with the mum and grandma and a public place.

That women's bodies as a collective body are out there.

It publicly in the center of camp, the central camp is where they are with the babies.

That's the centre of the whole social Nexus and so it's a, it's a really westernized dichotomy, there's public versus.

Domestic and it doesn't correspond to the evolved nest as we really evolved.

So I think that's that's again got to be addressed and we are we're.

This.

Break between women's work and their babies is is catastrophic.

It needs to be.

Needs to be addressed it it's.

Darcia: Even with vowel parents, the mother is typically around, yeah.

Morna: Yeah and also just a very, very briefly, Sir I have experience of that having come back from field work pregnant and had my baby, my daughter here while doing a PhD.

The the loneliness that mothers are experiencing under these conditions is really destructive.

Uh to everyone and I was so conscious of the loneliness of becoming a mother here, in contrast to what I'd witness and actually it it it kind of drove me to seek out in the later stages of my pregnancy.

another woman who I was kind of vaguely familiar with.

She's now my best friend because we at at least we could pool in a small group what we were going through and reinforce.

For each other, all the attachment principles that we wanted to.

You know to apply as mothers, but it really felt like going against the flow and I'm often asked not not pointing any fingers.

Chris, why haven't you done this with your career? Why haven't you done that with your career you haven't published your book and I think .

They're wandering around the house, they're in the background, my, my.

My my opus my my my lifetimes work and they didn't have to be.

They didn't have to.

They they could have worked beautifully with the professional work that I wanted to do.

I just needed Ben Jelly society effectively.

Unknown Speaker: Yeah.

Morna: So that's all I say.

Darcia: Kathy, it's Catherine.

Kathy: Well, I I'm gonna tag a little comment on to this this discussion about.

The kind of dichotomy between, well, let's let's let's have the aloe parents right in the workplace.

But what about? Doing the work.

While carrying for the baby where possible that the baby isn't like separate from your work.

That that workplaces should be set up so that, yes, there's all parenting when necessary.

But there's also.

Parenting.

While working I I've gotta believe the hunter gatherers don't separate parenting from work, whatever they might.

Believe we mean when we say work, I'm not sure.

Do they even have the same division of concepts?

Chris: *****.

Camilla: But but Mum gets a break sometimes when other little helpers or older women take over and.

That that does happen.

Kathy: OK.

So that was that was my tag on to the conversation, the earlier conversation.

But my question is and I'm not sure there's an answer for it and hopefully people are investigating this.

How does all this discussion knowledge that we're learning from traditional hunter gatherers? How does that inform? How our societies might ideally go forward.

What do we take? How do we apply it? Like I.

Unknown Speaker: Said.

Kathy: Not sure there's answers to that one.

Darcia: Well, in terms of the evolved nest, you'd want to centralized the care caregiving of children and support of mothers and families and have neighborhoods be more communal and write down the nuclear family in an isolated household, you need extended families together and non kin even who are there.

Ready to pitch in and be available and playgrounds everywhere for all ages and there's lots of things that.

Camilla: And reducing all the funds expended on military, industrial, prison, military, industrial complex.

To put that into the healthcare and support of children's nurture and these societies that are ultra egalitarian or just that they do not put.

Their efforts into violence, except perhaps violence against animals, and that is incredibly.

Hedged around.

In how it's done.

At they put it all as as Mona says, the babies at the centre, the children are absolutely at the centre.

These societies, who have no stuff.

Are a welfare network for children that puts the US and the soon I'm afraid, our country as well to shame.

Yeah.

Morna: And guess what? Most people are happy.

Unknown Speaker: You know.

Camilla: In our country, there are children going to bed hungry.

Millions of children in our country going to bed hungry tonight is could never happen in a hunter gatherer camp.

It can happen.

Wouldn't be loud.

Chris: I think I think Cathy's question needs.

Kind of attempted an answer on other levels.

I mean, it's one thing to say what should happen, what we should have in terms of childcare and so on.

But another thing to say is.

How? What leverage do those of us and hopefully there there are 1,000,000 more than just us.

What leverage do activists have or people who are becoming activists to actually get it done? What kind of action, what kind of collective action will get the thing moving cause you're not gonna get it? From politicians or the state, I'm afraid.

I mean, it's just somehow we need to think in terms of the kinds of action taken by women in the past that got them to the egalitarian situations such as we see among these egalitarian hunter gatherers and that was collective female solidarity, including quite, quite painful, if you like.

Measures against the what? What? What is so often the dominant sex? So I'm just saying it can't all be sweetness and light and cooperation and.

There are certain forces in society which will do.

Which will I mean do anything to avoid losing power? I'm afraid, and that that, that that reality has to be faced and then you have to look at which sections of society clearly women, but not maybe not all women, but clearly most women have got to the point.

Minor makes it so brilliant.

Supposing you told women right your.

Your kids, owing to climate catastrophe, your kids won't have a future.

I mean, every woman on the planet that really grasps that, we'll just do anything, take any measures necessary to secure the future of their of their.

Kids.

So I mean that's a a starting point, but of course it can't just be women.

I mean obviously we would need to get some allies from men and then you've got to work out well which men and so on.

So I'm just saying we need to look at it from the point of view of.

What kind of activism is realistically possible under our present circumstances that can get us from? Catastrophe to A to a future and clearly, as as as dashers book kind of kind of back to the future, clearly, but simply sort of saying how wonderful hunter gatherers are and so that that.

We have to get to where there are on a obviously on a huger level on a, on a global level.

Obviously nobody here thinks that you can just go back to using bows and arrows and that's somewhat somehow solve the problem.

But I can see married has got a hand up.

Had a hand up for.

A long time.

Mart: Thanks.

I just I was just thinking when when you were talking more about that amazing thing about the paste that that the mother putting the paste on everyone to help her twin babies.

That we we often talk about how our society is too individualistic.

But I've never.

I don't think I've ever really heard what it means not to be individualistic and what you said about that.

Just really, really struck home and I just wondered if you and the others can say more about what it's like to be in a society that is completely not individuals, that that's completely cooperative.

Is that?

Chris: What this term for it was communism, communism in motion, which I think is the most.

Genius.

Way of describing that anyone's ever.

Come up with.

Morna: Yeah.

I mean, I think it's it's it's like a it's something I've gone on learning about married since I came back through.

Like I said through conversations, but through reading through, through, through just kind of combing through the literature on on Central African hunter gatherers.

In various places and then in Hunter gatherer groups in Amazonia or looking at the the.

Knew it.

So it's it's corroborated by by research and then I suppose it's underpinned by my experiences as a, as a mum.

What? What? I still what stayed with me about the Benjelloun and the experience of being there.

Like I said, is that sense of being surrounded by a single Organism that was, .

Musical and physical and sensuous and.

It it it was just like this awareness of of, of having entered A context where.

The the latent potential that we have as as bodies.

Was it was happening in in front of me, capacities to to be so, so intensely connected to everything and everyone around you that you're almost vibrating with the collective energy.

It was invigorating, and it was terrifying at the same time to me because.

When you start to see yourself, you go as an anthropologist, thinking I'm going to study people.

Here I am with my notebooks and I'm an expert.

You realize very soon that you're a child is being studied and so I was, I was kind of like the entertainment for.

For a lot of people, a lot of the time, and I was great entertainment because I really didn't have a flu and on so many levels and I think they actually just really in terms of the comedy value before I had even tried to explicitly give anything back I was giving, I was giving something back in terms of my my comedy value.

But one of the one of the things that I realised and I think I've said this before is I realized really quickly that even Ben Jelly children.

We're looking at me in a way that I've never looked at.

I've never been looked at anywhere else since they would sit in front of me and they would look at me and they would just.

You would feel as if you were being scanned from head to toe and they the the, the young women.

Especially weren't engaging with this kind of.

Etiquette of we're all fame and we'll all smile at each other to to show that we're.

We're fine and we'll engage in small talk.

They would also just.

What? And listen and study with such curiosity and like a a lack of self consciousness that I it it began to to show me how closed and how self-conscious and defensive.

I was and I thought I was fairly open, open minded open in terms.

Of.

My, my, my social.

Presence and I would actually love to.

I think if we have more stories from anthropologists in those first weeks and months of field work, the experience of themselves as bodies in relation to different cultures, it would be really interesting because that's where you begin to see.

You know, when I find when I when I read darcia's work, you begin to see.

The effects.

Of having been raised largely outside, that's that nest or by those principles, just because that's the way it's done.

Yeah, I think the level of connection there is.

Being constantly reinforced.

Consciously by the community and by older women in particular.

Because it never stops.

It's like a fabric that's or a humming or a a, a an energy that's never switched off and the whole community works on that.

So even in the middle of the night, 3/4 in the morning.

If there's been a dance, you'll still hear a few people singing around the fire.

Like it will go right down to simmering the social space the noise and the the quality of the social space will go right down to simmer, but it will never get turned off and that's.

Really, due to the fact that people are working as a as a collective body and there's so much in the ethnographic literature on this that the morality embedded in that body, the sense that you're not doing this.

You know to be good.

You're doing it because there's nothing else to do.

It's what you are and so that's where I think someone said, how do we begin to change things and, I know there are different approaches, but I think that's where.

Looking at the information that Darcy is bringing, putting that together with the ethnographic information and the reality of communities like the Benji is hopeful because it's letting us see the kinds of things we have to start doing as.

In in our own lives as well as collectively.

If we want to begin to to experience ourselves in that in that way.

Yeah, I don't know if anyone else has.

Has anything to say on that?

Chris: Let's just say Camilla at a rather an amazing piece recently on how to decolonize time and how.

Who controls time and how it's called? How to breathe.

It's it is one more attempt, but I think a brilliant one to try to make a start and so activism.

Camilla: To breathe.

How to breathe.

Unknown Speaker: Yeah.

Camilla: The the material factors of time and slowing down and reclaiming time.

Unknown Speaker: Yes.

Camilla: Have to be.

Very significant for us to grapple with capitalism as the robbery of our time and the and the creation of inequality through time and that, of course, presses down on women above all.

Uh.

But yeah, I can send a link for that one if anyone's interested and I'm wondering if if we need to kind of wrap this up with that lovely last piece that mourners spoken, unless there are people who burning for more questions.

We've gone a little overtime anyway.

Chris: Lots of hands reach up for a link to that piece on time.

Camilla: Yeah, I need to pick it up online.

I'll see if I can do that quickly.

Chris: I won't close until that's been done then.

Camilla: OK.

Yeah, OK.

I'll try and I'll try and search it just to say our last session is going to be with Chris and Mauna, particularly in dialogue.

Talking about language and laughter, so we're going to move on to that key question about evolution of language.

This is not disconnected to everything that we've been speaking about today because of course.

Of all the things that make us human, language is such a is very special and unique.

But that emergence and evolution of language is highly is very intimately connected to the.

Relations of power of a very different sort than Mona is also Speaking of and which the laughing body she's spoken about.

This dialogic speaking body, this collective body.

So that will be.

I hope people will come back for that one and just to say that is in five.
Week's time because we are following lunar cycle, you may not realise this.
We are doing Saturdays after the new moon.

It was New Moon yesterday.

The Saturday in June, after the new Moon is the 24th, so it's five weeks today.

So Mona put a note on that.

OK, so we don't get the wrong day.

Ohh.

Thank you, mark.

You've found the how to breathe article.

There it is.

Thank you so much.

That was very clever of you.

It'll be, yeah, it it's quite a little nice little read and some people might enjoy it.

So I think we're all right.

We've just about got.

I'd like to thank everybody for participation and thank you to Dasha and Mona for your wonderful presentations and we've really covered a great deal of ground today and it's been a.

Quite a quite an inspirational and thanks.

Part 4

[not uploaded as of yet]

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Cover art by Diego Rodríguez-Robredo.

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