

The Meanings and Dividends of Man the Hunter (Seminar)

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20 May 2025

The phrase Man the Hunter is associated with sexist theories of human evolution, but wildly disparate use of the phrase has led to unnecessary scientific disagreement and popular misunderstanding. In this talk, which follows a recently posted collaborative paper with other hunter-gatherer scholars, I ask: what does Man the Hunter mean? I distinguish three historical meanings of Man the Hunter; first, the 1966 conference; second, popularized sexist theories of human origins; and third, the human behavioral ecology of hunter-gatherers. I then trace the historical development of these three meanings of Man the Hunter, situating their origins in evolutionary biology, ethnology, feminist studies, ethology, genetics, and other disciplines. This allows us to ask: how are these meanings connected intellectually? After presenting a surprising answer to this question, I conclude by offering suggestions for improving scientific and popular discourse regarding Man the Hunter.'

Vivek is a biological anthropologist who employs evolutionary approaches to the study of foraging behavior, energetics, and health. He earned his PhD in Ecology and Evolutionary Biology from Dartmouth College and conducted postdoctoral work at Harvard University and the Institute for Advanced Study in Toulouse. He is currently Assistant Professor in the Department of Anthropology and Archaeology at the University of Calgary. His present research focuses in Malaysia, where he is one of the Principal Investigators of the Orang Asli Health and Lifeways Project (OA HeLP), which studies the rise of chronic non-infectious diseases over time due to rapidly changing environments. He is co-Editor-in-Chief of the journal Hunter-Gatherer Research.

<https://www.youtube.com/watch?v=6IgVq0xCxIk>

So welcome everybody to what is our, our last session, zoom only today, but our last session before the summer of Radical Anthropology Group seminars.

we will be back in Autumn and we'll be back, live and on Zoom, but today I was really delighted that, Vik Van Tarman could join us and tell us about some of his most recent, work on around the Man Hunter debate.

he's also been talking a lot with Richard Lee, who's a, a good, friend of ours, and obviously very famous amongst, hunter Gatherer scholars.

and we have with us two Helger here, who is a, a student, former student of Richard Lees.

so we we're quite, plugged into some of the angles on the Man the Hunter Debate.

Vik is, a biological anthropologist using evolutionary approaches to study foraging behavior, energetics and health.

He's assistant professor in the Department of Anthropology and Archeology at University of Calgary.

and his current research focuses very much on the butt, in Malaysia, alongside our colleague Ian Ivan tafe, who's also working there.

and he's one of the main investigators, principal investigators of Orang as Asley Health and Lifeways Project and also, I'm very pleased to know that he has just taken on co-editing Hunter-Gatherer Research is a, which is a key journal of, for Hunter gatherer scholars, scholars of hunter gatherer behaviors.

so, welcome.

Thank you so much for doing this, Vivek and yes, please, tell us more, Paul, Just to say Jerome Lewis is coming as well.

Oh, he's gonna be late, but he'll be here. Great. Great.

Okay. I just put headphones in.

You guys still hear me? Yep. Good. Okay, great.

Well, thank you, Camila. Thank you everyone for having me.

I'm really glad to be here talking about our new Preprint.

Lemme just share my screen here. okay.

Okay. Everyone see full screen? Yep. Okay, fantastic.

all right, great. Okay. Yeah.

So, let me just make sure I can move my cursor.

There we go. Okay.

So, my talk today is about a pre-print we just put up about a month ago.

It's called the Meanings and Dividends of Man the Hunter.

this is a work that has been in process for a couple years now, with a lot of other co-authors.

So this is not only my work, but also, theirs.

this is currently in review at Evolution Human Behavior, and so we'll be getting feedback on that through the review process.

I've also gotten feedback through email, and on, social media from people.

So this is very much a work in progress, and I'd be delighted to hear any thoughts that you think could kind of improve our, arguments.

So let's go. Okay.

So I wanna start by, talking about how I kind of got involved in all this.

How did all this start out? this has been going on for a couple years now.

This kind of interest in Man the Hunter, and it was kicked off by this paper, which many of you will be familiar with.

So in 2020, Randy Haas and colleagues published this paper called Female Hunters of the Early Americas, looking at, an archeological site now, 9,000 years old in Peru and it found associations, with female skeletons and hunting toolkits and so the argument was made that there were female big game hunters in this population and as we see in this last sentence here, these findings are consistent with non-gendered labor practices.

In the past, again, females were big game hunters, so this paper made a big splash.

It was, very interesting.

there were also challenges to it from archeologists about the inferences that, that were made.

I won't go into that at the moment, but I'm just kind of setting the stage here.

Next slide. Now, in 2023, so that paper was focused on archeology.

In 2023, a paper came out by Anderson et al that focused more on the ethnographic record and what they did was they did a cross-cultural survey, looking at all sorts of different societies and examining the ones in which women hunt and what they found was that women hunt, according to their analysis, in almost 80% of foraging societies with big game hunting occurring, by women in about 33, percent of these and I'll get to the critiques of that in a moment.

and then next, later that year, these two papers came out, led by, Kara Koba and Sarah Lacey again, kind of pushing this, woman, the hunter angle from physiological and archeological viewpoints.

Now, to say the least, this took the world by storm.

there were a lot of media articles and, prestigious venues, scientific American Science, the New York Times, basically saying we've killed the myth of man, the hunter, man the hunter has been debunked.

As Al Pais said, women have always hunted as much as men.

So if you're someone who's not an anthropologist who's not familiar with this kind of work, it might seem as if we've had this kind of radical restructuring of, of knowledge.

and in fact, I was interviewed for, for some of these studies, including the one with NPR, and talking to the journalists, it was very much the sense of how have anthropologists ignored this evidence for so long that women hunt.

as well, it was almost kind of a conspiratorial tone, which I found kind of interesting.

Now, the reason I got involved in all this, I mean, I think otherwise I would've read the news articles and kind of moved on, but me and my students, back in 20 22, 23, we were working on a very similar, study as the Anderson paper.

So Jordy Hoffman, who is here today, and Kyle, Faron, both at University of Calgary, we were doing a cross-cultural study of women's hunting as well and what, and what we did is we used, HAF, the human relations area files, as well as other ethnographic sources and we were using theory from behavioral ecology to ask the question of why, when, how do women hunt? So we were synthesizing the rather large body of evidence about this and trying to make inferences about whether and how women's hunting occurred in the past and so when we were, sorry, when we came across the Anderson paper, we were a little bit, surprised.

let me just try and go back here for a second.

We were a little bit surprised cause I had just spent the past few months with George and Kyle pouring through all the ethnographic reports of women's hunting among hunter gatherers and we came to vastly different conclusions than the Anderson at Al Paper did.

we weren't trying to estimate the frequency of hunting though, across societies, so we thought something was up and long story short, we ended up writing a response

once we dug in to this Anderson, piece, trying to replicate their analysis and what we found is that, again, long story short, the methods are not really replicable.

We weren't really able to do it. We tried really hard.

but what we did find was widespread evidence of likely selection bias, okay? Meaning that, they were inflating the frequency of women's hunting through the decisions that you make along the steps when you analyze data from having your sample to, to coding it.

A lot of these steps we found, tended to increase the likelihood of women's hunting, and thus they arrive at a very high estimate.

The main thing I'll point out now is that there was a conflation of rare versus frequent or habitual hunting.

So if you had a society in which it said that women hunt once every 10 years or something, that would have the same level of evidence as, as a society in which hunting was, was frequent.

So that's not actually telling us all that much and we ended up redoing some of their coding.

and again, we found a lot of errors in the codings.

We found different answers.

Again, I won't go through all this, but basically we find that this wasn't overturning the idea that it's mostly men that do the hunting, mostly women that do the gathering with, of course, flexibility.

So we said female forger sometimes hunt, yet gender divisions of labor are real.

So I have argued that the media storm around this is not really justified by the evidence and there were some other aspects of these papers that I think hunter gatherers scholars found a little bit, off-putting.

For one, there was the focus on hunting alone, right? For decades now, we've been talking about how cooperation in forgers is complicated.

It's multifaceted, it's multi-dimensional.

Men and women play complimentary, subsistence roles to focus only on hunting or only on gathering.

I think we've sort of moved beyond that.

There's also this sort of implicit idea that hunting is necessarily better than any other kind of labor.

but we think that this is a form of projection, onto these societies of sort of how we are seeing the world and I'm not sure that that is really appropriate.

So again, that's just summarizing our argument from this paper.

Now, as all this was going on, I sort of developed a sense that there was even a deeper underlying issue.

It's not only about the data on women's hunting itself, but it's the way that we talk about these things.

It's the way that we refer to the phrase, man, the hunter or divisions of labor and I think this is summarized in that Anderson piece where, it says the prevalence of

data on women hunt women hunting directly oppose the common belief that women exclusively gather while men exclusively hunt.

So, of course, as former scholars will read this sentence and say, well, I don't know anyone who actually, believes that.

I don't think people in our field have believed that for 50 or 60 years, potentially and so their aim here was to deconstruct the general man, the hunter narrative and what I think we've realized is that that phrase, man, the hunter, that there, there is actually no general narrative.

It's actually a term that has multiple meanings, and people are using them in different ways and actually confusing those and that kind of explains some of the issues that have arisen with the media treatment around man the hunter.

So if you were to ask someone on the street what they think of when we say the phrase, man, the hunter, they might point to an idea that was developed in the early 20th century, if, if not earlier, in which hunting, which was done by men really shaped human evolution.

I mean, this in a sense goes back to go back to Darwin, right? hunting made us upright, it made males cooperate, it, facilitated tool use and so on.

But this is a very kind of deterministic version of the hunting hypothesis.

The idea of biologically fixed, genetically rooted sex roles with very little, flexibility and so the implication is that in the human past, we had very rigid sexual divisions of labor and added onto this was this idea of aggression, violence, and warfare.

I'll talk more about this in a minute.

But the idea is that the lust for hunting, it kind of spills over into other aspects of social life and so this is why males are so aggressive.

It's why our species is predisposed to, to warfare and so when we look at the kind of cultural products around this way of thinking, whether it's like I dug up some sexist 1950s, um divisions of labor, posters here where women don't leave the kitchen or the sort of like caveman type stuff.

this really goes back to, as I'll argue, dart and arrow and we see here in 2001 Space Odyssey, this famous dawn of dawn of Mankind, I think goes back to that, as well.

But there's another way to look at the phrase, man, the hunter as well, which is the conference in 1966, and then the subsequent publication that gave rise to modern hunter gatherers studies.

This was the first time that people, came together and said, okay, what can we learn from hunter gatherers today to inform our ideas of the past? And this resulted in the field of the behavioral ecology of hunter gatherers, as well as work on, social anthropology of hunter gatherers and what this large body of, of work has shown is that it is indeed men that usually hunt women, usually gather.

But this pattern is flexible and I would say, I don't think I'm, exaggerating to say that this is kind of a consensus view of people working in the field.

Now, the real problem here, though, is that these two meanings that I just outlined, they get confused, right? And we see this a lot in recent literature.

So in the Creative Spark by Augustine Fuentes, he writes that the, the 1966 man, the hunter laid the idea for a basic concept of early man, banding together, using sticks and stones to hunt down animals, kill them, and so on and so forth.

So it's that kind of strong version of the hunting hypothesis, but it's associated, this is a key point with the conference as a whole, okay? Not individual chapters, but the conference as a whole and we see the same thing in, one of the OK Kaba and Lacey articles.

So this idea formalized in the edited volume, man, the hunter of a deep sexual division of labor rooted in sex-based biological differences, males are dominant and prominent and then what's quoted here is a chapter by Loughlin and as I'll show you in a minute, this is actually probably the most extreme chapter in the Man, the Hunter Volume.

But again, you see a conflation of this idea with the vol, with the volume in the conference itself.

Okay? So to summarize this kind of first part of the talk, the phrase, man, the hunter, it's been associated with sexist theories of human evolution.

I think we can agree that those exist.

They're influential, unfortunately.

and they're problematic.

But wildly disparate use of the phrase has led to unnecessary, I think disagreement and popular misunderstanding.

I would argue that there's actually quite a bit of consensus based on the empirical record, around a lot of these issues.

So our goal in this paper is not to say that this isn't really a defensive man, the hunter.

It's not, saying that we can't critique man, the hunter, the volume or the other versions of it.

But it's to really say let's get our terminology straight here, and let's be clear about who is saying what and this will help improve the quality of our scholarship moving forward.

So that's what our paper is, is doing.

Here is the, the abstract here, and this will provide the outline for what I talk about for the rest of the day.

So we're distinguishing three meanings of man, the hunter, first.

First, the early to mid 20th century, idea that was propagated by popular writers, focusing on hunting man aggression, rigid divisions of labor, immutable sex differences and then second, the man, the hunter conference and volume and then third developments in the field of hunter gatherer behavioral ecology and then at the end, I'm gonna ask, how are these actually related? How did these different fields evolve in concert? Or was it separately? Because the answer to that question should tell us about how we should talk about man the hunter.

Okay? So let's get to our first meeting, which I've kind of touched on a little bit already.

Many of you will be familiar with Raymond Dart, famous paleo anthropologists working in the early 20th century, discovering the, the Tong child, Reuss Africons and he devised the, the Killer Ape Theory, and he wrote about it in, in very purple prose, basically, about how early humankind was shaped by the development of, of lethal weapons that kind of gave us this blood thirsty instinct and that's actually what made us human right, because we kind of two sides of the same coin and so here's an example of one of these quotes.

Our ancestor, the eight Man's Instinct for Violence, successful development of lethal weapons gave him dominance in the animal world from the beginning and those are with us today, right? So that is known as the Killer Ape Theory.

this was actually heavily critiqued by anthropologists when it was first proposed, accept, sorry, accepted by others, but also heavily critiqued.

Now, in the 1950s, dart ran into a, playwright named Robert Artery, okay? So he worked in screenwriting most of his career, but he was actually a, an anthropology major at the University of Chicago and in his retirement, he got interested again in, in these issues and he saw Dart as kind of a victim, a victim of the anthropological community that wasn't paying attention to an idea that was clearly correct.

Okay? So Robert Artery wrote The Nature of Man series, these four books here, which by the way, these have been reissued by Amazon, and they have extremely high ratings, right? 4.5 to five stars. People love these.

only in the past few years have I actually read these books.

These aren't actually taught in, in anthropology, which is kind of my point here.

I read these books, and they are, they're a lot of fun to read, right? You can tell that he's a screenwriter.

These ideas really grab people.

I was reading it like, wow, this is, this is really exciting to read.

so, but he kind of devised his own idea of the, the hunting hypothesis, right? So hunting led to food sharing the male role of provider, the bipolar society that was sexually segregated, and the female role of defender of the home site, okay? So according to Arry, women were basically just reproducing all the time.

They weren't really doing much else.

So he portrayed them as sexual specialists, counteracting a tendency of social males who are doing things other than reproduction.

So artery was kind of taking dart's ideas and then building on them more, and putting that all together into this kind of cohesive idea that I will call sort of a strong version of the hunting hypothesis.

Now, artery wasn't the only one who was selling bestselling books in the sixties and seventies.

There's also Desmond Morris and Desmond Morris in the Naked Ape, the Human Zoo.

He kind of has the same ideas as as artery.

Here's a quote again, about what women are doing.

because of the extremely long period of dependency of young and the heavy demands, females found themselves almost perpetually confined to the home base.

Okay? So I'm kind of lumping dart artery, Morris together here and the point I wanna make now is that we can ask where were they getting their evidence from? Where was the stuff coming from? And what I've been realizing is that it's not coming from hunter gatherer studies, it's not coming from anthropology, ethology.

It was all pretty much coming from animal behavior as well as paleo anthropology.

Again, dart was a paleo anthropologist, so Conrad Lorenz, Nico Tinbergen, these are very famous, scholars of animal behavior who focus their efforts on looking at the behavior of birds, lions, wolves, and so on and so for, for artery and Morris, these animals were actually more relevant to reconstructing deep human ancestry.

Then modern day hunter gatherers, which is kind of an interesting claim that we will unpack in a minute here and Audrey's voice was also boosted a little bit by, by Louis Leaky, who had his own ideas about, aggression.

They actually hosted a, a discussion at Caltech in the early seventies, I think and it was really interesting that leaky was aggressive in his own right, but he was actually calling out artery for his propagation of this blood thirsty eight man, idea.

So these ideas were getting a lot of popular attraction, but not necessarily in the anthropological world.

Again, these ideas, they can form really well to explaining why 1950s suburban life in the US was the way that it was.

It kind of just made a lot of sense to people, right? And then you have Kubrick 2001 Space Odyssey, that first scene where we are born of violence, nature read, and tooth and claw.

He was actually directly inspired by artery.

I mean, this comes directly from, from artery.

So that's what was going on in the sixties and seventies in terms of the creation of human nature.

It was coming from ethology, it was coming from paleo anthropology, and it created a lot of the negative stereotypes that we call sexist today.

if you're interested in learning more about this, these are two good books I would recommend Killer Instinct and Creatures of Kain.

they talk a lot about the, the stuff I was just glossing over, basically, but I'd recommend you take a look at this if you're interested.

Okay? So that's the, the first meaning of, of Man the Hunter, and that's what most people, I think mean when they talk about Man The Hunter.

But let's talk about the conference now.

So in 1966, a bunch of anthropologists, about 75 anthropologists, got together at the University of Chicago to talk about, again, how can we look to modern day foragers and reconstruct the human past 75 participants.

unfortunately only it seems like five to seven maybe were, were women.

Those who were there were very prominent.

I've highlighted some of them here.

This is in an article I wrote with Richard Lee recently, June Helm, Lorna Marshall, Sally Benford, archeologist, Sally Benford.

So in addition to them, you had, Saul Tax.

It was actually his idea to do this, this conference, apparently, sure.

Sherwood Washburn, he was a professor at Berkeley.

He's had a massive impact on physical or biological anthropology.

Richard Lee, who we all know right here, famous ethnographer of the Kung Irv Devore, who was actually at this time, focused a little more on baboon studies.

Glenn Isaac, Marshall Lins, Louis Benford, Shanan Levy Strauss, Woodburn the list list goes on.

Lots of famous names. And recently I was trying to get a better understanding of what this conference was really like.

what was it like on the ground, what was, what were the, what were the broader social conditions that led to this conference? Why was it needed? And so I reached out to Richard Lee.

Richard Lee, as far as I can tell, was the youngest person at the Man, the Hunter Conference.

I think he was something like 27 or, or 28, Irv Dvo, just a few years older.

and we started holding a series of conversations, and it's been one of the most fantastic experiences of my life for the past year.

Richard and I have been talking nearly, nearly every week off and about man the Hunter, but also about about other stuff and he's given me so much insight into how things worked.

I think we had a tendency now to just look at the volume and think, okay, well, it's, it's just that, but actually this is the product of a lot of, brilliant, but also flawed to people who, were, were working in in the 1960s.

So I recently published this in Hunter gatherer research, if you'd like to take a look.

but I basically asked a bunch of questions about the Man, the Hunter, conference.

Now, for our purposes, what I wanna point out is that man, the hunter, the conference, it was not just one thing, okay? It was not just the chapters that promoted hunting.

Now, there were two of those.

So we'll point out those ones here, the Evolution of Hunting by Washburn and Lancaster and then, as I mentioned before, this one Hunting by William Laughlin.

So these are very strong versions of the hunting hypothesis that hunting shaped humanity like I mentioned before.

But they are probably, I mean, they are the strongest ones there in, in terms of this emphasis on hunting.

One thing I'll note that I learned from Richard is that, the Washburn and Lancaster chapter, this was actually not even presented at Man The Hunter.

So when we're trying to recreate how, how this was going and what people were talking about, they weren't even talking about this stuff.

I'm actually not sure about the Laughlin chapter, but this was submitted after the fact in the two years between, the publication, or, sorry, the conference, and then the publication.

So that, to me, it sort of shed a different light on how the conversations actually would've gone and then, of course, we have the chapters that we think of as being kind of canonical, man, the Hunter chapters, at least if you're a hunter gatherer scholar, Richard Lee, what Hunters Do for a Living, this was one of the first papers to really call attention to the importance of women's gathering and say it's not really all about hunting.

There was Marshall Stalins who, advanced the idea of the original affluent society going after this idea that hunter gatherers are teetering on the edge of starvation.

There were also mentions of women's hunting in this chapter by Hitoshi Wabe and he says, Hey, look, this is actually not a rare phenomenon.

Okay? So the idea here is that that, that the discussions were diverse, and there was also a lot of disagreement, and this is what we go over in our paper.

I can't go over all this now, but there was disagreement about the subsistence base of modern, and, prehistoric country gathers a lot of debate about aggression and territoriality, ethnographic analogy, and its pitfalls, sex differences, the nitty gritty stuff like marriage patterns and, and kinship.

There was also a lot of discussion around, what was happening to hunter gatherers, land rights and, and cultural loss.

Now, I think part of the, part of the issue here is that the title, man, the Hunter, is admittedly, very old fashioned, right? Especially given what we just saw, that the contributions were actually very diverse and if anything, they were kind of undermining that idea of man the hunter.

So in the introduction, they talk about their terminology, where they use hunters as a shorthand, despite the fact that majority of people's considered subsisted on sources other than than me.

So this was acknowledged then, and I think maybe the most interesting fact I learned from Richard was that the title of the conference, man, the Hunter, it was really up to Washburn.

He was kind of the big shot in the mid 1960s and Lee and Devore were his PhD students, so you can't contradict your PhD advisor, and they, they had to just go with it, even though they actually pleaded with him.

They said this is really outdated.

It's old fashioned. I think we should go with something a little bit more inclusive and broad than just man the Hunter and Washburn said, nah, don't, don't worry about it, it's fine.

but this has, I think, ended up contributing to a lot of the misunderstanding that I've been, that I've been talking about.

I'll also note that the people who were at Man, the, man, the Hunter, this wasn't like a stodgy old group of white guys.

I mean, there, there were a lot, but there were, it was a rather young group of participants.

I think we calculated the average age was late thirties or early forties, maybe. there were also a lot of leftist activists.

You might know, the contributions of, of Ax helping out with land claims and, civil rights for Native Americans in the us.

Marshall Sos kind of invented the Kean, protesting the Vietnam War.

When Levy Strauss stood up to give his address at the end of the conference, he looked out and he basically said, I don't know any of you.

He said, the age bracket has changed.

and so that to me is really telling that we're seeing a changing of the guard here, and that it still has the title Man the Hunter, but it was really presaging what was to come about a revolution in hunter gatherer studies.

Richard told me a great anecdote that, while Levy Strauss was giving his address, Les Hyatt and Mervin Mega were basically talking s**t about him.

They were muttering badmouthing him.

and if you've, if you've read the volume closely, you'll know that this was a constant source of, kind of ranker at the, the conference was that they were undermining Levy Strauss', ideas about Australian Aboriginal kinship.

They were saying we, we've done the field work and this doesn't, this doesn't really add up and so here they were badmouthing him while he was giving his address and to me, that really shows again that this changing of the guard is, is happening.

So, nevertheless, there's been like a conflation of the Man in the Hunter Conference with those ideas I talked about earlier, dart artery and so on.

But this confusion has actually mostly been, I have to say, recent, my colleague here at the University of Calgary, Linda Fegan, wrote this great article in the mid 1980s, and here she says, the papers in Man the Hunter, championing as they did the Explanatory Power of Hunting and this is, she's referring to the, the chapters I highlighted also provided the insights and data that were to lead to its undoing.

So we have to look beyond just the title of Man, the Hunter.

It was actually really starting a revolution and that revolution was what happened in the subsequent years, which is the meaning three, the behavioral ecology of Hunter gathers.

also including all the work done on social anthropology of, of hunter gatherers.

I'm more of a quantitative behavioral ecologist, so that's what I'll talk about.

But I don't want to, um dismiss the really important, contributions by social anthropologists that, that we even as quantitative behavioral ecologists use and really appreciate.

but what the conference did was it inspired further research to integrate paleo anthropology, primatology archeology, human behavioral ecology to understand, human origins and indeed at Man the Hunter.

They even, right. You know, here we have raised more questions than we've answered.

I think there was a realization that things were sort of just getting started here.

Okay, so what is, human behavioral ecology? I'm sorry, that was our next slide.

anyway, so in the years after, man the Hunter, we had dozens of field studies, around the world with forger populations and this resulted in hundreds of thousands of hours of accumulated op, of accumulated observations of forger.

These were international efforts, Americans, British, French, Japanese, and so on, with a big focus on forging, subsistence cooperation, sharing divisions of labor and mobility, social organization.

Uh the list, the list could go on.

we have a whole section in our paper where we actually outline all this in detail.

I I don't really have time to go through it today, but, again, it produced a very rich body of work, producing a lot of empirical observations and when you combine it with other sources of evidence, it has been critical for elucidating the pathway of human evolution.

We have to be careful, of course, with how we make inferences, but it has been very, very productive.

One thing I wanna point out here is that this is a, this is a new kind of science than what Dart Audrey Morris we're talking about.

Again, they weren't even looking at ethnographic literature, but even the foundational assumptions were, were different.

They placed a lot of emphasis on, on instinct, right? You don't really see that in human behavioral ecology.

We're asking what are, what are the strategies and traits that maximize fitness in particular, conditions? And so we're not talking here about behaviors and roles as being fixed, but behavior is, is flexible, and people have to cooperate to solve problems and we've been using this framework over the past 40 years to try and understand how we divide labor, and how people in the past would've divided labor.

So let me just share with you real quick what those insights, look like.

So here's a paper from, 2007 by Frank Marlow, looking at what the ethnographic records says about the division of labor.

what are men doing, what are women doing Here, we find there's some activities that are all female, gathering vegetable foods, shellfish, eggs, and so on, all the way up to male, where you get kind of large land and aquatic, fauna.

So again, this is based on large crust cultural data sets and so where do we stand on this topic today? Well, it's been a really rich area of research, and I wanna just use this abstract from a book chapter by Bird and Cotting in 2015 to show how things have changed, how we've moved beyond kind of the archery morris view of manhunt

women gather and that's it, that's all there is to say to, current controversies and complications and it's a really interesting area of research.

So, for one, we're kind of moving beyond these simple dichotomies.

I think it's been a, a long time since people have talked about, men only hunt, women only gather.

Next, they talk about how divisions of labor are multifaceted, not only based on, on gender, but also age and it's not limited to monogamous marital pairs.

This speaks to the fact that divisions of labor are complicated and they're multi-level hunter gatherers live in multi-level societies.

Cooperation occurs in a multi-level context.

Another big development has been that we've moved beyond just talking about hunting versus gathering.

So divisions of gender take the form, not generally, generally not of meat and vegetables, but the acquisition of high and low variance food.

So it's, it's really more about, risk taking than it is about the food itself and then there's also been really interesting debates over the past 20, 30 years on why there is the division of labor at all.

Is it because men and women are dividing to have complimentary specializations, or are they pursuing different currencies, different goals? and that's beyond the scope of this talk.

But this is just to say that I think the consensus view is that divisions of labor do exist.

They are flexible, and we're still trying to figure out exactly why they, why they exist.

Hmm. Now, part of this is, about the fact that humans have the, this really long life history.

it takes us a long time to acquire skills.

I'm sure all of us who have done field work with forger and tried to do what they do, you fail miserably.

I know I do get treated like a child, basically.

but I understand why, right? these are skills that are just as hard as becoming a lawyer or a doctor.

and so it takes a long time to develop the skills, but once you get good at them, you produce a lot of food and that's what we see in this plot, from a paper we wrote a few years ago where return rates get really, really high in the thirties and forties, and at this point, you're producing way more than you need for yourself and of course, this is what we then share out.

So it takes a long time to develop, but then you share it out.

and then as you get older, of course, you, become less capable of doing that.

but because of this long developmental period, there has to be some degree of specialization.

Again, this is not conflict with the idea of flexibility, but there's some, degree of specialization that is kind of an economic explanation for a division of labor that isn't reliant on, just, just positing kind of strong sex differences.

So, according to this way of thinking, human behavioral ecologists, hunter gatherers, scholars, we know that women's hunting, is, it's not a surprise.

It's something that we've been talking about for decades, and it's something we should expect to see.

The key question is, when does it happen and why does it happen? There's also the role of culture here, which is absolutely critical and I think kind of being left out of these conversations these days, I could pull any number of quotes, but I, I really liked this one by Megan Beasley talking about, complementarity among men and women, of the kung and sort of this link between, protection from heat and like dancing and it's just this really beautiful description about the cultural background to divisions of, of labor and this gets to the point that I said before, is that we need to really think about how forger themselves are conceiving of these differences.

I think that contains a lot of critical information that, again, is kind of getting lost in these current, debates.

Now, with this framework, we're actually able to construct, I think a reasonable view about how divisions of labor might have looked in the past.

but we're actually using this, this, this logic of behavioral ecology.

So this is our women's hunting paper that I showed this screenshot from earlier, where we kind of summarize the conditions under which women hunt, and then we ask, would those conditions have been present in the middle paleolithic? And if they were, then that means that probably female hunting did occur under the right, circumstances.

So I don't think we need to be dogmatic about this at all.

But again, I'll just emphasize that it's the, it's the logic that I've been laying out that allows us to make this conclusion, right? We're not treating forger as living fossils, as has been stated in these debates, but we're treating them as people just like you and me, who are looking to solve problems and I also see people in the past as looking to solve problems within a 24 hour day in which they're very busy, and they might have solved problems in the same ways and I just showed this picture because, I mean, this will resonate with me with Helga.

this is a picture of head smash in Buffalo jump not far from where I live in Alberta and Canada and it just looks like a little cliffside right here.

But this is actually a spot where for over 10,000 years, indigenous hunters have, gotten buffalo to stampede over these cliffs and what you see right here, this is actually 15 or so meters of bone bed of accumulated bison kills from thousands and thousands, of years and what they would do is they would draw the buffalo in the fall when they were nice and fat, on these plateaus in these game drives over the cliff.

They'd fall down, get injured, and then they would finish them off.

this is the kind of hunting in which women likely would've been, involved, certainly along the game drives here, and you can actually still see stones, that marked the edges of those, of those game drives.

But if this kind of, if this kind of ecological conditions were more common in the past, I think women's hunting could have been common in the past.

Okay. moving on to sort of the last part here.

How are these three meanings of man the hunter connected? So I've argued so far that they tend to be conflated, they're confused.

but in reality, what I found was that they're only kind of marginally connected these traditions of, of research and I put research there because of Robert Arry and Morris, developed pretty independently of one another and if anything, we can say that there was a lot of antagonism between them.

So let me just summarize that evidence really quickly.

So when Dart Audrey Morris were writing their stuff, I would say it's, it's fair to say that they were largely rejected.

when Dart wrote his, predators Are Prey paper in 1953, sorry, I forget the title, but it's a prominent paper.

In 1953, one of the most, pointed responses was by Sherry Washburn, who we saw earlier, one of the organizers of Man the Hunter.

He said looking at this evidence that looks like Australia pits were probably the hunted rather than the hunters, he, he was also highly critical of artery.

As artery's books were coming out, he called 'em a popular popularizer of data he does not understand.

Okay? Pretty harsh anthropologists.

Edmund Leach, social anthropologists said, artery's books are best left alone altogether and then in a book review, Marshall Soland says, artery presents us with a view of human nature that does not make relevant the accumulated anthropological evidence of man's behavior.

What does he mean by this? What he means is he's ignoring ethnography.

Okay? more on that in one moment.

Now, if you do a search and man the hunter volume of artery or dart, you find that artery is mentioned once and, very critically and dart, as far as I can tell, is not mentioned at all and then subsequently, when you look at the development of human behavioral ecology, it, did not involve dart artery Morris at all.

It was simply, not mentioned.

They were simply not mentioned.

Now, similarly, Audrey, he was very hostile toward ethnography and I was trying to figure out why this is, and there's a lot of clues to it in his writing.

I think one is that Audrey was concerned with what he referred to as a pre cultural phase of human evolution.

he saw modern day hunter gatherers as, too advanced, so to speak, and also too marginalized to suit his arguments.

He was interested in the deep, deep past, right? And he saw modern hunter gatherers as not relevant at all for reconstructing, human evolution.

Now, of course, to even say pre cultural, now, it doesn't really make any sense cause we acknowledge that other animals have culture, right? but nevertheless, this is why he dismissed any evidence at all for modern forgers.

there was a point in one of his books where he reviewed Lee's evidence of women's forging at Manna Hunter.

So I thought, okay, this should be really interesting.

He goes through it, and then he just rejects it.

He doesn't give any reasons. He says, our remaining primitive hunting peoples depend more on the hunt than is generally accepted.

So he was basically just rejecting what, what Lee was, was saying and he also says that, to, to look at contemporary hunter gatherers as a guide to the past, is the living fossil fallacy.

So it's accepted by observers who take his, their model, contemporary hunting peoples to inform us as her way in ancient times.

So you can see, you can see his line of thinking here and then, in sort of co degrass, he says, modern foragers are human evolutions losers and this kind of hearkens a little bit to the debates about hunter gatherer marginality, about hunter gatherers being pushed to lands that kind of no one else wants, and therefore providing a skewed impression of how hunter gatherers would've lived in the past.

That is a robust and very interesting debate, but Audrey doesn't really engage with it.

He just kind of dismisses them.

Now, I wanna talk for a second about Washburn, because he came out in our analysis as a really interesting figure here.

As I said, he had a pretty outsized influence, not only with the title of Man the Hunter, but with really the course of the field in the 1960s and what we argue is that his version of the hunting hypothesis, although it was more defensible than arteries, which was kind of blood soaked, he had a, a kind of narrow focus on male cooperation, and that he, he, he was overlooking the significant contributions of women in foraging societies as well as cooperation.

This is another story from Richard that was very interesting, which was that in the editing phase of the book, he asked Washburn to put in more about cooperation into the chapter on hunting and Washburn did, apparently, I, I don't know what exactly he, he put in or what it looked like before, but apparently he obliged and then 15 years later, I think it was something like early 1980s, Washburn went up to him and he said, I should never have added that.

I shouldn't have listened to you. It's not about, it's not about that.

that was wrong, and it's still wrong, and so you should go visit the, the paper.

I went with Richard to, to see those details.

but I thought that was kind of interesting when we think about Washburn and his kind of evolving views.

But one thing that, that I think is striking is that because Washburn with his new physical anthropology, he was laying the foundation for what our field looks like today.

Like in a real sense, we are swimming in Washburn's water, of comparative research of not just this, like storytelling of a focus on hypothesis testing and he trained so many students, including, women who would go on to advance feminist critiques of the ideas that Washburn presents in *Man The Hunter*.

So in the years following *Man, the Hunter*, there was this book, *woman The Gatherer* and this book wasn't denying, that men tend to hunt, women tend to gather.

It was more centering, gathering itself as a driver of human adaptation and Adrian Ziman, one of the leaders of this way of thinking, was a Washburn student and apparently Washburn wasn't too happy with his students contradicting him, I guess it would be.

but it is very interesting that he kind of set the stage for that.

Now, in the 1980s, it seems like Washburn's views may have been softening a little bit.

So here's a book review he wrote of the *Man of, of the woman, the Gatherer*, volume, and it's with Sharon Ranieri and he, they say something really interesting.

they say, obviously the traditional view is in part correct, but it underestimated the economic and social contributions made by women, or even more infuriating.

It simply omitted them.

So, I don't know, this may be a little bit of, making up the past on the part of, of Washburn here, because you could argue that he was sort of the one omitting them.

but here he is, saying that that shouldn't have been done.

But then later in the piece, he ends up being like, quite critical of that volume.

So it's kind of interesting to think about Washburn in his later years looking at his legacy.

and it must have been quite sort of complicated and so in the context of *Man, the Hunter* Washburn comes off as kind of like a sto a stodgy old guy, of, of sort of representing a traditionalist view.

But it's important to, to, to remember with Washburn is that he was kind of on the cutting edge with other social issues at the time, even if he was behind the Times on gender.

So he gave a very, well-known, talk on the study of race at the 1963 Triple Ass Conference in response to Carlton C**n, who was publishing the origin of races and promoting racist ideas and he was saying like, look, there's just no evidence to support this.

And, back at that time, a lot of people disagreed with Washburn and thought that he shouldn't have been talking about this the way that he was, but we now see it as being, um progressive.

Also important to note, that Washburn was highly skeptical of sociobiology in the mid seventies.

So this is another piece in New York Review books by Washburn, going after Sociobiology and he was basically saying, look, sociobiology is not paying attention to human culture to society when EO Wilson says that genes are kept in a leash that's really flattening the human, experience and so I think people might sometimes lump Washburn with Sociobiologists, but actually the truth is something very different.

So I just wanna point out that this complicated legacy of, of Washburn now, with this kind of, I hope, more nuanced perspective of what man the Hunter was and is today, we can actually look back and ask what were people missing, even given evidence at the time, of Man the Hunter and I feel like female cooperation is one of these things that the empirical evidence for it was actually there in the sixties, but it was still sort of being ignored and I think, I think that's really interesting that that's the case.

Only recently, had human behavioral ecologists really emphasized this.

I, I would say, so here's a special fill trans issue from 2023 on cooperation among women.

of course, I'll give a shout out to Rag here.

You guys have been talking about, female coalitions and cooperation for a long time.

So I think that's great. but I think overall as a field, maybe we've been a little bit late to the show here, and, again, but we need sort of a more objective view of this history to come to that conclusion.

So in kind of summarizing here, what I try to do is distinguish between popular and scientific unsound framings of Man Hunter, comparing them with these more nuanced anthropological perspectives, and emphasizing that when we critique these ideas, which we should be doing, of course, let's avoid conflating these different models and using straw men to get high profile popular articles.

so we think that researchers, should consider specifying which models or maybe, specific chapters for man the Hunter.

They're critiquing. Like I said, if you, are talking about Solens and Washburn, they're saying very different things at the Man The Hunter Conference, and we need to distinguish those and treat them as different.

we need to consider emic perspectives from forger populations, and of course, recognize the importance of cooperation.

I don't see it as men versus women in these, cases.

If anything, it's about how you can work together, to, to achieve great human things and in closing here, I'll just, leave this quote from Levy STRs.

This is actually the last thing that he, that he says, in his concluding remarks and I think it's a pretty apropos for, for the talk today.

So, like I said, this is a work in progress.

I would love to hear feedback.

I'm sure we got some things wrong.

So very happy to, to to hear your thoughts. Thank you.

Let's see. I'll stop sharing.

Fantastic. Thank you. Thank you. So Thank you. Yeah, happy to hear any thoughts. Yeah, thank you. It's a very, very comprehensive, discussion. Yeah.

Covering a lot of ground, and, hell, I meant to give you a shout out there.

I think you've had some of the, I find it really cool evidence about, again, that's like emic view of forger, and, you said that, that in your conversations that women say they find hunting, boring and they don't wanna do it and I, I think that, I mean, that says a lot.

Yeah, no, it's because when, when men go hunting, generally they stay very quiet so that, that their voices don't disturb the game that they're approaching.

they tend to, in fact, the, the accessory show is sort of one in seven, I think Huns, is successful.

And, um it's, it's, since it's not as reliable as going gathering and it's not as fun, it's not men.

I don't know how many people have actually gone gathering regularly or at least followed along with their camera, with, with hunter gatherers in the field.

But I can tell you one thing, they chatter about all kinds of gossip.

You know, like they, and they they're talking about, oh, look at their, and look at their, they're, they're observing the environment.

If they see game like a herd of wildebeest going by or something, they, they, they talk about that.

And, and everybody, is, reminded to let the guys know.

Um mm-hmm.

They also sing they, they sing songs at each other.

They make jokes, mostly jokes about the men.

which probably why they don't really like to have the men come along gathering, I don't know.

But sometimes when I wasn't allowed to go, I had a feeling they were talking about me.

But gathering is, is a very kind of, in my experience anyways, it's a, it's a kind of lighthearted group activity that's fun.

And, and hunting is very different and that's why they said that it's, it's kind of boring to, and you see, the thing is that what that indicated to me is that women knew what hunting was like because they they'd sometimes done it.

It's not as if it was an absolute, an absolute impossibility for men, men to go gathering and women to go hunting.

In fact, there was a man I knew who lost his wife while I was in the field, and, and he joined the women regularly gathering food.

cause he had two young children, ? So, I think the other thing I was saying before we got started here, because I brought up this whole issue of why is it called Man

the Hunter with Richard Lee? And he said he would rather have called it woman the gatherer, or, or people, the foragers.

But that, what he told me was that, Warner Gren had insisted on that and I, I have a feeling that the fact that Washburn was supporting that term, is also important.

It's not one that I remember from that conversation, but I know that he, I think he suffered over the years because, because people have kind of, disliked the term as time goes on, and feminist scholars in particular, have felt that it, it was unnecessarily discriminatory, as far past was dominated by male hunting.

Can I say one more thing? Absolutely.

I am currently working on a book with Bob Hitchcock, who is one of the students of Henry Harpening and Patrick that I met when I was starting my field work.

Mm-hmm. and what, what we're doing is we are putting forward the, a model based on not economic activities, but ecological impact.

In other words, that humanity evolved as a keystone species of ecological engineers using fire, and also from the women's point of view, replanting mm-hmm.

Of important food species and of course, you may not know this, but probably do that most hunter camps or abandoned it almost never used again.

Mm-hmm. Well, I was with the women, we would detour from old camp to old camp, and some of these were, this is the camp where my grand, that was named after my grandmother or something and these camping areas were just hotspots of ecological diversity of all of the important food plants.

Totally. You know, and that's something that, I think has also been discovered in, the Serengeti.

I think that pastoral camps, old pastoral camps became hotspots of ecological diversity and that just that whole process of becoming a hunter gatherer kind of creature was, was simultaneously affecting the trophic flows of the entire ecosystem.

Mm-hmm. one of the people who came up with the term keystone species suggested before he died, that, in fact, they wrote a paper on, he wrote a paper on it with one of one of his colleagues, suggesting that humans represent the primary hyper keystone species within each ecosystem.

and I, I would really like that to be explored.

That's, that's basically what, what we're writing the book about anyway. Enough said. Well, That sounds great. I, I look forward to that. And yeah, we see the same thing with like, abandoned bot camps.

It's amazing to see the, the richness.

So I, yeah, that's, that's great. Thank you. Yeah.

I see a few hands up. I, Ivan, you wanna, Ivan? Okay.

Alright. Can you hear me? Yep.

Yeah, that was really great. Vive great talk.

You put everything together to really give a great overview and I read the paper this afternoon.

I don't know if it's gonna be useful, but I, I highlight a couple bits in the paper, but I think, I had a couple of points to raise.

Where was it? there was a bit when you mentioned about Australia in the paper.

Okay. And you mentioned no evidence of agriculture that I don't think that's, I'm not sure that's accurate because Well, you do, the book Dark Emu? Have you ever read that? I Do, but sorry, would you mind just for everyone, can you just like, maybe read the sentence? So, I, I was just trying to find out.

I wanted to do that right there. I will get it.
where it's highlighted.

It must be before that, right there. Oh my God. Here we go.

Page, page, page, page 24 of the PDF.

thus with the important exception of the indigenous peoples of Australia, who did not practice agriculture prior to European contact, all after known forages have a long history of a direct or indirect interaction with farmers.

I think actually in Australia, well, Pasco and others have argued that actually they did have agriculture and they had quite sophisticated technologies, storage economies and, and so forth weirs.

and actually he really beautifully describes European colonizes moving through this landscape where you see clear evidence, agriculture that's really worth reading that actually, yeah, it's a super paper.

I just thought I'd point out in case. No, yeah.

That's great, man. Yeah. Yeah. Thank you.

And, another thing, like, it was really nice, you mentioned at the end of the talk, about Chris Kamilla and Ian's work alongside that of other papers talking about, female cooperation.

And, I thought maybe this should be mentioned in the actual, I don't know if I, I did only, I only spent like an hour or so reading through, I did go through it fairly quickly, but I thought that might be great to mention that in the paper itself, because obviously their research goes back decades and they've been pushing this idea of female, cooperation for a very long time.

So I thought that could be worth exploring.

And, there was one other point, this I'm only saying in case it's useful, everything was awesome that you said you have.

All good. All good. Yeah. where was it that I noted? yeah, it's this page. So it's, again, page 26.

you're saying you've got one sentence where the hunter gatherers with logic egalitarian.

Yeah. Then you've got all the references.

Then you say whether encephalization was driven primarily by social or ecological selection pressures.

I just thought in that kind of paragraph there, um you could link that in nicely with like Sarah Hardy's ideas about female corporation and also Chris and Camilla and Ian's work.

There would be a really nice touch, I think, because it really would fit in that paragraph perfectly and it's kind of a really powerful framework to understand that that fits in with your general argument really well.

But anyway, that's all, and I really loved it.

It was really awesome. Not very useful.

Loads of great stuff there. Lots of nuance in it too.

Brilliant. Cool. Thanks, Ivan. Thanks, man.

J okay. About Jerome. Great to see. Hi, Vivek.

Hi there. Thanks. Really great.

thank you for such a systematic Yeah.

look at that, rather uncomfortable phrase, man, the hunter.

Yeah. I mean, one thing I just felt that was sort of missing were the more sort of emmic perspectives on what hunting is.

because the whole idea of man, the hunter is very much based on this, well utilitarian way of categorizing that that tends to play against anthropologists and, and, and others.

Where we look at the sort of what's the output? What's, what's the thing that happens? Well, an animal is killed, but actually, um that process is, is one which implicates the whole community.

Mm-hmm. and so for instance, in, in my work in, in the Congo Basin, it's very clear that, your, your behavior, your relationship with your marital relations, all have a huge impact on hunting.

So, I, I did a paper on something called Quila, which is the, this, it's a sort of a, a complex category that the Baban jelly people I lived with used to try and talk about these relationships and how the context of one's behavior, in particular sexual relationships mm-hmm.

play out in hunting.

So if your wife sleeps around, you'll keep missing and you'll wonder why you miss.

but actually it's cause your wife's sleeping around, but mm-hmm.

But at the same time, also, the meat that's brought back to the camp has to be socialized in a sense from that wild, dangerous animal to something that's safe for people to consume.

Mm-hmm. And, and that is a critical role that women play in the hunting process, making sure that the meat is fairly divided, that everybody gets a, a, a share, a share, which is relevant to, to their needs.

So old people, for instance, don't get given bony bits.

They get given the nice soft fatty bits because they haven't got enough teeth to chew the bony bits properly.

and, and those are the sorts of things that women are, are surveying as, as, as the hunt comes in.

But also before the hunt, women will have play a big role in preparing for the hunt.

So, I was surprised when women, when some men said, oh, we're going on a, a women's hunt and I thought, oh, what's a women's hunt? and they were going elephant hunting.

And, and the reason they call it a women's hunt is because the women are ritually responsible for, what the way they express it is tying down the elephants, so that the men can then catch it, get to it and, and, and kill it.

So the, the actual hunt has already been organized by the women, in, in a, in a ritual sense.

they tr they, they drink a special brew and travel in trance over the forest and say they tie up the animal, and then they can tell the men where to go to find it.

and they even designate which man should be the hunter.

Uh mm-hmm. They're very sort of forceful way of, it's not something that you, you undertake lightly.

Of course, elephants are rather terrifying when you meet them in the forest.

Right. so I just wanted to really emphasize that, that we have this way of isolating hunting from much broader social processes, which are really important for the people involved and that even though women, women do hunt in the ba jelly society, but they, they hunt in very particular ways, which are connected with some of their, their values about blood, actually.

so women coming across an antelope or a small animal will bludgeon it.

they'll take their machete if they have one in the hand and turn it upside down so it's the blunt tendon and hit it on the back of the neck.

or they may actually try and pick it up and hit it against a tree, to, to kill it.

But, but what they won't do, and what they find really repulsive is piercing.

So they would never stab the animal.

They would never cut its throat and there were a couple of Muslim traders that floated by on a boat one day, and, an antelope was swimming across the river.

They caught it, and they, they cut its neck to make it halal, to, to drain the blood and this was so repulsive to the women.

They talked about it for days and days afterwards, how disgusting it was that, all this blood had been shed, unnecessarily.

and, and, and that brings me to, the work of an anthropologist who didn't mention who I think is very interesting on this subject. Hmm.

Oh, yeah, yeah, Yeah. Sadly published mostly in French or sadly for people who don't speak French.

Yeah, I've experienced that. Yeah.

and and he, he does this extraordinary analysis of tool use among hunter gatherer groups around the world, and he finds very clearly a pattern, whereby men focus on

tool use that pierces, whereas women focus on tool use that pounds that, slices or that, bludgeons or, or bashes things.

and, and that this, I think gets back more to these emic perspectives where it's really about the way that you do things as opposed to what you do.

So women will hunt, women will participate in the hunts in many different ways from preparing the hunts through to, the, the, the cooking of the meat and the preparation of that, that it's done properly and respectfully so the hunters continue to find meat when they, they hunt.

Anyway, just to really just to suggest that perhaps the critique could go a bit wider, in, in how you're framing this to consider some of these more emic perspectives that don't just focus on the act of catching an animal, but, but focus on, the way it's done and the, implication of many different parts of society in that process, and particularly women and women's work is very central to the hunt.

Yeah. Thank you so much. Those are fantastic observations.

yeah, I did have just one slide, on that, and I knew I was giving it short shrift, so, so sorry about that.

Sorry. If you check out our, our paper led by Jordy Hoffman here in in hunter gatherer research, we actually, that paper has, kind of a compilation of, of all those sorts of things that, that you're talking about.

But I, but I think it's critical, and I think it's also something being lost again in these current debates now of just how these people are seeing their own society and how much richer of a view that is, and the kind of stuff that you're saying, rather than simply look women hunt too.

I mean, it's just so much more fascinating and Yeah, Exactly.

Well, I look forward to reading those papers. Thank You. Yeah. Great. Thank you. Yeah, Thanks. Thanks J I'm gonna jump in here if it's okay.

yeah, it's, there's a couple of things following up what Ivan was saying.

we can see it was a wonderful presentation of the arc of all these different aspects of man the hunter.

I thought it was fantastic vi and I've had a go at reading the paper a couple of times.

Yeah. but one of the biggest kind of attacks, dismantling of man, the hunter, as it was of course, is the whole grandmother hypothesis attack.

It was done in so, archeology, paleontology, life history theory, evolutionary ecology with the za.

and so it was really, not just a woman, the gathered thing, but just calling into question, what, what can we how how reliable actually was man hunter in a long, putting it in a long term evolutionary perspective.

Mm-hmm. but there's also something else that I think, I mean, you do reference Hawkes and colleagues, of course you do.

but to kind of pull out a bit more, both from the grandmother hypothesis, but also from her de in her journey, bringing that grandmother hypothesis together with like Thomas and Intersubjectivity going to the cooperative childcare.

Now, why this becomes so important, and of course it connects with Frank Marlowe's, investigation on residents rules and the impact of residents on, male on, on how much men actually can produce.

Sure. yeah, the, so one of the things that is left out in terms of what is in there in Manhunter is you reference one of James Woodburn chapter chapters, but you leave out the key chapter in our view, which is the one where he highlights bride service.

Yes. Okay. And he really demonstrates it's not this isn't in our evolution.

It's not just about pair bonds, it's about the female linkages through kinship.

so mother and daughter acting together, and the son-in-law is marrying in, and the mother-in-law to him mm-hmm.

Is lost in many ways, or is the one who has demand is obligations that are owed to her.

and that was classic with the Hadza, but of course, it's not just the Hadza, bride service tends to be a pretty universal institution for most nomadic, for its for us, I understand it and we tend to think of pair bonds in that with that sort of rejig dynamic.

I mean, that's a rejigging Right. Of man Hunter.

what else? Oh, I was gonna add something there on the, on the issue of bride service, and now, oh, now I'm losing it.

yeah, yeah. Oh, what was I gonna say? oh, Chris, you, you carry on and I'll see. See, that's Great. And I just say that, bride service, well, there's several things that get left out.

And, and again, I will really say Vve, that was such a magnificent overview, was so exciting.

Thanks. Funny and so clarifying, putting it all together in that brilliant way.

So yes. I mean, but in, in a way, following from Camilla, but also from, from Jerome's, things which sort of just tend to get left out.

I mean, I can think of three huge things which just about always get left out having to our own cultural kind of feelings of awkwardness or even, I dunno, even our own taboos.

I mean, one of them's the, the actual scheduling of, of large scale hunting expeditions.

So, I mean, so I mean, it's just so clear that Hunter gather gatherers never pray to the sun.

If they are gonna invoke some, some assistance from some celestial being, it's gonna be the moon.

Mm-hmm. And that tends to get left out because people get very worried over here about moonshine and, um anything to do with that and linked to that, of course, again, and very closely connected to what Jerome was saying, is this the issue of blood.

so, and then of course the, and then Brad service, so blood, blood gets left out because of menstrual blood, and no one really wants to Talk, hi, Amy Country, vote, What's going on? What's that happen? Something happened there.

Somebody please mute who is Yeah, Yeah. Somebody just hope so.

Yeah, I can gets left out, menstruation gets left out.

Yeah. And, and the reason why bride service gets left out, I've, I've often wondered why did it, why is it sort of unmentionable? And as far as I can work out is because Westerners treat bride service as, oh my God.

Oh, horror of horrors. It's a form of prostitution.

It's sex for me. Sure. Yeah.

So, and so you can't impute prostitution to hunter gatherers without being without.

Mm-hmm. And of course, bride service has got absolutely nothing, whatever to do with prostitution.

It's, and it's all sorts of, we go into, into it forever.

But anyway, the thing, the thing about bride service is that it's, it's in separate from women's collective ability to say No to sex.

That's the critical thing.

The, the mother-in-law that Camilla was talking about, she has to be able to, to say to a young man who's come to stay with his sweetheart for a a while, you'll hear initially on, on probation, on trial, prove yourself a generous, good humor hunter and you can probably enjoy your relationship but prove lazy any kind of, any kind of unpleasant sexual behavior and you have on your neck and it takes a long time for that young man to prove that he's he's worth, worth keeping as a son-in-law.

So, so sex strike is what I used to call it, and I don't mind calling it that still and it's, and it's, and when Jerome was talking about the elephant hunt, the critical point is that women, it's, it isn't unusual.

In fact, I think it's normal for women collectively to be the managers of male hunting.

It's as strong as that, that is actually what bride service is about.

It's the mother-in-law, many other relatives, maybe quite a few young men, brothers needed as well to make sure that the male, the males behave.

But the, but the behavior required is courage in, in hunting and it's just normal in that sense, not just an elephant hunt, which is what Jerome's describing.

Any hunting is gonna be kind of managed by women.

I think it's really important to understand that. Right and then the other thing is, I was saying, which gets left out is the, is the blood and I, and I, I it's, it's, it's so critically important to understand that, as Jerome was saying, that women often hunt, they won't shed blood in the hunt and Jerome's concept, Akila is again, a, a very widespread, concept as, and Un Testa and others have, have argued and the critical, the core of Quila is you do not mix menstrual blood with the blood of the hunt, which initially sounds ex extraordinary puzzling what on Earth.

Why would that, why would be so immoral, so deeply immoral to let those forms of blood be get confused? Obviously we, as you mentioned, we, we, we, we talked about that me, Ian and committee in our, human Symbi article in 1995.

But I mean, everything since then has confirmed all of our predictions and, and it, it is so important, it seems to me to, to be emic as Jerome was saying, but actually to go quite far in actually being able to come up with genuinely testable predictions about what you should find and what you shouldn't expect to find if that model is correct.

Going to details of hunter gatherer's, cosmology, and the cosmology is so exciting and so interesting.

And, at the root of hunter gatherer traditions and, and cosmology, there are these ideas about not mixing blood.

And, and, and of, and of course, as you were saying, hunter gatherers are people like us trying to solve problems.

If, if hunting blood and menstrual blood were to be confused, end of story, it would be, I mean, the level of misunderstanding, violence, blah, blah those two types of blood, they, they absolutely need not to be confused.

Disaster would follow. And we need to understand precisely why and then once we, once we start under investigating that, it gives us new insights into how this, the gender division of labor emerged, and how actually it would've been very largely women's, strategies, which made necessary a gendered division of labor because women needed to be able to say no to men.

Any young woman going off and joining the men with the hunt would've been completely, completely undermined women's women's pride service strategy, who you can't possibly control what a young woman does when she's out on hunting expedition with the other, with the other, with the other men, is it all makes wonderful sense and I, and I'm just saying and I, and I know, Vivet that you, you are very sympathetic to all this, but I'm just saying there are seems rather important that certain things which just happen to conflict with their own cultures taboos don't get emitted because that's just Sure.

A dangerous road to go down.

Fantastic. But Great. I agree. Yeah. Yeah.

So, oh, go on Vik. Go on, go on.

No, no, no, go ahead. Go ahead.

Oh, well I was only just gonna pop back with, it was a couple of ref, when, when you go, you and your colleagues go into this presentation of the sort of consensus of what we know from the last common ancestor right through to the hall of scene.

and you were, say you were just sort of summing up, this is on page 18 on the PDF.

Yeah. and talk, and the references you gave as the authoritative references made me wince a bit, and I'm talking about word fot, gamble and chape. Oh my God. Okay.

Fo the reason I'm wincing is because those guys are signed up to man, meaning male, the hunter in control of the economy and in control of females.

They really are. and chape in, in control of kinship and marriage.

I mean, they sign up on that. They absolutely are.

And, and even though Foley and Gamble published the same year as Sarah Hurley published, mothers and others, her takes it away.

I mean, just goes away from where they are. And I, I can't, I'm just interjecting here.

Chape thinks that language has been invented so that dominant males could instruct females as to correct sexual behavior.

Is that right? Okay. Not too familiar with that.

Just, I mean, I'm not saying you shouldn't ever put them, but if you put Sure, sure.

The leading, the leading edge that is Well, yeah, there's very question.

Gotcha. Okay. Thank you for that. Noted, noted.

We'll, we'll balance that out. Yeah, do that. That's great.

Any, any more thoughts? And Maybe Elena, I think, is that Eleena? Do you need to go first or is Ian gonna talk? Yeah, hi. Hi, Vivic. Hi there. Lovely talk. Lovely.

Thanks. Thanks. only, only a minor thing, which again, is, is, is, is is just sort of filling it out even more, fleshing it out a bit more and it's possible as I missed it, because I I was rushed read, so I sort of focused on the beginning and the end and, and, and read the, the middle properly.

But, in evolutionary terms, I think it, I mean, you, you, you touched on it in your presentation just now in, in terms of the role of collective big game hunting Yeah.

In evolutionary terms, that that becomes really prominent.

now how that plays out in, in, in, in sort of sexual division of labor, I think Chris, Chris has already touched on, but, but like, this is, this is crucial for really, and it's something that Kristen Hawkes never really develops, but like this is clearly not about, I, I mean, if, if it's collective big game hunting predominantly by males, then females are using a slightly different calculus for, for, for looking at male qualities than we are familiar with.

Where most hunting is, is is sort of more individual. Yes.

Interesting. and, and, and I think this needs to be sort of somehow sort of drawn into the debate.

Yeah, That's an interesting point. I mean, can you say a little more, like The quality is like, well, I mean it also tie, it ties in with, with, with sort of Chris's point about the moon and the phase locking of hunting.

That, that, that sort of like, and, and this ties goes back to Kristen's work.

What so apparent in the ha in the hadza material, but also in Southern Africa, is, is the, the, the, the what would normally be the season of stress is the late dry season where there's no more honey, no more fruit.

Um unless you're, unless you happen to have Mong go nuts, nuts or, or, or something like it, it's a seasonal stress and Frank Marlow expected that this should be when women should show the lowest body fat ratios and they found just the opposite.

And, and, and they could only explain this in terms of Luna phase locked nightstand hunting in the late dry season.

and the, this was by far their most productive form of hunting.

And, and, and both Burton Jones and, and Kristen Hawkes had been drawing this out 30 years ago and they, and, but they, they were sort of more, more interested in early homo and they never really related it to, to recent human evolution, modern human origins.

And, and, but that's the question that needs to be asked.

When was it be, because lions are such successful nighttime predators, you do not want to be by the water hole except during moonlit nights.

So that's why it's got to be in the nights leading up to full moon, Which When it is.

But if you do that then, and you, therefore you need, and of course this is a spear technology.

So like you are talking about, effective distances of like 10, 15 meters, you've got to get that close.

You can, you can, in, in evolutionary terms, you have to be very close to the game trails as they approach Right.

The, the water holes. Right. So, so Just to say that Ian's arguing that around 160,000 years ago, this wasn't just one sort of particular sort of hunting technique.

It was, it's like saying if there was this kind of bottleneck at a certain point, it was thanks to getting through that bottleneck, that that difficult period, and as particularly every dry season, it was thanks to this particular form of hunting, which was connected so closely with the moon that actually we became successful homo sapiens.

So, I mean, actually, and, and it just, it just, it is just a fact that hunter gatherer mythology in cosmology is just hugely connected with the moon.

You know, you mustn't go hunting when your wife is menstruating.

Don't go hunting with dark. Oh.

You know, because for really real reasons.

cause that's the time when the hunt where the lions would be on the prowl.

Mm-hmm. So I'm just saying for, for weird reasons, all that doesn't sort of, it doesn't translate.

It's all better to put it, it gets lost in translation somehow.

Mm-hmm. I dunno. It's fascinating, wonderfully rich, incredibly interesting.

But somehow it, it, it, those, those real recurrent details of hunter gatherer cosmology and, and practice in hunting that, I don't know, they just somehow, it all gets subtly very subtle ways censor, censored out of, even, even even scientific literature.

I I told you about this, unpublished paper of James' James Woodburn, which Yeah, yeah, yeah.

Editing to make it legible. Yeah.

And, it, it gives incredible fieldwork observation on the HUDs of belief system in relation to the lunar cycle and menstrual cycle. So, oh, Amazing. It's An extraordinary

piece that, that needs to be got out there, in Yeah. Well, I'm very curious to see how that's going.

Yeah. I know you'll love it for Hunter gather research.

Yeah. I don't go into hunter gathering research, actually, but Yes, sure.

All good. Yeah. Yeah. Well, thank you for all this very, Yeah, yeah.

Excellent Comments. Any anybody else would like to ask questions or add in to this? Helga, do you wanna do Helga? Can't hear you can't hear. Unmute.

I should, I'm sorry. I'm sorry.

this isn't a, I'm, I'm not making a comment about the, the timing of hunts or the moon or anything like that, or blood, mixing.

but, it has to do with the behavior of game animals and one thing I noticed when gathering with the women was we'd be walking along, actually, it's not even just game animals.

We walked past a pride of lions that was asleep and they kinda looked up and then went back to sleep and we just kept walking and we passed.

Oh. Within I would say at least, 200 meters, or I should say at most.

But these animals saw us and took no alarm. Okay.

In other words. And I started asking about it.

In other words, what they did not show when they saw a human being, or at least human being such as the qua that I was with, as dangerous, they didn't have what we call predator fear.

Okay. Now, there's a very important aspect there.

If an animal does not have a extreme predator fear, you can actually get quite close to it.

Your hunting blind is much more effective, even if they smell you.

cause they're not gonna associate that smell with danger.

I think from what I saw in the Kalahari, these very small arrows with the little tips on them and the poison and so on.

Mm-hmm. Those, those are hunting tools that can only be used and this, of course, is why I thought of this because you referred to the distances, right? between the hunter and the animals, that they can only be used over very short distances.

Right. That's not a very powerful type of hunting technology.

it, it actually go only becomes possible when the humans involved have, in a sense made the animals lose their predator fear.

Okay. And predator fear, is also what leads lions to attack you and various game animals to become dangerous, to approach like the bison who, who knock people over in Yellowstone National and they, they, they can be approached very close, much closer than a, a truly wild animal would approach you.

But the essence of what modern hunter gatherers did during the middle stone age, when they developed these much more refined small hunting weapons and distance hunting, we call it distance hunting, but it's actually close distance hunting.

or further, no, it means you can be at a distance when you hunt, but only if the animal allows you to come close enough to actually hit it.

Right. Which is very different from a bunch of you going out there with spears surrounding an animal and trying to spirit or bludgeon it to death.

That's very dangerous.

I mean, all those broken bones on Neanderthals tell that story.

Hmm. Right. So when you're talking about, how, how humans, modern humans, I mean, I, I think Neanderthals, and depending on your perspective, were probably homo sapiens.

They were just in a sense, an what, what they, what do they call it? Archaic homo sapiens and so what made the change, if any of you have ever heard of this, was likely the consequences of the Central African mega droughts where people were, along with all of their ecosystem were pushed to the edges, the Kalahari, southern Africa would be at one end.

And, and along the coastal areas, where there were rivers coming down and so on, those would've been the much reduced habitats.

Yes. That would've supported a hunter gatherers and in order to prevent the animals in those areas from going extinct, particularly the important game species from going extinct due to predator fear, which would lead them to fail to reproduce.

cause with high, high levels of predator fear, animals often don't even come into season.

Or if they do, they have very high rates of miscarriage or they, they just abandon their babies.

You know, this has been documented.

So people began to notice this cause they were living quite close to, to the animals, and were observing these local essential populations starting to dwindle if they were hunted by humans, as well as the other predators in the area and they began to try and understand how to reduce the fear of humans and one of the ways to do it is to hunt from a concealed location, to hunt the, a very small, um hunting instrument, technology like a arrow or a spear throat, and to use poison and of course, snaring and trapping in that way also falls within the same, general grouping.

So they altered their technologies and their methods of hunting mm-hmm.

In such way that the game was, the game populations were preserved.

They were continuing to reproduce, and they didn't endanger humans because their predator fear led to aggression.

If somebody, like I remember one day, um turning, turning a corner like a bush in the, in a, a trail.

I was actually going to pee, actually.

But anyway, so I was trying to go into the bush deeper so I wouldn't, wouldn't bother anybody.

And, and, and so, and I turned a corner and all of a sudden I encountered a young leopard.

It was just standing there. And I was just standing there and we looked at each other and all I did was very gently back way and the leopard kind of looked at me cocked its head and just disappeared into the, into the bush.

It wasn't afraid of me. Hmm. Like the sight of me.

cause I told people about it later, if at the sight of me, that animal had had a surge of terror.

Right. It very might have turned into aggression.

It's an adrenaline response. Right.

So people understood this fascinating. Yeah.

A hundred thousand or more years ago during these African mega droughts and when they were, in a sense, in much closer contact with the few remaining herds of game animals and I think that's why they changed their hunting technology and, and that change in hunting technology resulted in fewer injuries and of course there, it changed the selection pressures on the human body.

Right. It would have to, because a smaller hunter, a lighter boned lighter bone specimen didn't have to eat as much.

I saw an estimate recently that, indicated that a neanderthal male would have to eat between 3000 and 7,000 calories a day.

Yeah. Pretty wild. Yeah and human males, even if they're hunting, don't have to eat that much to compensate for their efforts.

Right. And so what may, what it means is that the smaller people could bring back just as much meat as the bigger people and in fact, because they shared more, could share more of the food they brought back, it meant that their children got more of it.

The women in the camp got more of it, and that population probably, survived better than, a population where the hunters needed to make up for the caloric cost of hunting in such, in such a big way and slowly, slowly the physical, sorry.

Yeah, Go ahead. Sorry.

Mute. Yes. Sorry, I mute myself.

No, it's, no, no, it is somebody else.

That was someone else. I just muted them. It's Okay. That would enable people to do a lot more laing around, which is one of the things that vivex been pointing out.

You have that you do a lot of work, get a lot of stuff, and then you can be lazy.

Exactly. Yeah. That's the pattern. Yeah.

Well, thanks for those observations.

I mean, this is one of the great things about coming here for me, is to hear all the cool experiences you've all had.

Mm, yeah. Yes. Thanks. great.

I'd just like to add one last thing. yeah and it's, it's a little bit mischievous in response to Helga.

hunting actually is really, really fun.

I was a vegetarian for many years before going to live in the Congo Basin, realized I needed to eat meat and, and that most of the, the men who I was starting to build

relationships with, would spend their days wandering around hunting and so I suddenly realized actually I need to, to learn this.

And, and it was, it, it, well, there are many remarkable things about learning hunting, but, but, the drama is extreme.

Uh you're in a life and death battle with, an animal that really doesn't want to die just as you don't want to get hurt.

And, and it really is quite something and especially in the Congo Basin where you've got these very large animals, it really can be extremely, dramatic.

and then the other thing that's really, beautiful about hunting is how intimate you become in your relations with the animals that you regularly hunt.

Because you don't just know them, as, as something to eat and, and their, their, anatomy from cutting them up and so on, or, or trying to kill them to understand where you kill them cleanly.

but it's also learning about their behavior, their ecology, the, the things they like to do.

The, you have to anticipate animals generally to, to hunt them successfully with the sorts of weapons that hunter gatherers use.

you can't stand miles away and just shoot them from a, a, a, a little, sort of a stakeout spot as so many western hunters do.

You know, you really have to get up close and intimate and, and to do that, you really need to understand them, and you need to think about how they're thinking and get into all that.

Anyway, it's a, it is a very, rewarding and, and beautiful thing to do and the, the animals that I got most affectionate towards were the ones that I ended up hunting mostly, because I just started to appreciate the beauty of their lives.

But at the same time, I knew the kids and, and, women back in camp were hungry and we needed something to eat.

but it was always something with done with respect, with, with, with care and admiration for, for those creatures. Anyway, sorry.

Very cool. Did, did, I mean, I, I actually had men who had personal names for some of the older antelope and, animals within the, the range.

They'd known them since they were very young and, by the way, just in response to what you sort of were saying, it's not that I think hunting is boring, it's that that was, what the women told me and it might have been partly said as a joke. I don't know.

I don't know. Anyway, that's delightful.

The love of all the creatures was something I, I really noticed.

I remember when I, I set up a little ca camp next to one of the, the, hunter gatherer camps on, on the invitation of the, of the people there.

And, the next day, a couple of the women came to me and indicated cause I hadn't learned much of the language yet, that they wanted to show me something and I thought, oh, this is interesting.

They took me to a tree and pointed at a python and, and they told me that this python, I might see this python, but it was their friend.

Mm-hmm. Wow.

It's, you wanna know, I think Ian might have a few, we wanna know why the python's their friend, Because it was, it was useful in, in keeping down the small rodent and I, I guess it was just, but I think, I don't have any explanation, but I, I was very struck by that, and it was because of that and they had a name for it.

But I've, I've written it down somewhere, but I haven't got access to my notebooks right now.

But they had names, people had names for animals that they had watched be born not far away from where they were camping at the time and particular animals seemed to affect people, or at least some people, almost like a friendship.

It's hard to explain. It's just, it was so, it was so touching in a way and I remember once following men on a hunt where they, somebody had come and said, they hit this.

It was a kudo, I think.

And, and so I was allowed to follow along and all of a sudden after about an hour and a half, we came in sight of this animal, which was down.

And, and the old guy who was the lead tracker, he suddenly stopped and sighed and he said, oh, it's her.

You know, that's so different.

It's so different from the way that hunting is viewed as a sport and as a masculine triumph in a lot of modern societies.

You know? And then they also circled the animal, as it was dying and they, said this, this prayer this, this chanted prayer.

thank you my sister, for your gift of meat that my children may live, go to the door of heaven.

I'm translating roughly here, and wait for me.

cause I'll be along very soon and we can be together forever.

Hmm. It's a sacred pact.

The animal had, in a sense, gifted them with its meat, and it was seen as a friend.

Now, how do you, how do you, how do you reconcile that with trophy hunting and so on? You can't mm-hmm.

Can I just, I, I'd be interested to hear you respond to that because you, you've told me that with the accurates not quite like that.

You don't, they don't, it's not a feeling that the animals make a gift of their lives.

Well, I mean, so animals don't give up their lives willingly.

They give with a fight.

And, and, many Baca, and I think it's particularly cause they're hunting large game, buffalo, sometimes elephants.

and, and you need to be really smart and sneaky and, really understand those animals to be able to catch them and if you are not skillful and you start being sloppy

in your, your, your execution of, of the techniques, then you risk very serious damage and they, they really it's, it's, they, they won't muck around.

I've seen what elephants do to people.

it's, it's very messy.

so they, they, I mean, I think if someone had a personal relationship, with an animal that they knew, they might feel very emotional about having killed it in a hunt.

But, but generally the idea is that, animals will resist and they, you'll have to use all your wild and guile to, to catch them.

they don't have poison where you Were, they do have poisons. Yeah, yeah.

It's a nerve poison. So the animal becomes incapable of Moving, of running away.

But they use that mostly for monkeys. yeah.

It's, it's not effective with elephants, I would think.

No, I haven't seen, yeah. Yeah.

Interesting. I was just gonna just, I was gonna just add very briefly that of course the python, I think Ian's written about all this, but I mean, the python, there's a reason why the Python is so frequently a metaphor for, a bride service women's coalition that the, this, is just again, and again and again, we find a sort of connection between snakes, pythons, rain, snakes and, and, and snakes in general mm-hmm.

With these, women's coalitions with their, with their blood.

but, anyway, yeah, it's a lovely story that you actually that you actually, felt this relationship with this, python.

Yeah.

I think we, we ought to, come to an end to let Vivek off.

thank you so much Vivek for this amazing talk through this paper and for listening to all these suggestions and thank you so much Helga, for coming along with your stories as well as Jerome.

and I hope that, Vivic and all your colleagues, we are really looking forward to the paper and that you'll feel that there's been some, some worthwhile tips today or some worthwhile, stuff.

Also maybe tell people about, your podcast on Friday, because some people may be very interested in that.

Oh, sure. Yeah. well, so I actually, did two podcasts with David Sloan Wilson on Hunter Gatherers and the origins of Democracy.

So those are posted already, but we're having a discussion on Friday that we'll kind of rehash some of those and then have a q and a and discussion.

But yeah, thanks for, thanks for having me. It's always a pleasure to speak to all of you. Yeah, Yeah, I'm, I'm glad you liked it, but it's also great to get constructively critical feedback that helps improve a paper that's always the best.

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