

# Beauty Magic - The First Art

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The first art was body art and the first body art was menstrual.

This talk explores the evidence of a social and sexual revolution in Africa as we became modern humans about 200,000 years ago.

How did that revolution work and what does it mean for Homo sapiens today?

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[https://www.youtube.com/watch?v=Fh\\_heVDha70](https://www.youtube.com/watch?v=Fh_heVDha70)

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**Chris Knight:** Okay, everybody, welcome to Radical Anthropology.

This evening we have Camilla Power, who's going to be speaking on beauty magic, arguing that cosmetics constituted the world's first form of art.

So many of you will know Camilla because she's, of course, the organizer of these events.

She's also the anthropologist who I would argue, and many of us would argue, is the Darwinian anthropologist who has worked out the only existing evolutionary theory to explain why art emerged in the 1st place.

And she's established herself as an authority on this topic over many years, many articles and talks she's given in the past.

And that's it.

Over to Camilla.

**Camilla Power:** Thanks, Chris.

Okay.

So yeah, tonight is a story of human evolution, but really it's the story of how women won the human revolution.

And it may not seem as if from this point of view today, looking back at the, you know, the thousands of years of Neolithic origin patriarchy that women won.

But if we think of a time scale of our species lifespan of the Paleolithic or geological time scale of the Pleistocene, the 200, 300,000 years, then I argue, yes, women won.

We wouldn't be here without that.

And they won in terms of the extraordinary reduction of dominance and violence among males.

They won in terms of the amount of work and subsidy of energy that they got from men to support children.

And they won in terms of the creation of language, of art and symbolic culture.

So the focus today is on the actual mediums or techniques of art and body art that women used and how that was the basis for symbolic culture.

So that's what I'm going to go to.

But first of all, to give a bit of a feel for the time scales when I'm talking about the first art, I'm going to start, I'm going to share screen and I'm actually going to start in Europe.

Even though Europe is not where art started, art began in Africa for sure, many times older than it is in Europe.

But I'm going to start there with Europe to make a few observations about the type of art that is customarily thought of as being the first art or some of the earliest art.

OK, so as I say, we're in Europe and this is a French piece from La Roche de la Linde in Dordogne.

And it's not the oldest art at all.

It's only 13,000 years old.

So it's really quite young.

And that is something like, I would argue, of the order of, you know, a 20th of the lifespan of how old the earliest art is.

But nevertheless, it's still worth examining the iconography.

And I'm just going to pick up a few items here.

It's quite the medium or the, yeah, the medium is limestone that there's been etching and carving into limestone.

which is a very soft rock.

And it's actually a piece, a plaquette.

It's something that could have been carried or moved, possibly quite heavy.

But it may have been an artifact belonging to a ritual, possibly of women, possibly even of men.

That's also a possibility.

You can see the photograph on the left is this big detail, photograph taken by Alexander Marshak, this big detail from that round of dancing, very stylistic, very stylized female, apparently female figures in that round of the dance there.

And there's been a great deal of focus from people like Alexander, the late Alexander Marshak, looking at the microscopic marking of this line drawn between these two PowerPoints here of the women's vulvas.

Is this line drawn or cut into the limestone like once by a single individual on one occasion? Or has it been actually scored again and again, maybe periodically, maybe because of repeated performance or use of this? this artifact.

And it seems to be from the examination of the micro markings there, that it's the latter.

It is an object that Alexander Martak called time factored, that it was used perhaps periodically and again and again.

So that is about 13,000 years old of the Magdalenian.

Okay, now we're moving back into the Upper Paleolithic from various parts of Europe, Central Europe here, the Czech Republic, the Donivas Nitri, some French figures up at the top left and the bottom right, and the famous Venus of Lauser as well, a bas-relief on a rock.

And the very small, even though presented large here, this is a very small figurine, like the size of a hand, the Venus of Willendorf, so-called Venuses.

They're called Venuses as a kind of category.

It doesn't, we should be careful with those names like that.

Okay, so this is now about 26,000 or more.

It is twice as old as the Lalinde carvings.

And what can we say about the is a generality about these Gravettian figures? There is an extraordinary obscurity, facelessness, if you like.

The Dodny Vesniche, very naked, a pottery figure, which is an extraordinary advanced technology at that time, has just two, is marked only with two slits of eyes.

There are barely eyes in these ivory faces, Brass Sampuy down in the bottom right.

The Venus of Lepug up in the top left is, there's hardly any face, very bowed head of Willendorf.

But we see as well that there is this extraordinary decorative ornamentation, despite the fact of the kind of obscured faces, extraordinary detail in Willendorf, which as I say, is so small, a limestone piece, a carved piece.

Detail of the hairdos, detail that you can hardly see here on her arms, which are little bracelets, little jewelry.

And then of course, very specific, picked out detail in terms of genitals, \*\*\*\*\* and aspects of the body.

Now, both Willendorf and La Salle, both appearing, both looking very, very sort of naked, although they have appurtenances, were both rubbed over their bellies and their vulvas with red ochre.

And again, the Brassenuil, very elegant and specific, or the hairdos, Lepug, this possible skirt or apron of some sort, or It's an ambiguous motif.

It could have other associations.

Also about this age, something like 27 or so 1000 years old, sort of similar age.

Donivas Nietzsche, the Czech Republic again, the same as the naked pottery figure that we just saw.

And then Ukraine Meijin.

Now these examples are extraordinarily abstract.

very sort of icon, very stylistic iconography with these detailed notches and very intricate abstract patterning, formal geometric patterning on the Meijin figures.

And another aspect that I'd point to is, well, are these definitely female figures? In fact, there is a certain ambiguity about these figures.

Here, this looks as though apparently female and yet, and also this pendant with the breasts here, but also could it be interpreted in terms of male genitalia and similarly these Meijin ones.

So there are venuses, so-called, which have the, which are put into a category of falliform.

which gives an indication, it says all you need to know about their kind of ambiguity of their aspect.

Okay, the last one from the European Upper Paleolithics.

So now I'm going back about three times older than Lalinde, and I'm still about 1/5 of the way back to the emergence of art in Homo sapiens.

But this is about the old, this is the oldest of the currently known of Venus figurines in the European Upper Paleolithic record, very early date from Hohler Fels.

So this is pre-Gravettian in the Aurignacian.

And we've got these features again that the figure, which is made of mammoth ivory, you can see from the centimetre scale, it's only five or six centimetres, again has lost the head.

The head, the face, kind of obscure.

literally as if lost the head, gone into another world, as it were.

We have these motifs of the lines and the geometrics that were found with some of the Meijin figures, and extraordinary attention to the biological features with the breasts and the genitals in the figure.

And so there's been quite a lot of debate in archaeology from artists, from like people studying, I sage art for museum curatorship, do we think of these figures as in terms of some forms of male fantasy.

Some people will actually try to align these figures in terms of a kind of pornographic male gaze and that they're super stimuli and that they're answering to some male kind of dreams or ideals.

Or should we look at these figures in terms of power, ritual power, ritual potency.

You don't need to know very much about the sort of theories that I deal in that I'm going to lean that way.

But how do we approach this kind of material to deal with the arguments about, well, it's just males making pornographic items? It's just men making, males are the artists and they're making pornographic art.

How do we deal with that? We need to know something about archaeological and social contexts.

But above all, I think we have to reach for anthropology and for the anthropology of what are the contexts within which artifacts of this kind are created? Who uses them? What do they use them for? We've got to investigate that kind of context.

And we can't just assume the sorts of perspectives that we think are just normal in our weird world.

They do not necessarily tell us about art that belong to the Upper Paleolithic, to peoples, hunter-gathering peoples of the Upper Paleolithic.

We need to investigate art through the lens of societies that are much more similar to our hunting and gathering ancestors.

So that's the way I'm going to proceed.

And I'm going to go really for African examples of body art, not all hunting and gathering, but I'm going to use African societies that have many exquisite and extraordinary traditions of cosmetics and cosmology to think about how they are using their art.

If we consider ritual as the likely context for these pieces, I'm just flipping back into some Darwinian natural or sexual selection here, then of course, well, there is beauty in the animal world.

There is an animal aesthetic under these extraordinary powerful forces of sexual selection.

Before culture in the animal world, beauty is a matter of sexual choice and sexual competition.

So we're seeing the extraordinary productions by the peacocks, by the birds of paradise, and here the collections, the aesthetic collections of the bowerbirds.

Now, these, of course, are all males.

It's very general.

generally, most generally, not absolutely always, that males are the ones producing this beauty.

But they produce an extraordinary array of useless ornaments in display, in competition, in sexual competition, that have apparently evolved in response to the whims of females of the species.

Okay, well, in human culture, We do see this extraordinary multifarious ornamentation as very much as various amongst different cultures as we see variety amongst different species.

It's just an extraordinary variety.

Now these adornments for human culture, these adornments and ornaments cosmetics particularly are focused very much on the body paint aspect as well as scarification aspect.

They are worn and displayed by both sexes.

It's very much kind of almost an even balance between men and women in many ways.

But in the human world, within the human culture, body art, artifice and ornament, it creates a whole other dimension, which we can describe and which I've titled in this lecture, beauty magic.

following the phrase from Malinowski, who did work on an extraordinary sophisticated culture of cosmetics in the Trowbrain Islands.

So beauty magic is implying that the ornamented body invokes other world powers, spells that were learned from the ancestors.

They create states of taboo or magical potency or medicinal protection, for instance.

And they are involved, they are placed in context of social magic.

So we have here a, I believe, Mauritanian woman with her scars here, very beautiful, but they're medicine scars.

They've got a special aspect of protection.

And A Hembra woman from Zambia, Congo, who's in part of a dance of possession in touch with ancestors.

A person with this kind of ornamentation is completely transformed in the eyes of the community.

The display here cannot be understood in terms of animalistic, competitive, individualistic.

People are taking on identities, new and imagined identities, which have been collectively agreed.

They're adding a dimension of the ideal to the real.

And in some senses, these are actually fake in the sense that an individual is no longer just herself.

She's consciously creating an identity.

She creates A representation of herself for others.

And in creating this playful or powerful shared fiction of identity, she's experiencing herself in a new way as others see her and understand her.

So she's growing aware of her own thinking about herself through understanding the thoughts and perceptions of others.

This is ultimately inter-subjective.

So pretend play with identity, a journey into a space of imagination through this body art and a location in a social cosmos, an enduring social cosmos.

The body is the immediacy, the vividness of the decoration, but it is also appealing to the world before and the world of the future.

It's appealing to an enduring cosmos.

So let's just look at some of the actual pigments and the concrete material media that are being used.

And we can begin, say, with henna, a very ancient, one of the oldest of vegetable-based pigments, which provides a perfect example of how the meanings operate at both symbolic and a very practical social level.

This is a Berber bride.

And she would have at the time, the process of her wedding, she would have all her womenfolk, her kinsfolk around her.

Henna, above all, represents fertility and festivity and joy and beauty, which is befitting the bride at the time of her marriage.

And it offers very much magical protection against the evil eye.

This is its special property.

These symbolic ideas are given a very practical application in the process by which the women in the bride's and the groom's wedding parties come together.

They spend many days preparing dyes and then applying these exquisite and beautiful designs, enabling the families to get to know each other, to perhaps resolve tensions, all kinds of doubts or difficulties.

So for cultures right across from West Africa, across Mediterranean, North Africa, Middle East to India, henna is a vital ingredient of social networking, of alliance formation.

If a woman wants to make a friend, she would say so by sending her a parcel of henna as a gift.

This would be absolutely typical.

Now, henna has a cosmology association of beliefs, a whole system that would, it would be easy to talk a whole lecture, and I'm not an expert in henna, so anybody who has knowledge would be great to hear from you in the questions.

But even older than henna are mineral-based pigments, so these are the ones that will preserve for long, time periods in the archaeological record.

pigments such as ochres, iron oxides.

So this is an example taken from the Nuba of Sudan, which would now be South Sudan, from fieldwork in the 1970s, an amazing photography by James Forrest.

And in this example, the exchange and application of cosmetics is underpinning the entire social and economic order.

So this young Nuba woman on the left, she dresses every day with a fresh coating of ochre.

And it would be a deep, this deep red, this glistening deep red or a yellow in accordance with her plan.

There's a very intricate kinship system of double descent of matrilineal and patrilineal descent in this.

And this is being applied for, the lady on the right there is her future mother-in-law.

And the ochre itself has been supplied by her fiance, the man she's hoping to marry, as that is part of the agreement of the betrothal that he should be supplying her with this ochre every day.

Now, it's quite clear that we are in a world that is just 1,000,000 miles away.

from a kind of Anglo-Saxon Puritan attitude, which takes adornment to be something like trivial and superficial.

If you think of the English sense or metaphor around cosmetic, the word cosmetic, it has that sense of just being like skin deep, of being something that's a frippery, that doesn't matter, it's unimportant.

But actually, cosmetics derives from the Greek word of cosmos, with its implication of order in relation to chaos, the opposite, and the plural of cosmos, cosmoi, that meant ornament or adornment.

So this word is conveying the idea of the whole universal cosmos and of order opposed to chaos.

In that classical Greek worldview, ordered arrangement gave rise to a sense of both morality and beauty.

So if we think of the cultural social anthropologist term, cosmology, that is similarly linking moral symbolic systems into a schematic order of the world, the worldview of the people, the community.

Now, of course, cosmetics are so important that men also will be using them.

This is not something that only women use across the vast majority of cultures in the world.

It really is the parts of the world that have been over time through colonialism and imperialism influenced by Anglo-Saxon heritage, that frowns upon the idea of men decorating themselves.

Almost everywhere else is perfectly normal.

So it's a particularly weird and kind of Anglo-Saxon Puritan perspective that alienates men from body art and cosmetics.

But it is universal pretty much.

There are rare exceptions where women and girls who are growing up will use cosmetics and their preparation and their application to share experience, to bond, to teach each other, to learn and pass down generations, particularly at occasions like initiation for a young woman.

So on the left there, we have a Mendi girl in Sierra Leone.

And these are young Maasai women being a young Maasai woman being attended to by both kinsfolk and possibly patriotic, possibly affine women as well.

And so some of the messages that are coming through in this, you know, in this work that's being done in this ritual preparation, well, the fundamental message is how much that young woman is being valued.

She's being placed, given a place in the community.

And that is being made clear, amply demonstrated through the attention, care, and sheer amount of time and effort and delicate work that's being put into these occasions.

And it should also be immediately apparent as well that these are cultures which are, as soon as you take away mirrors, it's perfectly clear that to produce very beautiful and very exquisite body art and decoration, you can't do that by yourself.

It has to be done by friends, coalitionary allies, people that know you and care for you.

And so that is perhaps the most fundamental message in all this body art that it is being done by people that are taking care of you.

And when all those preparations have been done, which may take days, may take weeks of work, as for the example with the henna, And that adornment then is displayed in ritual and dramatic performances that take centre stage, and I mean centre stage.

These are women's rituals.

So they're the Hadza girls in initiation maitoko at the bottom, who are dressed in ways and deporting themselves in ways that are about the sort of the original maitoko girls in sort of the original creation stories.

and they're meant to be emblems of beauty.

At the top, the Himba women performing a lion dance in connection with the rains and a Ghanaian group here who are performing first fruits ceremonies.

There is nothing here that's marginal.

This is not like women doing stuff on the side.

Men are entirely relying on these performances by women in the Hadza case for the hunt, to proceed successfully, for the rains to fall, for the crops to grow.

Men are relying on women's ritual actions.

Okay, so we've had a little investigation of the kinds of ritual configuration of this body art and the implications, the cosmological implications.

So let's now turn to the time scale of human evolution.

because I was particularly our species evolution, because I was claiming that art started, 20 times older than Lalinde in the Dordogne, which a lot of people might think is pretty old already.

And we're going back to at least 300 KA on this time scale.

That would be 300,000 years ago.

And we're focused in Africa on the speciation.

So Ajebelahud is a fossil from Morocco.

These are fossils of Ethiopia, Omokabish and Herto, against that time scale.

So this is the on, this is the process of speciation of modern Homo sapiens.

And we have a timeline here of sites from Kapthorin, East Africa, Twin Rivers, Zambia, Pinnacle Point, Klazis and Blombos, right on the coast of Southern Africa, going right down from 300,000 through to 100,000 years old.

Associated also these crayons, that's from Pinnacle Point, these crayons, so-called ochre crayons that are hematite.

And subsequent to this long record, of the ochre of human made, anthropogenic ochre, we start to get a certain amount of shell bead jewelry.

We'll have a look at some of that as well.

So let's just see how far back we can push.

I mean, this is not a complete consensus.

But I think the onus of proof is on anybody who is trying to say that this material is not a relic of a ritual tradition.

And that is certainly what myself and Ian Watts, who's one of the great experts of red ochre in the African Middle Stone Age record.

And this is now work by Ian Watts from this extraordinary site called Vanderwerk Cave in the Northern Cape of South Africa.

Now, Vandenberg has very deep sequences going back over a million years, back to some of the very earliest known fires.

But right in the deep cave, it's an extraordinary site, which used to be a river, a river going underground.

And you can go deep into the hillside.

These are rail workings for mining activities.

Deep into the hillside, 140 or more meters.

It's extraordinarily deep.

Now in this space is darkness unless there is some firelight to open it up.

And at a period which is associated with what's known as the Forrest-Smith industry, from half a million to 300,000 years old, there are some extraordinary evidences of new things happening for these These human populations, they're archaic humans.

They're preceding modern human populations, these, so that they have sophisticated, prepared core tools being developed, developed from the preceding Achulean, the Homo erectus hand axe industries.

There are stone-tipped spears, the first weapons with composite tips.

And we have evidence that I'm just going to show you of red ochre and specularite, another very interesting material that is definitely utilized by humans.

And Ian Watts has been, you know, checking out the evidence.

Where is the bottom of the red ochre and the specularite in Vandenberg? And he's coming to the, although the dating is not able to be exact, it's tending towards half a million years.

Because of the context, that it's so deep underground that it would need a brilliant light.

It is very hard to envisage what else is this space for, but some kind of brilliant, brilliant ritualized display, which is the title of the article that they produced, Ian Watts with Michael Chazen and Jane Wilkins produced on Vanderberg.

So let's just have a look at these lumps of rock.

They may not seem awfully exciting, But actually, there's Forrest Smith Specularite. Specularite is on the left.

You can see it's this glittery material.

And hematite, the red hematite on the right.

These are the earliest cosmetics known to humans that we know of.

And we have good reason to think they may be the oldest at all.

You can see how the grinding, so these have been ground, they've been striated, there's evidence of the human use.

And you can see that the powders that they're producing have these qualities.

Now, specularite is a type of hematite.

Hematite is iron oxide, ochre.

And the name hema means blood from Greek.

So it's associated to the colour of blood.

Specularite, if you cut into it, you can just see it's got a sort of reddishness there.

If you cut into it and ground, you get some reddishness.

But the real quality is its sparkliness.

Now, specularite is not used for any other purpose than this decoration.

Hematite ochre can have other possible uses.

So there's been a bit of an argument in the archaeological record by the archaeologists.

Can we work out that there's other reasons for having all this red hematite? But with specularite, there aren't any other reasons.

There just isn't any other reason in the ethnographic record for using it except decoration and display.

So it's very significant that it's being found in the site alongside the hematite.

The other thing to say about the specularite in the Northern Cape sites, another particular site near Vanderberg, the specularite sample has probably travelled a distance of over 150 kilometres.

which at this time of the Middle, preceding the Middle Stone Age, the Forest Smith precedes Middle Stone Age, for humans, these archaic humans, to be traveling more than 150 kilometers with exotic materials is just unheard.

I mean, it's extraordinary.

It's indicating some, well, it's indicating the extraordinary value that these humans placed on these materials.

Okay, we're jumping forward and going to a South African site, Blombos Cave, which is right down on the coast, the tip of South Africa, right out to the Southern Ocean.

And it's an amazing site that was opened up by Chris Henshelwood here from the late mid to late 90s and produced all kinds of, at a time when people still were searching for evidence of symbolic culture in Africa as against Europe, Blombos provided riches.

Now, Chris Hedgewood was especially searching for ochre and he wasn't finding it. He wasn't finding any.

So he was wondering where it is because nearly all those Middle Stone Age Southern African sites of the coast would show record of ochre.

And eventually he discovered that the pieces of ochre, again, red hematite, had been placed into cubby holes, placed into little places that were hidden out of the way so that they'd be, you know, carefully stored.

So these little ochre cupboards that you can see him putting his hand into there.

He also, when he was digging the site for the first time, they lifted off a surface which was like a table, a rock table, a surface that was impregnated.

It had just glistening with red, the red ochre paint, almost as if it was new, almost as if it had just fresh.

But as soon as they had taken the dirt off it, the fill off it, that began to oxidize.

And within an hour, What had been bright red became just grayish patina.

You can see in some of the examples of the hematite that I'm showing you, they don't seem to be very bright red.

You have to cut into it and get into inside it to get the brilliance.

But so the sad thing was that they didn't take photographs of what it looked like straight away.

I don't know what they were thinking of it.

They just let it go gray, which is, but Henschelwood told us about this.

So the Blombos site from 70 back to 140,000, it's a much more recent period of the Middle Stone Age than the earlier Vandenberg, but it's showing the continuity and the emphasis And again, the valuation of this red, particularly emphatically red pigment.

And here are some of the famous pieces of so-called geometric engravings from the Blombos site, particularly that one at the top, which was, when it was discovered, it's about 76,000 years old.

a small, fairly small piece of hematite.

It's not very big.

You can see how big the scale there.

It was considered to be the world's first evidence of art because of this deliberate hatching geometric engraving.

We also have shapes and engravings on these examples of which are sometimes, they're lumps of hematite, some of them in a forms that might be considered to be crayons that they've been used in design format.

So yeah, as I say, that seems to be quite gray on the surface, but it is absolutely a red, a blood red saturated hematite.

And this is a blow up of that geometric engraving.

If you're Thinking back or linking back to some of those Upper Paleolithic patterns and geometric figures, I would say, well, that's quite an interesting leap to make.

And we'll try and link back onto the Upper Paleolithic sort of motifs in a little while.

So it was considered to be the world's oldest art, like at the turn of the century, about 2001 or so.

But there are now some older examples of geometric engraving.

And again, I would not say that this is the oldest art.

It is a particularly kind of European or European heritage fetish that art has to be in objects, that it has to be on surfaces.

But of course, the tenor of my argument is that art, if people were producing this kind of geometric engraving in surfaces, then sure as, sure as anything, they were putting it on their bodies before that, or at least as early as that.

So a body art that is not yet alienated into artifacts and objects is what we're really talking about here.

Just to expand a little on Blombos, this doesn't look like very much, but it's an abalone sort of sea snail shell And it was one of the finds at Blombos that was found as a little kind of cosmetic container with paint, a palette of paint, a kind of paint kit with some applicator.

Now, this is a, you know, this is making it clear that the issue of colour of design, the use of colors rather than the ochre being used for any kind of utilitarian purpose is what's so significant.

And this was dated, this paint kit, in the order of 100,000 years ago at Blombos.

Now, I'm just going to flip back to Europe, but I'm going to flip back to the Neanderthal record, because I've just said that the Blombos was 100,000 years old.

This Neanderthal collection from Spain, of Musia, is actually older than 100,000 years, about 115,000 years, but it has many aspects resembling Blombos.

In that there are applicators, there are cosmetic containers which then have colour and oops, I'm just going jumping forward from jumping forward from the Neanderthals, colours like this orangey red pigment.

And these have been used to stain shells or come to the shells at Blombos in a moment.

So they're shells, which some of them had natural formations of holes, which is also true at Blombos too.

So the major point here is, I don't want to go far into the Neanderthal European record today, but the major point here is that evidence of pigment use of cosmetic palettes or kits and shells as potential jewelry with staining of pigments, That sequence of first of all pigments followed by shells and jewelry is something shared by Neanderthals and by modern humans away down in South Africa and other parts of Africa.

So it's as if it's a standard sequence for evolving an emerging human species.

And it focuses on cosmetics.

It's evidently that is the focus of the earliest kind of symbolic medium.

And as I said, the colour appears with those old samples, not to be very vivid, but this young woman of the Himba, who's beautifully dressed with the pigment, she's showing us what does that paint start to look like when it's mixed with a fat, when it's given a vivid colouration because the fat is bearing that colour.

Fat, glistening grease or even water will produce this rich, rich color.

You can see that she's got the shell there against her skin.

A different kind of shell from the Blombos or the Neanderthal one, but nevertheless, we'll see how that shell may pick up the color.

These are examples of ochre crayons, again, from that period of about 100 to 120,000 years old.

They're quite, they're relatively small pieces.

but they've been honed presumably by the use of rubbing and abrasion, and presumably used to make very fine line decorations that could be on skin where it's soft enough, or could be on hide and leather and so forth.

So it is evidence of an aspect of a ritual tradition of design.

And We can just see here from a couple of extraordinary sites that are, the top is Aboriginal Arunta site, Ormiston Gorge in Australia.

Below is African Eswatini site of Lion Cavern.

These are mines, sources of ochres.

You can see the extraordinary, the Ormiston Gorge, the extraordinary range of colours that are produced.

in this site.

Lion Cavern was famously a mine, a very great antiquity, back into the Middle Stone Age for hematite.

It produced enormous workings of hematite, even into industrial ages.

Now, what's important to know is that in the Arunta site, the Ormiston Gorge, so-called, this, you would not be able to just go into that site and pick up ochre.

That material would be under the guard and the curation of the traditional owners of the site, and you would need their permission to even touch.

It would be a danger to you to even touch that material.

This material has a ritual power.

It connects to ancestors, so it isn't something that can be just trivially handled at all, easily handled.

Lion Cavern was famous and up in the mountains of Eswatini, former Swaziland, that area was famous for women of various African groups traditionally going to collect pigments, particularly red hematite ochres.

So it has a long history in the ethno-history that Ian Watts has researched.

and the Lion Cavern workings themselves upwards of 100,000.

This is the these are the oldest mines in the world, and the substances that were being mined were like the equivalent of gold of that time.

I think that's becoming clear from, you know, the hiding of hematite in Blombos.

from the fact that Van der Berk people, Northern Cape people of a half million years ago were moving these materials so far.

They were collecting them from long distances.

And the other aspect of shell jewelry I just wanted to pick up because we saw some of the Neanderthal shells that are believed to be worn as decor and decoration.

And here are examples from Blombos, there, South Africa, the Moroccan example, examples from North Africa, Near East.

And we get this impression of the ochre on these.

are little Nassarius shells.

They're quite small shells with natural openings.

But the openings have been scored by, marked by sinews on which they were strung.

So it is very clear that they were made up into some necklace format.

But they have been either, the ochre is picked up either from just rubbing against skin, or in fact, the shells could have been fired and heated to make, to give them a redness.

It may be the latter, in fact.

But here we see again the young Himba women from Namibia showing off their decorations before this is actually preparation again for a wedding.

You can think in terms of the Berber girl with her henna.

And the shell against the skin is picking up the color from their different shells, Conus shell here rather than Nassarius, but it's the same thing in principle.

Okay, so I've shown you some of the archaeological evidence.

What makes us so sure that this is really a ritual tradition and how should we approach or interpret that tradition? And I am going to draw on evolutionary theory to do that.

I'm going to start to tell the story of human evolution and why, did women in particular need art? I'm going to interpret art and body art as strategic for women in human evolution.

Now, this is a chart indicating, sorry, that should be australopiths down there, a chart of 3 million years through time with the measurements of brain volume in cubic centimetres.

And so we have brain sizes of australopithecine, early australopithecine specimens or early \*\*\*\* at this level of about 400 or going 500 CC maybe.

And we can see brain size increase after 2 million years with Homo erectus.

And then we have this really significant large increase starting with, well, Heidelbergensis, whatever was the ancestor for us and modern human, us and the Neanderthals, and a really sharp increase.

Now, what I am, what I'm not trying to argue, I'm not arguing that because our brains got bigger, we started to think of art.

That isn't what the argument is.

The argument is that because our brains got so large, women, mothers of these very offspring whose brains become so very large, needed extra energy subsidy.

They needed more energy to support themselves and their large-brained offspring.

And these and the art and the ritual traditions were the product of their strategies for getting that energy.

So basically, this art, this ritual traditions are coming out of a kind of sex war, a sexual conflict, if you like.

They're driven by sexual conflict.

And it's the females who needed the help, and it's the males who tend to be the leisured sex when it comes to great apes or hominin ancestors, almost for sure.

something extraordinary has happened in the course of what we're looking at here.

This is, when I say one times chimp, that means the size, the brain volume is about the same as a chimpanzee volume.

A chimpanzee mother simply looks after her offspring by herself.

She doesn't expect any help from males.

She doesn't get much at all.

In fact, her males may be more hindrance than help.

This doubles, there is a doubling through 7 to 800, 6, 7, 800 for these early \*\*\*\* early genus \*\*\*\* with Homo erectus emerging from that.

And the argument is by a number of people such as Sarah Herdy, such as Carol Van Schaik and others, that mothers would only be able to afford to have this brain size increase of their offspring if they had support from others.

This is the famous thesis of Sarah Herdy, mothers and others.

That implies cooperative breeding and those sources of help may be the mother's mother, they may be males to some extent, men, fathers of offspring, starting to get helpful.

So that's two times.

But when we start to get three times the volume of chimpanzees, this is already bigger than really any Homo erectus has a brain size.

That is in that is in the range of modern human brain size.

And we see even bigger than that in the last half million years through to the specimens I was showing you, Jabelle Hood, Omo Kibish, Herto, are all right up here as modern human early fossils.

Neanderthals, also very large brain sizes.

You will have seen the publication earlier this week of the Harbin Denisova, possible Denisova, the Harbin dragon man, who also has a brain size equal of Herto.

So these are very large brain sizes.

In fact, today, the average brain sizes have gone back down towards 1200 to 1300.

So we have actually decreased our brain size.

But for these late Pleistocene humans, middle to late Pleistocene humans, this is an extraordinary energy burden for mothers.

The energy required for the offspring.

And she is the one who's got to produce that through breastfeeding.

And then subsequently, because humans tend to wean offspring relatively early compared to great apes, subsequently she needs to feed that very young child with energy, expensive foods, energizing foods, foods that will feed the child's brain.

A child's brain growth, it kind of peaks, the rate of brain growth peaks at about four years old, work of Kuzawa et al.

And that child is super energy hungry.

They really need the foods, very nourishing foods at that time.

So that is the problem for humans, whether they're modern humans, Neanderthals or Denis servants, it will be that same problem.

So how did we solve this problem?

## **Modern human female sexual signals**

I say it's a sex war. It's fundamentally a problem of sexual conflict, which will be basically solving, you're driving evolution by sexual selection of features that win this sex war. And I'm arguing that we did.

It was a cultural war because we were using symbolic materials, but it's still got to be rooted in aspects of biological signals.

So what sorts of signals are we talking about? Well, how did women actually gain greater, more attention and support from males? They have hidden sexual, we women have hidden our sexual signals in evolution.

We're famous for what's called concealed ovulation, plus also continuous sexual receptivity.

In theory, we can have sex almost any time of menstrual cycle or reproductive cycle. Or alternatively, we can decide not to have sex.

This is also kind of very different from, say, chimpanzees who tend to have sex during a certain period, estrous period, but then have not much interest in sex at the rest of the time.

We can describe the evolution of these sexual features as making us like the world's greatest time wasters from the point of view of males, from the point of view of men who are not very good at telling at all when women are fertile.

That kind of means they've got to hang around, yeah, nice to have lots of sex, but they kind of got to hang around, got to hang around, and they don't know.

They don't know when a woman might be fertile or at least they're not very good at working it out.

They probably try to work it out, but they're not very good at it.

And we've, evolution has made sure of that, because otherwise, what would happen, the problem would be that, a male would work out when is a female fertile, have sex at that point, and then, okay, sort of lose interest and go and find somebody else.

And that is kind of how it works in very promiscuous chimpanzee and bonobo groups.

So, it would have been like that with hominin ancestors almost for sure.

So concealed ovulation is part of the story.

Sexual receptivity continuously is part of the story.

We're very good at having lots of sex and using that for maintaining partnerships and pair bonds.

But there's the exception.

The signal, when it first of all, it starts as a biological cue, But then I'm going to argue, well, it soon becomes a signal.

The signal which will become the focus of attention, because it's a reliable cue that a woman is not now pregnant, is menstruation.

Now menstruation in humans, menstruation is found in great apes.

It's found in monkeys and great apes, although it's much less of it compared to us.

But it's kind of not interesting for male chimpanzees to know about menstruation because a male chimpanzee has the signal of an estrous signal, which is much more reliable for when is a female fertile.

So it gives a much better cue for when is a female fertile.

But in our case, when there isn't a good cue for ovulation, menstruation, a menstruating woman or girl compared to women who are either breastfeeding or who are pregnant, heavily visibly pregnant, menstruation is a really good indicator for a male that female, she isn't pregnant, she might be made pregnant in a week or two.

So that implies, well, in a Darwinian world of sexual competition, males just can't afford to ignore that information.

They are going to be super interested in that information.

and menstruation matters enormously.

So we just take a schematic model that amongst a group of however many females, and these are likely, we believe, to be female relatives, that they would be females, related females in coalitions.

So suppose one woman, maybe she's a young woman, starts menstruating.

Others are either they're pregnant, lactating, or menopausal, their older grandmother.

And suddenly that female is the point of attention, the focus of attention to all these males.

She's got to be interesting.

She's got to be riveting.

Okay, so this is menstruation immediately causes conflict.

It causes conflict potentially amongst the females.

If those females who have the burden of pregnancy and breastfeeding, rely on support and investment from any of these males, then it's a problem if one of those males is going to head off, hike off with that girl.

They don't want that to happen.

Similarly, if these males are going to be engaged in some collective work of hunting or whatever, if one of them starts turning into a dominant alpha male and starts throwing his weight about and trying to monopolize or take that, you know, get hold of this girl, That is going to completely undermine male solidarity.

So menstruation is a threat both to solidarity of females and then to solidarity of males.

The females are the ones who have the problem.

They are the ones who've got to do something about it.

So what can they do? They've got two basic choices.

Like ovulation, they could try to hide that signal or they can do the opposite.

Whatever they do, they've got to grab their girl.

They don't want the girl being taken off by some would-be dominant male.

And okay, they could try hiding it, but our argument is that they will do the opposite and they will do something like that.

So this is how we spin the argument from biology basically into culture.

It's like the pivotal interface of biology into culture that what has been a kind of biological cue becomes an exaggerated cultural signal, where the sharing of blood, which may be very ad hoc and improvisatory, you know, without any particular cosmetic materials in the beginning, becomes elaborated culturally into the use of media like vegetable pigments like henna are very sophisticated to produce.

They would be later product.

But there could be plant, there could be plant products that are less sophisticated.

Obviously ochres, if you can get hold of ochres.

Ochres, cosmetics produced from ochre mineral pigments imply already, you know, significant planning for this kind of activity.

They need to find them, you need to know where to find them, you need to be able to grind them, use grindstones and so forth to have them.

So we could envisage part of this process being very improvisatory and ad hoc, but then in relation to brain size increasing and the pressures of energy requirements on the mothers increasing, then this becomes a habitual process and a ritual process Even if, for instance, there aren't necessarily anyone menstruating, you just do the ritual irrespective of whether they're menstruating.

Now, these males, I've kind of put them as if they're gormless there.

They're not going to be gormless, obviously.

But if we look here at what is the effect with, again, the Hymba modeling for us of the red ochre pigments, the effect is one of creating an impression of Women's coalition, alliance, solidarity, we can use industrial Marxist terminology.

It's like a picket line.

The effect is to say to the males, you cannot pick and choose amongst us.

We are in solidarity and you are going to work for the whole of this coalition.

You're not going to just pick and choose amongst us.

Of course, males may be able to say, yeah, that's the menstruating female.

But if you think about it, the only male who's interested in doing that is a would-be dominant male.

Actually, the males who are going to be good hunters, good investors, they will be on the side of the females, as well as, of course, kinsmen of the females would be on their side.

They will be on the side of the females because What's happening here is this is not just a symbolic strategy, but a moral strategy of females creating their solidarity, kind of entering into the other world.

We'll say a bit more about that in a moment, making themselves unavailable.

And from the point of view of males who are investors, these females are saying, we don't want to have anything to do with dominant males who just pick, who don't do any investment.

So from a point of view of male egalitarian reproduction, this is something that men are going to be choosing.

They are going to be choosing to see decorated cosmetic coalitions of females.

It's going to be part of the sexily selected signal of modern humanity.

And it can be quite, there are ways to say no, we're getting the vividness of the red there in that photograph.

This is from, oh, I've forgotten her name, Angela Fisher's beautiful photographs of the Himba women.

Yeah, saying no is also the implication of, yeah, but you go and do the work and then we will see, we'll see about what happens.

But it's quite clear that women have seized control here of the signals.

They've collectivized and put their signals together as this elaborated and beautiful pigmented signal.

So the men are being presented with an absolutely united front.

Now, in terms of the other world, in terms of the sexual conflict that may be occurring, we can understand this.

It's not exactly menstrual signal because it's kind of the antidote of menstruation.

It's kind of the evening out of the signal from any one menstrual girl to all of the women. And if you think about henna and the cosmology of henna as the protection against the evil eye, it's kind of the medicine of menstruation, if you like, or the antidote of menstruation, if you like.

## Human females signal 'no'

Here is an example, the Himba, I have to confess, they're not exactly hunter-gatherers, but here we have example with hunter-gatherers from the, we, Anna in the Kalahari, where women are performing a dance for the girl who's in the menstrual hut there.

And they would be marked, the girl would be marked with a hematite.

The power of the, ritual power of her power would be spread out to all the group, the surrounding group, through, including the men who are hunters, through hematite being distributed to them at the end of these ceremonies.

The women are dancing as Eland antelopes with these horns, which they use to keep the men at a distance away from the girl who must never be seen by them.

She's completely taboo and unavailable.

So the signals in this ancient ritual, the Eland bull dance, that the women are the wrong species, they're the wrong sex, and it's the wrong type, but it's the menstrual time, which is the especially interesting time.

So this is the signal that carries everybody to another world.

It's opened up a space of imagination that doesn't belong in the real world.

Species, not human, but animal.

Sex, not female, but male.

The wrong time.

So the girl herself has become this Eland bull, as this magical totem creature of this Kalahari group.

And we have evidence of that Eland bull dance found in Rockart, away in the Drakensberg Mountains, far away from the Kalahari, found in other groups for the groups of the Central Kalahari, from the groups, the Naro and many others, and evidence from the Kham, the folklore of South Africa, of the Southern African groups of the late 19th century.

## Signature of ritual power

So the Eland bull dance would be one of my candidates for perhaps the oldest still extant or virtually still existing ritual to this day.

So it becomes very difficult to take seriously arguments by some archaeologists who say, who look at the ochre and say, it could be just a sort of dabs of decoration, like a little bit of makeup, blusher or a bit of lipstick or something of that nature.

But hang on a minute.

Lipstick itself, all cosmetics by all human beings are occurring in social and symbolic contexts with shared meanings that are constructed within cosmologies.

So these are ritually ritually powerful, the rituals of social magic that are the basis of the cosmologies of all these groups concerned.

So I just want to go back.

Well, yeah, let's just put it this way.

I'm making the claim that the first art produced by humans is body art, that body art and cosmetics was the first human art, but I'm going to make it stronger than that, we actually became humans, that through the create, we were created as humans through body art.

It was that art that created human bodies.

And we really weren't human bodies until that happened.

We didn't have human bodies until that happened.

So it's that interface of the body with this opening up, virtual space.

We saw those examples from Africa earlier of this interface of the body identified with the body paint to a spiritual space, an invocation of ancestors.

So what can we say? How can we sum up? What are the aspects of this signature of ritual power? And then maybe flip back onto some of those upper power images.

There is a profound focus on reproductive power, menstrual potency, but that would be also associated to women in all reproductive stages.

There is a coalitionary context.

Cosmetics are not individualistic and competitive in these cultures at all.

They're placed inside coalitionary context, and that is above all, importantly, what they are speaking about.

We have this link to animals, but particularly found together is, of course, game animals, very profound link that is an identity, the girl with the ylan ball, dance, And there is a parallelism of the production of flesh so that the girl's blood, the gay animals' blood identified together, hunting and reproduction are envisaged as parallel processes.

And the cosmologies are intensively lunar.

They are connected to the lunar cycle because they're connected to the menstrual cycle, the two things being two sides of a coin or identified to each other.

So how, if we have all those aspects, how do we represent, if these are the aspects of the strategies that took us into the other worlds, the worlds of first creation as the Kalahari groups would say, how do we represent that other world? What are the ways that can be done? Well, abstract, geometric, formal motifs, Durkheim used to argue that how do you represent a world that's out of this world? You must use a sort of abstract geometry because you're representing something you cannot see.

But also the repeat of formal motifs is indicating it's the repeated periodicity of ritual.

So that would be an important aspect.

Another way is the wrong species aspect.

You create impossible monsters, you create therianthropes, you make a girl into the Ylan bull and always changing and always changing, which is what happens in the Ylan bull dance.

And possibly the wrong sex aspect, you fuse together the genders, the sexes into gender itself.

Gender begins as this fusion of the aspects of the sexes, biological with cultural fusion as what we call the gender of power.

If I just flip very quickly back to, I've gone too long, I'm sorry, back onto the Upper Paleolithic, these links to the game animals.

You may say that these Venus figurines don't necessarily show coalitions, but I contend, oh, yes, they do, because the hairdos, because the indications of paint and red ochre, these are all indications, they're indications of textiles and special clothing.

These are all indications of collective ritual activity.

They're not just about individuals, although these are very individualized artifacts.

Here we have artifacts indicating both the repetitive formal motifs, the geometric motifs, but also the extraordinary ambiguity.

These are some of the so-called falliform Venuses, the extraordinary gender ambiguity in these Ukrainian, Czech Republic and Ukrainian, Kostienki is Russian on the end, Kostienki, no, it's Ukraine.

I'm sorry, I'm getting muddled.

So yeah, we've got, we're really, and then coming back to Lalind, coming forward in time again, The lines, the expression of ritual power, repetition, movement into the other world, the very stylized, almost, it's almost like handwriting, it's almost like sort of writing, the very stylized, formalized female figures there.

So We're looking at something, I mean, the idea that these are pornographic depictions, I think, is just not going to stand up to any kind of analysis of that sort.

Now, of course, in terms of thinking about today, there is, there is an, there is a deep-rooted connection of women and cosmetics.

I think that's, that is, goes without saying, it's part of our makeup as humans to be using makeup.

But that has, it's had many different contexts, but especially and profoundly, it's been used in very ritual and important ritual, social ritual contexts.

I just wanted to leave a couple of images which are quite some devastating and difficult images which are showing a powerful continuity or evocation of some of those ancient rituals and we can say something about them.

Below is a demonstration of new Nomenos, one of the major feminist movements of Argentina that's been very strongly involved in women's resistance to violence, gender-based violence, and also in the rights, reproductive rights movement.

But on the top is especially haunting at the moment, the demonstrations produced and the artwork produced by women to mark and memorialize missing and murdered indigenous women of the First Nations, who we're thinking about very strongly at this particular time.

## Analysis of the Lalinde plaquette

**Chris Knight:** Fantastic. But can you just finish your analysis of the Lalinde plaquette, because I don't think you quite explained what you think might be going on there.

You mentioned that there's a lot of the lines were repeated.

**Camilla Power:** Yeah.

**Chris Knight:** And you left it there.

**Camilla Power:** It's showing most intimate linkage of power and ritual power between women's bodies.

And it's a very directly intimating commonality of, well, power from the genital reproductive region.

If we can readily, I think what you're angling at is to assume menstrual synchrony. And Lalinde doesn't have particular red as, actually, I'm not sure about that.

As far as I know, Lalinde hasn't got particular ochre red.

I'm not sure if that's true.

But yeah, it's an imagery that without an idea of men, it seems to project an idea of menstrual synchrony.

If people want to ask about that, you can ask about that.

**Chris Knight:** I just, what I was just saying is that the whole idea of whether menstrual synchrony has got anything to do with anything is, around, of course.

I mean, all kinds of people that call themselves scientists say the whole thing's, there's no such thing as menstrual synchrony.

But what the point, I mean, surely the point is with that thing is if you didn't even have that concept, if you didn't have the concept of menstrual synchrony, what on earth would you make of that image? I mean, if Steven Pinker and people say it's pornography; I don't know too many porn mags which show women connected up in that way.

**Camilla Power:** I think the reason for showing that very recent material with the images of the demonstrations against violence with the hands, that's very commonly, that's very often reached to is the painted hands.

Remember, of course, that in the Upper Paleolithic, the painted hands are the rock walls, the cave walls and that being brought back onto women's bodies with the fantastic blood red imagery as the image of women's solidarity against violence by men.

You would not want to offend or upset women memorializing the missing murdered indigenous women by saying, oh, that's menstrual.

You'd say the menstrual aspect of the signal has opened up into a whole world which connects to the ancestors.

So they're using those cutouts with the figures saying, you are not forgotten.

I think that is the key linkage there. For sure, I think the body art starts as menstrual art and it kind of continues as menstrual art, but it's medicine.

## Audience questions

**Chris Knight:** So questions, arguments. This is all very, very, very controversial. It's not exactly mainstream. It's kind of mainstream in the sense there isn't any other theory.

But on the other hand, so many archaeologists don't want to go there and Camilla's work is considered.

**Camilla Power:** Not wacky, not wacky, but definitely controversial. So William has a question.

**William:** I noticed that was the best version I've seen of this and I've seen like this is like my third version.

**Camilla Power:** Oh, thank you. It gets better and better.

**William:** I noticed on the La Salle relief.

**Camilla Power:** The Venus of La Salle, yeah.

**William:** You didn't talk about the fact that there are 13 marks.

**Chris Knight:** Thank you, William.

**Camilla Power:** Thanks for bringing that out. Yeah. I should have mentioned it. You can't say everything. I was trying to do too much Upper Paleolithic as well.

Dasha.

**Dasha:** Thank you. Very interesting, Camilla. Can you clarify, so my understanding of what you said is that when our brain, the brain volume became twice as large as a chimp's, that this Sarah Hurdy's cooperative reading explained what we did in response, and that you're now saying that when it became three times as large, more was needed.

Is that, so are you adding on then to cooperative reading? Is that it? Okay.

**Camilla Power:** Sure, yeah.

**Chris Knight:** I mean, the short version is that the erectus meant you lived with mum and got grandmothering.

And then when you got to modern homo sapiens, you'd long last got the ledge of sex to pull their weight.

**Camilla Power:** Well, no, you don't. Sorry. Sarah Heardy's cooperative coalitions and the others who've argued with her.

Yeah, grandma is vital to begin. But you get males involved as hunter scavengers. We can't say that home rector aren't doing anything, the males. But it's just that in that situation, even though it's in Europe, male investments increasing, there still may be significant sexual conflict between dominant males who are trying to guard potentially fertile females and other males who are trying to do hunting and scavenging.

It's like the situation's not very resolved yet. So I'd say that Homo erectus, there would be a lot of ad hoc, there would be a lot of cooperation, intersubjectivity with our cooperative eyes, a lot of joking and laughing with moajo and pantomime and something that was like beginnings of proto-language, even proto-ritual perhaps, even proto-ritual connected to menstruation, but it wasn't very crystallized. It wasn't very

hard and fast. It wasn't very habitual. And we don't have evidence of ochre usage for Homo erectus.

That was so important in Ian's work in Vanderwerk is the Vanderwerk sequences go down to the Acheulean levels that Homo erectus were around. And they aren't showing ochre. The ochre is above. So that's quite a different, big difference.

So yeah, the later stages that maybe is much more reliable pair bond, linkage of longer-term pair bonding compared to the earlier erectus, possibly.

**Dasha:** And there's no competing theory.

**Camilla Power:** Well, not that explains symbolism and the ochre record. There are plenty of arguments about how and why.

I mean, I don't think there is a competing theory that really explains how do we overcome the sexual conflict aspect.

Terrence Deacon, I don't know if you've heard of Terrence Deacon, he did make a strong case in *The Symbolic Species* that what do we need symbolism for? And he argued that it was for social contracts, and he particularly argued it was about the, making contracts of pair bonds, the reliability.

How do you deal with pair bonds amidst big, mixed, socially mixed groups with mixed sex groups? And that was, and he pinpointed that problem. It's called Deacon's Dilemma. And I think he's absolutely right. But I think it comes much later than he was arguing.

**Chris Knight:** Anne.

**Anne:** Hi. Thank you. It was absolutely fascinating. But like I really, well, you know what, I'm not absolutely not an expert. I'm just learning from you. But what I wanted to ask, but doesn't make sense to me in a way is the coalition around around, being fertile.

So basically, the coalition around menstruation, like women are obviously not fertile at menstruation.

So the point you made about it being evident the woman isn't pregnant, so she can be impregnated, And there's that there's a need to protect her from, a man who wants to get her pregnant and, the need for social solidarity for all the reasons you gave.

But women in general, according to our biological, rhythms, is like, it's not for another two weeks or so.

No, obviously, like maybe that maybe I'm just being Maybe there's something I'm missing, but it just seems that there's a bit of time between the two.

**Camilla Power:** Well, that's the argument would be that...

**Anne:** Yeah.

No, that's it.

That was all.

Thank you.

**Camilla Power:** Yeah, it's just that compared to any woman who's pregnant or breastfeeding or not menstruating, menopausal, a menstruating woman is evidently going to be fertile within a week or so.

if males are competing, to bring flowers and chocolates, or if a male who's dominant wants to grab that female and go on safari with her and take her off, that's the problem.

And what's more, almost for sure with *Homo erectus*, that kind of thing was happening.

So it's just that the male knows it's worth waiting.

He knows it's worth waiting a week or two.

The males have not, amongst us, amongst our species, I don't think males have evolved to be that clever about knowing when a female's fertile, although they keep trying to guess.

And there is some little bit of evidence that they can tell the difference between a woman before she's ovulated and a woman after she's ovulated.

And they probably can.

But we, as females, we keep trying to sort of throw a spanner in the works of what they can tell and what they can't tell.

And that's part of the sex war at a biological level.

But look, this thing about picking up menstruation, we wrote an article which was with a big expert of langur monkeys.

Now, it so happens, langur monkeys are the ones who have significant infanticide.

And females combat the infanticide by having sex with quite a few males, but sometimes they're in harems.

And the harem male is picking up signals of if a \*\*\*\*\* female's menstruating to get an idea of whether to mate her.

And they don't have signals of ovulation.

They're like us.

They've hidden ovulation because they're too worried about infanticide.

And it's not a conscious, I'm saying that as if it's conscious, but of course it's not.

It's a natural selection or sexual selection process.

So if langor males can pay attention to menstruation, then sure as hell, evolving human males were paying attention to it.

That's not a difficult argument to make.

**Chris Knight:** And it's just the fact that Jerome Lewis points out, he just points out that among the binge jelly, for example, menstruation is a huge turn on.

I mean, it's just a very, very exciting thing.

And although the way Jerome, the way, just let me just finished, come on, just let me say it, please.

What Jerome says is that, although officially, woman's biggest husband is the moon.

So when women are menstruating, they should be with the moon.

Jerome says that if the men think, if only we could just get one over on that moon and get her pregnant, then they can sort of, you know, show 2 fingers to that moon.

They've kind of cheated because, and they know that they know that really, and what they say actually, Jerome says, is that if you really want to get a woman pregnant, have sex with her while she's menstruating.

**Camilla Power:** Whilst she's menstruating.

That is a pygmy forest people thing.

They do talk like that.

So with a Hadza, a woman would tend, there would tend to be taboos on sex while menstruating and a woman would supposed to be like wash herself.

But her husband would be incredibly carefully attentive.

And Hadza men have the belief, well, you really need to have sex like five days after she's, you know, straight away after she's finished menstruating.

There are other examples of that, the doggone, that a woman is in the menstrual hut, and a man will come, his, her husband, will come and chat her up through the walls of the menstrual hut to make sure she's not making assignations with anybody else.

It's like men are very switched on in these natural fertility populations.

We are, again, weird people.

Most people with natural fertility, menstruation is an indicator about fertility.

It is imminent fertility.

We are strange because not many natural fertility populations with women continue having menstrual cycles, menstrual cycles, menstrual cycles.

We have many more menstrual cycles than is normal, quite honestly, for normal people.

We're weird.

That's part of it.

**Chris Knight:** Denise.

**Denise:** Yes, thank you very much, Camilla, for that talk.

It was great.

I wondered if you could say a little bit more about the use of geometric as opposed to figurative drawing.

**Camilla Power:** Yeah.

**Denise:** In South America, there's something comparable because they're very, very careful about when they use geometrical drawings and when they use figurative ones.

Textiles, the geometrical ones have to do with They're kind of containers for other things.

They're not plants or animals or things like humans.

They're the containers that allow those things to develop.

And they're always done with odd counts, which means that they're to do with single people or collectives that are not in a paired married state.

The paired...

**Camilla Power:** Oh, wow.

**Denise:** The are the figurative ones.

And in the lowlands in the Amazon region, It's very slightly different.

There's much more emphasis on ancestors to do with geometrical designs, whether they're in textiles or body paint.

But it's also this idea that if you have like those labyrinthine ones all connected up, that they help you to kind of go up and out and into the celestial space.

**Camilla Power:** I can't say it much better than that.

All of those aspects, non-pair bond.

connected to ancestors, opening out to the other spheres.

Yeah, I mean, we can, it's very hard for us to make, obviously, for Upper Paleolithic or Blombos geometrics, it's very hard for us to make specific interpretations.

We can try to offer interpretations of what kind of thing might be involved.

Some people, of course, have related for instance, the Blombos geometrics to what we've been talking about with David Lewis Williams, the neurophysiology, the entopics and so forth.

And they've tried to relate to trance.

So we come back to this argument of what is it, you know, menstrual ritual or is it trance ritual? But it's movement into another world of a kind.

It's also linkage of people.

I'd think with Alexander Marshak, who did an enormous amount of work on the notations and tallying of the Upper Paleolithic, he would also, he would argue about time factoring, and I would agree with that, that's ritual repetition and periodicity, which he would at some stage sometimes connect to the moon, but he would find it very difficult to say the M word, I mean, the moon word or the menstruation word.

He would find them terrible.

He would never say them together.

It was too dangerous to say them together.

So yeah, I mean, we've got all of those ingredients.

**Chris Knight:** Could I ask a question, Denise? Because what you said is just so interesting.

It's just, I mean, for example, We know from the Karahari work, and particularly the Keeneys, the re-entry into first creation, we know that the difference between first creation and 2nd creation concerns fixity.

So in first creation, you can be an animal and then move into being a human and then move into being female and then move into being, everything's fluid.

And it's only in second creation that you have fixed identity.

And I'm just wondering, Would you see the distinction you've just made between figurative art and abstract art in the same light? That abstract art, you can put different identities into one geometrical form, whereas once you have figurative art, you've fixed the form.

Would that polarity kind of work, do you think?

**Denise:** I'd have to think about it, but yes, there's something of that there.

I mean, as I say, you create these container spaces.

They're kind of open and waiting for the future for the real growth and happiness and growth to start and to take place.

So there is that kind of difference, yes.

It's more evident in the Amazonian material because, you know, you can go off into these labyrinths and that's a kind of difference.

first creation.

And it's also dangerous and you have to be guided through it and people, and that's when they sing to guide people so they don't lose their pathway.

Do those weird celestial roads and so on.

Yeah.

Wonderful.

**Chris Knight:** Wonderful, yeah.

**Camilla Power:** John Cox was noting about mirrors.

I think this can tell us something if we think about it quite a lot about the symbolism of mirrors, because it really, some of those stories about mirror, mirror on the wall and so on, who is the fairest of us all, the mirror symbolism is some kind of indication of perhaps of women cut off because they're kind of by themselves in that, although there may be many other, there may be also reflection and the other world, there may be some kind of reversal of time in the imagery and so forth.

But I think that aspect of mirrors somehow taking a woman out of, she's out of the context of coalitions who will produce the beautiful body painting.

It may be important.

**Chris Knight:** All right, Leonhardt.

**Leonhardt:** Hi, Camilla.

Hi, Chris.

That was fantastic as usual.

I just had a quick question about, has there been any studies since the McClintock one, I think in the 70s, actually proving, you know, scientifically that women do actually synchronize? Was it just proving? I don't know if you want to get into it because it's a...

**Camilla Power:** It's okay.

It's kind of avoid it today.

I have done quite a bit of talking about it online on the Menstruation Matters Vimeo there.

But yeah, there's been a lot of disparate, basically science can't prove it with stats.

They find it very difficult to demonstrate because they always argue, oh, it's about random effects.

It's just women pick each other up and then they separate.

So they only synchronize a while and then they asynchronize.

There was a very interesting paper not long ago by a German team on women's synchrony with, not with each other.

They had a longitudinal study, about 4,000 menstrual cycles of around about 20 odd women showing synchrony to certain poles of the moon that they kind of closed.

So there was something interesting there.

One of the most interesting works is by Brianne Fars, who did research, not trying to work out is there synchrony or not, but to what did menstrual synchrony mean to women? And she was working with women, diverse background, women in Midwest, I think, South Midwest US.

Asking them why they thought, did they, did they believe in menstrual synchrony? Did it occur to them? Did it, just asking them general questions around it and getting a very interesting, she's, so I can try and write her name for you.

And I don't know off the top.

If you search for Brianne Fars, I think that's the correct name.

And I can find references for you if you need it.

That was a very interesting work because It didn't try to sort of prove menstrual synchrony exists.

It tried to, what does menstrual synchrony mean to women? And it clearly had a lot of meaning.

And it was interpreted in terms of solidarity, interpreted in terms of intimate sharing, interpreted in terms of, in all the terms that we might expect symbolically.

Wow.

And oh, thank you, Amy.

You've got it.

Have you got, is that the one? Brilliant.

Thank you.

Thanks.

And I do.

the main, if women have evolved to have lunar length cycles, and fundamentally there is evidence for that, with the biggest, latest studies on menstrual apps data.

Right.

When you, when you take, you've got a section, the part of women's population, which are very fertile, so they're age 20, the fertile cycles for women with more hunter-gatherer like BMI.

So they're like fairly, they're not carrying lots of body fat, like hunter-gatherer women.

So it's like an 18 to 20 type BMI.

Those women have averaged 29.5 lunar length cycles.

Wow.

So that is, that is, that is demonstrable.

If we have evolved as women's biggest husband as the moon, then there would be a tendency to create synchrony in the cosmology in relation to the moon.

You've got to think that in hunter-gatherer groups, in a hunter-gatherer camp of 30, 50 people, the number of girls who are actually there menstruating at the same time, it's not a large number of people.

But what they do is use ritual to construct it.

So I showed some of the hands of Mitoko girls, And they actually don't use ochre.

They use cutting and blood to make collective menstruation.  
And they have all the symbolism of women's menstruation and the moon.  
So they're not leaving things to chance.  
They're making it culturally.  
So this is a culturally selected signal as much as just biology, as just biology.  
It's the absolute interface of biology with culture.

And I think all the ideology about menstrual synchrony and all the taboos around menstruation and all the seclusion ceremonies about, you know, all the weight of menstrual culture across, I've been hearing, you know, people have been referencing Judaism, referencing all the different traditions.

It's just telling us that this is the pivotal place between nature and culture.

**Leonhardt:** Just one last thing.

I live in Germany now, Munich, and I've been asking women around what they call their menstruation.

And one really common one is they call it the rule.

**Camilla Power:** And I just thought that was fascinating.

In French, it's regular.

Yes, yeah, definitely.

I mean, it's like the rule of law or the rule of, yeah.

**Leonhardt:** The first rule.

**Camilla Power:** Absolutely.

I think so.

The first rule, no means no.

You just, that's really it.

That's it.

That's the only rule you need.

Then the rest of the rules.

**Leonhardt:** Awesome.

Thanks.

I can see there's lots of questions in the chat as well.

There's quite a few.

**Camilla Power:** Yeah.

Thank you.

There are lots of references I could send.

I don't know if I can write them in the chat now.

**Leonhardt:** Yeah, I'd love to.

May I can e-mail you as well?

**Chris Knight:** Can I just say that the reason why that menstrual app paper is so important is, of course, one of the ways in which the kind of what I often think of as the men in white coats, there's a huge number of people who call themselves scientists who just absolutely insist that the 29.5 day length of the human menstrual cycle is just a coincidence.

And that's despite the fact that bonobos have 40-day cycles and common chimps have 36-day cycles.

And all the other primates, I mean, some of them are quite close.

Orangutans have pretty much 29 and gibbons aren't too far away.

But I mean, of all the primates, the human has precisely the length of cycle with the conditions Committers mentioned.

You have to take fairly young women and all the rest of it.

But I mean, 29.5 days they still say it's just a random coincidence.

And of course, one of the arguments has been that actually the cycle length is, say, 28 days.

And so the reason why that Mensra map paper is so significant is because it just makes the idea that it's a coincidence.

I mean, of course, it could be a coincidence, but when it's so precise, when it's 29.5 days, precisely the time it takes for the moon to pass through the phases of the seed from the Earth, you have to sort of say, well, let's, before we dismiss it as a coincidence, let's work out is there some possible adaptive reason in terms of Darwinian evolution, why women would have evolved precisely that cycle.

And because menstruation itself is such a taboo, you know, everywhere, and certainly, I mean, you just do not, you just find whole stories written about human origins without even mentioning females, let alone menstruation.

Of course, they can get away with this idea that it's a coincidence.

And of course, it's absurd.

It's just pure, it's just reflects the fact that our university not so long ago were theological colleges and it's just massive taboos still operative within science, but it's supposed to be science.

**Leonhardt:** But doesn't Alexander's, you know, the calendar that he found that early, that really early piece and it does have the moon, doesn't, isn't that 29 or 29?

**Chris Knight:** And a half or something? Yes, absolutely.

That's another huge thing, of course, that Alexander Marshak, he's been kind of almost forgotten, not quite, because he did more precise photographic work on Upper Pellinistic art in general, you know, anyway, so people can't quite dismiss him.

But yes, I mean, it's extraordinary how people can dismiss the fact that he just frowned that again and again and again, where you had kind of regular notations, they look uncannily like in the calendars.

And of course, when he was publishing that stuff in 72, no one had any theory, any theoretical sort of model which would predict that hunter-gatherers would have lunar calendars.

Well, now we've got a theoretical model which completely converges with what Alex Marshak discovered.

So it's another whole Ave.

which, and then of course, we just know, you know, from recent hunter-gatherer research with Jerome Lewis and so many other people, that of course, you know, of

course, I mean, what else can you use if you're out there try to plan a future event, what clocks are there to even pinpoint a particular future moment in time other than the sun and the moon? And if you're doing a ritual, although you can have seasonal rituals, annual rituals, hunter-gatherers, we just know that they don't really focus mainly on seasonal rituals, certainly not in African hunter-gatherers.

And a ritual is something which more likely to happen once a month.

So anyway, I'm just saying.

**Camilla Power:** Chris, there is a question.

Anki Tang, I'm not sure if I'm pronouncing your name properly.

In the chat, is that person here as well? Because it's again, it's asking about this question of, if I read out the questions so people can see, there's saying, I'm not an expert.

I think one thing I'm confused about, why a woman would not like to show she's fertile.

According to Darwinian selection, surely women will be more focused on seeking A suitable mate when she's fertile.

And then the second part of the question again about cosmetics being considered a woman uses to make herself stand out.

Okay.

these are two important questions.

So I'd like to just say, try and address that a bit from, Yeah, there is quite a, there is a lot of evolutionary psychology type of studies trying to assess whether women at different stages of their cycle, so when they are going towards ovulation, Are they, for instance, trying to attract men who may not be their steady partner, but another partner who perhaps is a fitter male or good genes or something like that? So there's been plenty of attention to that by evolutionary psychologists.

But I was making an argument about, look at the energy burden to females of encephali of this very sharp, difficult increase of the brain size.

So a woman Clearly, in our evolution, we have hidden the signals of ovulation.

We are not making it easy for males to tell.

You know, if you've got a boyfriend, see if he can tell when you're ovulating.

He's going to be all over the place.

He might have, he might think he knows, but he may not.

And that's part of our evolution of very subtle sexual signals.

of all kinds of hormonal signals, pheromonal signals, possibly there's been a lot of attempt to measure like symmetry in the face and the body as possible signals of where we are in ovulation cycle.

So that's why I'm saying the signal that counts, that is clearly visible and clearly can attract attention, it isn't ovulation, it's menstruation.

So this is not what most evolutionary psychologists think about, but that's because they're being what's known as WEIRD, Western, educated, industrial, rich, so-called democratic.

I hope that kind of answers the question.

And it's quite clear that women are not advertising.

What those Khoisan women doing the Eland bull dance are advertising, they are advertising a young woman who has reached fertility.

She's menstruating, but they're also showing that she is not available on just any old terms.

She belongs to an alliance of kinswomen and men as well as family members.

And therefore, any hunter who's going to invest in her, they have to, you know, speak to all those people.

It's not about one man just taking one woman.

It's not like that.

So it's a completely different scenario from a very individualistic way that we have of thinking about creation of relationships.

And it's a very good point that cosmetics today in a Western world, in a kind of Hollywood cosmology or pop star cosmology or whatever you might want to call it, is considered to be very individualistic and competitive.

But in reality, if you think back to the talk by Elena Fadyova, who did her PhD with me on the Slovak women's cosmetic coalitions, when Slovak women were sharing their cosmetics with each other, they were just creating coalitions.

And these were very anti-capitalistic.

They were very anti-individualistic.

They wanted to create an egalitarianism, not competition.

So this is an assumption of Westerners, very much so.

It's an assumption out of our culture, which we're imposing onto other cultures where it just doesn't fit.

I hope that helps.

Yeah, Rosalie's making the comment about what the evolutionary psychologists argue, the extra pair bond population.

Mary, you want to talk? Mary.

**Chris Knight:** Oh, yeah, Mary, yeah.

**Mary:** Hi, Camilla.

Thank you so very much.

In a previous talk called Lunarchy in the Kingdom of England, you had mentioned that the lady of the unicorn was standing outside a menstrual hut.

And I was wondering, do you think that in this little chest that she has, do you think there is a little bit of ochre or a little bit of rouge in it.

And my second question is to.

**Camilla Power:** Yeah, I sure do.

**Mary:** Okay.

**Camilla Power:** Well, I mean, I mean, it's gold and dark.

I mean, it's treasures beyond.

I mean, it's her beautification, her ornaments and beautification.

But if you look at those beautiful tapestries, the redness, I mean, she's either wearing red or the red ground or The implication of blood, there's the moon always.

The imagery in those is so powerful.

**Chris Knight:** And the rabbits.

**Camilla Power:** Oh, there's rabbits as well.

And the rabbits relate to the moon.

Yeah.

**Mary:** And Camila, do we know, do we know of how the red ochre was carried? Was it in shells? What were...

**Camilla Power:** Well, we saw about these...

Sort of shell, but it, but for Khoisan, they could use tortoise shell.

They might they might have various ways to contain it, or there might be bone or I mean leather bags as well, but yes, seashells or there's a lot of association of ochre to seashells, and sometimes those seashells up in the examples of necklaces from Algeria, which are very old.

They're older than 100,000 years old.

Those shelves have come big distances.

They're a long way from the sea.

So these are all examples of exotics that are transported, which indicates long trade and exchange networks of some kind.

And it's associated to cosmetics.

It's associated with beautification.

**Mary:** Thank you.

**Camilla Power:** It's more about the value of these objects.

William had his hand up again, or did you want to say something?

**William:** Yeah.

What do you make of the fact that they've recently found a child's fingerprint? on the Doli Vesta Nietzsche figurine, what they're calling a Venus.

**Camilla Power:** Is it on the naked? I didn't know about that.

Yeah, I posted the paper on the pottery figure.

**William:** Yeah, I posted the paper on the in the chat.

**Camilla Power:** Oh, thank you.

Thanks.

Yeah, I mean, we saw in the Gunnersdorf imagery that I put right at the end alongside Lalinde, the women are dancing and prancing.

and babies on their backs.

I mean, if you're going to have a women's ritual, you're going to have children there, aren't you? That's for sure.

**Chris Knight:** It's just interesting that there's no, there are very, very, very few images.

of men dancing, and they're very difficult to find in the upper paleolithic.

I think I'm right in saying, Kim and I, aren't either groups of men and anything like the sort of numbers and connected connectivity of those groups of women.

And then, and also you don't find sort of mummy and daddy dancing together.

You don't, you don't find couples at all.

It's a huge lot of gender solidarity going on in pretty much wherever you look with the upper paleolithic art.

**Camilla Power:** Thanks for that.

I wasn't aware about the child's fingerprint on Donavis nature.

It's great.

**Chris Knight:** It's a bit extraordinary that those fingerprints should still be there.

**Camilla Power:** Well, it's pottery, so keep it.

That's fantastic.

That's fantastic.

**Chris Knight:** We've got time for perhaps one more question before we stop.

I think we'll comment.

**Camilla Power:** Yeah.

And we've got a comment from Sonali as well in Bengal, a strong tribal connection with red ochre and shells.

Red ochre is essentially associated with marriage fertility worn by women as a symbol of marriage.

Okay, yeah.

It would be.

There's a, there is a, I was focused on Africa, but there is massive stuff, red cosmetics for Indian culture and for many, many others as well, obviously.

**Chris Knight:** Someone was asking, what's the alternative theory? And perhaps it's worth mentioning, Camilla, that the main opposition to you are coming from certain archaeologists who say that the fact that the ochre is red is kind of irrelevant.

It might as well have been children playing with, you know, face.

**Camilla Power:** Well, there's that.

I mean, I can remember being in an Oxford conference where there were archaeologists, people like Steve Mythen and Paul Pettit, for instance, who put, who exemplified the fact that there was this, the redness of decoration, the selection of red ochre, and just saying, well, it could be just, and they put up a woman with red lipstick showing her as an image, and a white, a white woman with red lipstick showing her as an image.

And they thought that implied, oh, this is just a bit of frippery.

That's what they take it that, and I&I just said, Well, that's symbolic.

What else is it? It's obviously symbolic, and it's just so pathetic.

They're trying to make so decorating with a body paint or a cosmetic is somehow not symbolic.

There's a stage where it's just women prettifying themselves, and that's not symbolic.

Yeah, it's just total.

Male archaeological sexism.

OK, male sexist archaeology.

That's what.

I think that's enough.

Yeah, Desmond Morris would be it.

Yeah.

Well, Dasha's asking about menstrual cycle.

The best sources, Dasha, would be Beverly Strassman on doggone natural fertility. fertility and when Maggie on the Kalasha.

Our women are free.

Our women are free, yeah.

They have done a lot of work on quantifying numbers of menstrual cycles.

There are other broader papers which, you know, which are talking about sort of hunter-gatherer menstrual cycles. lengths.

we probably, as a Western woman who has maybe one or two children, is likely to have about four or five times more menstrual cycles in her lifetime than a hunter-gatherer woman, probably.

Something like that.

So that maybe upwards of four or 500 compared to less than 100, possibly.

**Chris Knight:** So do you want to close this meeting, Camilla? Say anything concluded.

**Camilla Power:** Yes, thank you everybody for listening and sorry it went on a bit long again.

Okay, next week is our last session for this summer term before we pick up again in autumn and we've still got to decide exactly how that's going to work, but watch this space on RAG's Facebook and RAG's Twitter and so forth, and RAG's website.

Next week we have, it's a very exciting talk.

Don't miss it because it is Helen Nde, who's a Cameroonian, young Cameroonian scholar, on riddles, what she calls not quite child's play, riddles in African orature.

So she's looking at African oral culture.

Helen runs some wonderful Twitter threads, the mythological Africans Twitter threads, and she has encyclopedic knowledge of African story, various cultures, story traditions, but also this study, particularly these riddles.

And riddles, again, are not quite child's play.

They belong in secret and ritual context very significantly.

She's probably going to put us to the test with some of these riddles in Twitter format.

She's a very social media conscious student.

So I'm looking forward to that enormously and hope you will turn out for that for next week.

Okay.

**Chris Knight:** OK.

Thanks everybody.

Thank you very much.

**Camilla Power:** Thanks.

**Chris Knight:** Fantastic.

I agree with those who said this is the best version ever.

Fantastic.

Thank you very much.

**Camilla Power:** Thank you.

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<[www.youtube.com/watch?v=Fh\\_heVDha70](http://www.youtube.com/watch?v=Fh_heVDha70)>

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