

When Eve Laughed (Seminar)

Chris Knight & Jerome Lewis

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Chris Knight with Jerome Lewis discuss their forthcoming book on the origin of language:

Why is it that out of 220 primate species, we are the only one which talks? Laughter, too, is unique to our species.

Although quite different from language, collective and contagious laughter may have set the scene for words and grammar to evolve by establishing the necessary bonds of trust.

In addition to the latest archaeological research, this talk will draw on hunter-gatherer studies to show how men learn to communicate with birds and beasts and how women use laughter as a levelling device.

https://www.youtube.com/watch?v=D_p6RUyQuwU

Introduction

Camilla: Good evening, everybody. Evening here for everybody who's come to UCL for our first talk of radical anthropology in the spring term. It's really great to see you and good evening to everybody, or good morning, wherever you are on Zoom.

Radical Anthropology Group has actually been running 46 years. We're heading for a 50th anniversary on three or four. And we are a community-oriented, open to all class and have been so as an evening class running Tuesday evenings, sacred Tuesday evenings for all that length of time with hardly any interruption.

Thanks to one of our speakers tonight, Jerome, who's ensconced here very much at UCL as leading hunter-gatherer anthropologist here. We have brought RAG here to UCL in the last few years. Well, it's been now five, six, seven years nearly.

Radical anthropology has always had an interdisciplinary attitude. Myself, Chris Knight, and Jerome Lewis, we're really social anthropologists, but we've also been very oriented towards evolution as well as in some of our colleagues like Ian Watts towards archaeology, so leading archaeologist of some of the earliest symbolic material of African Middle Stone Age, the emergence of our species in Africa.

So as far as we're concerned, to solve a problem like the origins of language, we absolutely need to draw on all these different disciplines. We can't solve it with just sticking in one discipline and another and another. We've got to bring them together and that is what radical anthropology has really been doing.

Chris Knight was a founder as a social anthropologist who started after publication of his famous book, *Blood Relations*, the first famous book and he began to study this problem of origins of language.

He didn't try and deal with it in blood relations, but he did so by founding a new conference, something which is now still running today.

So he found, you found it 95, 96? Evolang, evolution of language, and it has become a whole field, defined a whole field of discipline of people making models and trying to work out how did language emerge? What is the origins of language? This is really the biggest puzzle in science.

So Chris actually got a few years ago, 10 years ago, a lifetime achievement award for his work for EvoLang, including the book you've published on Chomsky, Decoding Chomsky, and several edited volumes that kicked the ball rolling with EvoLang.

Jerome has also been a keynote speaker in one of the EvoLang, that was in Torun, one of the Eva Lang events and Chris and Jerome have published key articles around origins of language, Wild Voices, a beautiful article in current anthropology seven years ago, it's quite a while, but they have brought together and so we're hearing tonight about this book, which is very much forthcoming.

It's been brought together, almost text is being finalised. I'm still doing a bit of work fact checking for Chris, a book called 'When Eve Laughed; The Origins of Language'.

So we're just going to listen to Chris and Jerome tonight to tell us about the state of play on this book.

Chris

Chris: Well, I thought I'd just start by giving you the answer. Very short version of the answer, because it's actually quite challenging the whole, the whole topic.

So language has what's called a digital format, a digital structure. So probably most of you have heard of Noam Chomsky. Most people on the left just think of him as an activist.

He's actually among scientists regarded as almost, well, yes, the founder of the kind of cognitive approach, the whole, there was a thing called the cognitive revolution, which took place in the 70s and 80s and I won't go into it too much, but Chomsky, you just, everyone would assume you just can't do linguistics if you haven't really internalized the writings of the number one theoretical linguist of the second-half of the 20th century, Chomsky and he defined language, very, very short way of defining it as digital infinity.

So the idea there is that you have, We humans, we use our vocal apparatus as a kind of digital machine with little switches in it.

So we can switch nasalization, making the sound through the nasal canal.

We can switch that off or we can switch it on.

We can make us, we can close the lips and make a sound like, and we can switch off the voicing, just one little switch and by switching off the voicing, we change a B into a P.

So bin becomes pin and the thing is that this digital format, I'm going to try to summarize the whole theory in the moment, is something which animals don't do.

All animal signalling is kind of analog and costly and involves using the muscles, using time, using an expenditure of energy in order to get your message across and the critical thing is the more resistance your signal meets, imagine you're trying to say something and you find the person you're talking to just isn't listening, you're gonna have to sort of repeat it, start stamping, maybe shouting, increasing the amount of time and energy put into the signal, try to overcome that resistance.

But with digital signalling, it's absolutely like zero cost.

It costs nothing to switch from one sound to another, but one word to another, one whole sentence to another.

So if you were to say like, We will meet you tomorrow, and you just switch off the first consonant of that word, which sounds a bit like eat or meat, switch off.

that just one, it costs you nothing to switch off the M, and you've turned, we will meet you tomorrow into, we will eat you tomorrow, which is a life or death distinction and the critical thing is that for digital signalling, any telecommunications engineer would know this, the most efficient form of communication, the kind of communication which is the cheapest, the fastest, and the rapidest, is digital.

You just have little offs and ons, offs and ons, offs and ons.

Any kind of analog signalling, it's costly and it's difficult to interpret.

Have you ever heard of a coinage system? The system of artificial coinage, where the coins are sort of analog.

You know, it's either a pound or 50 pounds or whatever.

These are just digital distinctions and you can see, can't you, that in order to have a system like that with no energy put into it, zero cost, just a little switch, There has to be no resistance to your signal.

In other words, the listener has to be giving you sort of almost infinite trust.

I mean, just no challenge to what you're saying, just taking it, taking it as read and then you have this problem.

Infinite trust.

Hang on a bit.

Can you see what I'm saying? It's like the amount of energy put into the signal depends on the amount of resistance.

The more resistance, the more energy to overcome the resistance.

If the signal has got no energy in it, that means there's no resistance, which in turn sort of means that trust has gone exponential and is kind of infinite and that's a theoretical impossibility.

No Darwinian would even believe you if you sort of said, well, language emerged when trust between humans became infinite.

It kind of doesn't make sense.

There's always some level of mistrust or resistance to the signal.

So Somehow we've got to solve that problem of trust.

Camilla mentioned that my book covered a lot of things, blood relations, menstruation and the origins of culture.

But it didn't.

I didn't deal with language.

The reason I didn't deal with language is because I just couldn't get my head around theoretical linguistics.

I tried reading Noam Chomsky and it it didn't make sense to me and naturally because I'm a scientist, I just thought, well I'm sure if I read some of Einstein's early papers, it wouldn't make sense to me either.

It seems incomprehensible, but that's just because I just haven't got my head around it.

I've got to try harder.

I tried harder and I tried harder and tried and over the years, it didn't matter how hard I tried, it made no sense and so I just thought, well, I better leave the whole subject out.

But I did write a few things in my book and I referred here to the fact that chimpanzees have the capacity, not exactly for language, I suppose, but certainly they can communicate in sign language.

So Roger Foots was one of these American experimenters who decided to lovingly bring up in his own family two chimpanzees.

They were called Bui and Bruno and he explained to them how to ask politely for food and everything went very well as long as he, Roger Foots, was at the table So that when Bruno asked for the marmalade, Roger would make sure that the marmalade got passed over.

So as long as it was humans who were called upon to make the culturally required responses, everything worked.

But he then decided to just try an experiment and leave Bruno and Bowie to themselves and he had to write this.

He said, The food eating situation has turned out to be somewhat of a one-way American Sign Language communication, because neither of the two males seems to want to share food with the other.

For example, when one of the two chimpanzees has a desired fruit or drink, the other chimpanzee will sign such combination as Gimme fruit or Gimme drink.

Generally, when the chimpanzee with the desired food sees this request, He runs off with his prized possession.

So the lesson that, of course, the chimps had is if you want the marmalade, you grab it.

You don't ask for it politely and I was using this as an example to show how it'd be completely pointless to have language in a social situation where there were no moral rules.

it'd be absolutely pointless and the point is that chimpanzees can do all sorts of clever things.

I mean, for example, chimpanzees are quite clever at inventing metaphor.

So in another experiment, the chimpanzee, I think this one was called Lucy, she described a radish as a cry fruit.

I mean, it's a brilliant little beautiful imaginative metaphor and all sorts of other metaphors she was able to invent.

But what's noticeable is that Chimps in the wild don't use metaphor, and they don't use any kind of conventional signaling.

So what shall I say now? OK, there are— OK, I mean, there's all sorts of things to say, of course.

But one of them is that as soon as you start relating language to morality, and to social relationships and to kind of politics in a way, because animals, of course, have politics sexual politics, all kinds of other types of politics.

Chimpanzees have quite complicated political systems, mostly based on the thing called dominance.

Dominance is just your ability to displace a rival using threat or force and some chimpanzees are very dominant, highly dominant, some are subdominant, some are under the whole people talk.

So it's difficult to talk about, say, Evolution of language in a social sense, and especially like evolution culminating in a revolution.

The social revolution, which is one of the theories.

Christopher Burn talks about the idea of reverse dominance that somehow during the course of human evolution, resistance to being dominated, and he pointed out that wherever you get dominance.

You're going to get resistance.

Christopher Boehm in the wonderful book.

About how resistance to dominance, counter dominance culminated in.
a revolution in reverse dominance.

But as soon as you start talking about evolution, you're into politics and perhaps I should say that's why the very topic of origins of language was prohibited by the most influential linguistic society in the late 19th century.

The Paris Linguistic Society in 1865 banned all discussion of either a universal language or the origin of language and it's because these people were monarchists, they were quite reactionary, and they didn't like Darwin, and they thought of Darwin as somehow subverting morality by saying that we're basically chimpathies or evolved from chimpathies.

So that's that one version, that's one illustration of how politics gets in the way.

But there's another illustration.

I mean, supposing you really, really, really wanted to eliminate all possibility of politics.

You just wanted to do pure, pure, pure science with no hint of any political implications.

Can you see what you'd have to do? You'd have to strip away the social aspects of language and if you wanted to go the whole way to depoliticize this topic, languages have to be not social at all.

It'd have to be like a snowflake or something, like an object.

Noam Chomsky, being so very political, most people, I mean, I have a huge admiration for Noam Chomsky, who's currently very ill and not at all active, but we miss him a huge amount.

He's a very openly and explicitly Jewish intellectual who's very critical of wherever he finds oppression and abuse, including by the Israelis, he will denounce it in a very, articulate, beautiful, courageous way and that's how most people on the left at any rate think of Shostakovich.

Sort of because he's so political, his work for the US military establishment, funded by the Pentagon at MIT, has to be absolutely non-political and you think to yourself, well, how could you make the study of the origin of language completely non-political? Well, one way to do it would be to say that language isn't social.

It's just an object.

It's an object in the head and to make the whole story about its emergence completely meaningless and non-political, you'd have to say it didn't come out of any previous form of vocalization, any previous form of primate chimpanzee politics.

It just suddenly appeared from nowhere and sure enough, this is Chomsky's theory.

I just thought you might be interested.

I've written a whole book on all this.

But he just says— it's almost as if— this is his theory.

It was almost as if there was some higher primate wandering around a long time ago, and some random mutation took place maybe after some strange cosmic ray shower. And it reorganized the brain, implanting a language organ in an otherwise primate brain.

Now, when I say this in my lectures, I'm usually warned by Chomsky's supporters not to take it too seriously.

It's just a metaphor, they say.

Chomsky himself, after all, described it as merely a fairy story and that's true.

But we need to explain, I think, why Noam Chomsky keeps returning to the same story.

So here I'm going to read out a somewhat more elaborate version.

An elementary fact about the language faculty is that it is a system of discrete infinity.

Any such discrete means digital on off.

So digital infinity is another way of putting it.

Any such system is based on a primitive operation that takes n objects already constructed and constructs from them a new object.

In the simplest case, the set of these objects that we have, we have a certain number of objects and then we form them into a set.

We like we merge them or combine them.

Call that operation merge.

Either merge or some equivalent is a minimal requirement.

With merge available, we instantly have an unbounded system of hierarchically structured expressions.

It means you get certain number of sounds or, and then you You take this set, and you take this set, and you merge them to the set at a higher level, and you can merge that again.

It's an infinite series of these mergings.

The simplest account of the great leap forward in the evolution of humans would be that the brain was rewired, perhaps by some slight mutation to provide the operation merge, at once laying a core part of the basis for what is found at that dramatic moment of human evolution and then he says, in another whole thing, he talks about this great leap forward.

But either way, what he says is that when language emerged, it didn't come from any precursor.

It just appeared suddenly, instantaneously and what happened was that inside the brain, there was installed this like a miniature computer, this miniature digital computer, which we call language.

Now, I mean, I'm not going to go into that very much more now.

except to say that you can see what he's trying to do.

He's trying to get rid of.

He's trying to think, how do I get rid of politics? I don't want to be accused of being political.

How do I make sure that my theory of the origin of language is non-political? Just get rid of everything which connects it with anything else.

So what Jerome, I mean, Jerome and I almost finished, I think, writing a book called When Eve Laughed.

We are in a language and we're doing really the very opposite.

Our position is that there can be no such thing as a theory of the origin of language, which might seem a bit strong, but I've always thought that more and more as the time's gone on.

The theory of the origin of language, I'm saying, is impossible.

It's a little bit like a metaphor I use sometimes when I've been speaking in the language.

Imagine you're in the forest and you're watching the chimpanzees doing those different things and you're thinking about a credit card.

Oh, this is a really interesting thing.

It's a little credit card.

I've got one here.

Such a clever thing, this thing.

It's just got a few numbers, but what you can do, you can just use the phone and you can tell the people at the other end what your credit card number is and it's magical.

They'll let you sleep in their hotel, have breakfast every day, go out for great, very expensive meals and it's such an amazing thing.

Clearly, it's digital.

Maybe the magic's inside this little strip here.

But imagine you're in the rainforest looking at the chimpanzees, and you're thinking, hmm, how long have I got to wait in the forest for the chimps to invent credit cards? And I'm using that analogy to just say, well, you're not going to get credit cards ever.

You've got to go through the human revolution.

You've got to go through hunter-gatherer.

You get immediate return hunter-gatherers.

You've then got to go through delayed return, slightly more hierarchical hunter-gatherers and you've got to go through so many phases.

Eventually, feudalism and capitalism and the development of industrial revolution, electronics, computer.

So it's the same with language.

We think of language as something which sort of happened.

But it couldn't have happened without a huge number of other things and what we need to do is to explain the whole thing.

We have to explain properly how it was that we became humans in every sense.

Language being one aspect of it all.

But the idea that language sort of emerges and then makes everything else possible, the problem is how do you explain language? And it is an insoluble problem.

So that's why in our book, We say when Eve laughed.

Because laughter is something which, well, I mean, other animals kind of laugh.

But human laughter is very, very distinctive.

It's very, very different.

Again, we could go on forever about talking about laughter.

But one of the things about human laughter, unlike, but you can tickle chimps and they make a sort of heavy breathing sound.

But when chimps do make that sound on being tickled.

The sound itself is not contagious.

The thing about human laughter is we laugh because people are laughing.

As soon as you hear somebody laughing, you start to laugh.

It's a contagious signal.

It's therefore intrinsically social and one of the things is that, I mean, Robin Dunbar wrote a book called Gossip and Grooming.

He points out that when people meet together, in a relaxed setting, which is when you're going to get the most sort of fluent, creative, expressive forms of language is kind of gossip.

You just hear people are always laughing between the sentences.

There's little bursts of laughter going on because people feel relaxed when they can laugh, have a laugh over things and you can't laugh when your boss is around and you can't laugh when you're trying to manage some subordinate.

When we feel relaxed as humans, we like to laugh with friends.

who we can tease, joke with maybe maybe quite rude to, because we know that it's all going to be taken in in good heart and amongst what we do know, and I'm going to ask Jerome to stick with in a moment, is that among traditional hunter-gatherers, immediate return hunter-gatherers, and this is really widely known and widely recognized, laughter functions as a leveling.

So Instead of having some certain people in charge of making sure that people don't get above themselves, what happens is you get a particular form of laughter.

I mean, the form that I'm going to ask Jerome to talk about now is clearly from the people he's worked with, Benjelli.

But there's something generalized about this, this particular kind of social collectivized bottom-up and largely women-led laughter and why is that connected even with the problem of the origin of language? It's because once a whole community have had a laugh over something, the social atmosphere is ready for this strange set of noises that we humans make that we call language.

Perhaps I should just read out another very important quote that I did have in my book.

It's long before David Graeber, who, as everyone I'm sure here knows, died not so long ago as an anarchist anthropologist and a brilliant anthropologist, a very well-known French anthropologist called Pierre Clastres, wrote a book called Society Against the State and he just put it this way.

Language is the very opposite of violence.

Speech must be interpreted.

as the means the group provides itself with to maintain power outside coercive violence, as the guarantee repeated daily that this threat is averted and David Graeber made a very similar point, which is that if you can get people to do things by hitting them with a stick, you don't need to talk with them.

Talk requires the absence of violence and threat.

It's far more difficult to use language because you've got to use persuasion, temptation, so that all sorts of things and maintaining a maintaining us a social milieu and again sufficiently egalitarian for language to really flourish is probably the most complex intellectual task humans have ever had to accomplish and it was accomplished at the moment when we became fully human, fully sapient, if you like, Homo sapiens and it was something quite revolutionary, the emergence of this particular kind of laughter and Jerome, could you talk about more John? Do you feel? It's very good.

I'll just say, perhaps a little bit more, is as soon as you think of one of the components you need to get language off the ground, you need cooperation, you need a certain kind of control over the tongue and all these things, you just which comes first is so difficult

to work out because you can't have one without the other and Jeremy and I think that actually *muajo*, which is a form of laughter, solves that problem because these things, this particular form of laughter, we can definitely envisage it happening kind of simultaneously and again, what happens too often is because we're going to talk about the Mengelli, people forget that we don't have this Darwinian stages picture of evolution whatsoever, the view I've always had and the radical anthropology has always had, that when we became human, we were fully, fully, fully human.

We were fully communistic, generous, sharing, political creatures, brilliant at managing the most complicated thing, which is to keep the society egalitarian and over the years, especially in the last few hundred years, we've become, if you like, less and less human.

So the most fully human people, in many respects, are today's and gender, egalitarian hunters and gatherers and we've got a lot to learn from them about how to maintain an egalitarian system.

But also they've got their own ideas about how language might have.

Jerome

Jerome: Well, thanks, Chris.

I guess just to put my joy in context.

It's something which is a a moment of interaction between people, which raises a whole series of issues, which answer some of those questions that Chris has been asking.

So if people are to trust one another, they need to have some sort of system by which they can diffuse the potential for conflict and one of the key areas of conflict in human society is, of course, sexual relations and so In the hunter-gatherer group that I worked with in Central Africa, who are radically egalitarian, they're so egalitarian, for instance, that a child, as soon as it can walk, can decide where it sleeps, there is a very high premium on your autonomy to do what you need when you need to do it.

So there's no word for goodbye.

If people leave, you say go, and that's it.

Because once you say goodbye, you're almost sort of trying to claw them back again and so you mustn't hinder people's autonomy and in such a context, how you collaborate and coordinate becomes quite a puzzle for people who come from very hierarchical rule-bound societies or enforced rule-bound societies like ours.

So in these contexts, you don't have police, you don't have judges, you don't have people who can come and say, oh, well, you were bad and you were right and so on.

So what people do when they have conflicts is they just avoid each other because they don't have stuff to protect.

They haven't got fields that they need to guard or whatever and that means actually most conflicts can be quite easily resolved just by avoiding the person you're in conflict with.

You meet them again a year later or six months later and you've often forgotten what the issues were and life can continue.

Sometimes, of course, it doesn't, and there are people who you just try and keep apart for various reasons because those conflicts have gone deep.

But in general, avoidance is an effective way.

So how do you keep in camp a particular atmosphere which brings about the respect of one another, the ability to respect certain rules without anybody enforcing them? And so there are a number of different things and in other talks, I've talked about Aquila, which is a set of prescriptions.

descriptions or taboos or rules about how you should share things, essentially and it's not just about how you share, say, the meat you take from animals.

It's also about how you share your bodily fluids, how you share your sexuality, how you share your fidelity to the partner that you've committed to and so on and these rules, if you break them, they affect you or they affect your partner.

They don't affect other people, there's no sort of enforcement agency that comes to you and tells you, oh, you're wrong.

You just stop, you aim at an animal and it misses all the time.

Or you start having accidents when you go in the forest or dangerous animals come and attack you.

There are all sorts of ways that these rules are self-enforcing and so one of the key ways when someone does something outrageous, so for instance, there was a man who was particularly fierce He was an elephant hunter and extraordinarily courageous.

One time, for instance, walking in the forest, and I wasn't actually with him, I was at camp, but so they're walking in the forest and they passed a mother elephant without realising because she was still, and her child was on the other side and it was a small boy who was about 8 years old who walked through first and the mother elephant reacted by grabbing him with her trunk shaking him up and down, throwing him to the ground, and then was just beginning to tusk him when Suke, this very courageous elephant hunter, went running between her tusks, picked the small boy up on his shoulder, and left as the elephant tusked him, and he had a big chunk taken out of his skull from the elephant tuskings him.

But he managed to rescue this poor boy, who was unfortunately very broken, and get him out of the elephant's reach.

So this is someone who was well respected in the community, who was very strong and rather passionate in many ways.

Anyway, one day his wife was having a hair plaited, which is a style of hair that is popular among the farmers, but not so popular among the hunter-gatherers and so she had her hair plaited.

That evening, Suke got into a fury and started to beat her and her girlfriends had to come with sticks and beat him to protect her from him and it caused a huge noise and there was lots of rushing around and when people fight, it's very dramatic in this society.

People amplify the, there are sounds that accompany the fight that people who are watching do and it's part of the way that you create checks for the people fighting because they start to become aware as the sound increases, it's more dangerous, as it decreases, people are relieved and so it's It's a very complex sort of sonic way of managing conflicts.

But then the next day, some of the women, elder women, and these tend to be widows who are the sort of the stalwarts of the community, came together and they started reenacting a fight that looked very similar to the one that Suki was doing.

But as they were doing it, they were saying things like, They started off plaiting the hair of one of them and plaiting and, oh, aren't you beautiful? You're so beautiful.

It's a lovely hairstyle you've got there and then in comes this other lady.

What are you making yourself beautiful for? You've got some boyfriends, have you? I'll show you.

I'm your husband and just, and then they start reenacting in a very comical way.

the events of the night before and as they're doing this, immediately everyone in the camp knows and camp life is quite quiet and you're in a very peaceful place and so when there's a bit of animation, everybody comes and wants to watch and see what's going on.

So all the kids come round and all the other people in camp come round and it's very funny.

The women are experts at making it very humorous and so everyone starts laughing and as people are laughing, they start commenting.

So there's a sort of a spontaneous moral commentary that emerges from the crowd watching the show that starts to inform the moral compass of those people who are present and the women continue doing this, and this is Mwajo, when they do these theatrical reenactments of some problem that has just happened and as the women are doing this, they wait and they watch and of course, He came too, because he was wondering, what's all this noise about? And then he watches for a few minutes or even a few seconds, and he starts to realize, that's me and of course, this has happened to me, so I know the feeling and from humour, you suddenly, and there's that feeling of resentment when someone's basically making you realise that you were a fool and so Sukhir stood there, And he started growling.

I could see, he was starting to get hot inside and there are two reactions you can have when women do this.

You can run away, which is what Suki did.

He ran into the forest and we didn't see him for about 6 hours.

Or you laugh and if you laugh, the women stop immediately and it's a very interesting psychology.

When you can take distance from yourself and laugh at yourself, you've suddenly sort of accepted, yes, I am, that's not acceptable and that's enough and then the whole thing stops and nobody talks about it and they probably won't talk about it.

But anyway, that's the end of the module.

So in this module, you have a whole series of very key elements which answer this question that Chris was posing, which is, If you talk about the origin of language, you can't really talk about the origin of language by itself.

You have to talk about the origin of morals.

You have to talk about the origin of rules.

You have to talk about how you control the potential conflicts of sexual violence.

You've got all these different elements which are key to creating that trusting context in which language can start to flow.

Otherwise, it's all about posturing and sort of much more in the way we see chimpanzee, chimpanzee communities interacting with one another and so the mwajo is a moment where you have displaced reference, for instance.

So if you're talking about something, I'm talking about mwajo right now.

There's no mwajo going on in here.

There is probably a mojo going on somewhere in the Congo or in Central African Republic.

But right now, it's a displaced reference and all the words that I've just uttered are creating, I hope, some pictures in your mind, which are nothing to do with anything that's happening here.

apart from what I'm saying and this is an extraordinary thing that language can do.

It's all the most the magic of language and it's explaining that, which is the key conundrum in trying to understand why we speak and chimpanzees don't, gorillas don't, bonobos don't, orangutangs don't, dolphins don't.

They all have very sophisticated communication strategies, but they don't speak and we think that the The way that Mwajo illustrates the emergence of a moral community is a key to understanding the emergence of language and I think Chris now wants to say something.

Chris

Chris: Well done.

Thank you.

Fantastic.

But of course, okay, but so many linguists have a kind of reverse picture of all this because they say that displaced reference is a consequence of the evolution of language.

It's one of the features of language.

It's this amazing thing that language enables you to talk about stuff beyond the here and now.

But of course, you heard Jerome describing Mojo, and although now and again, of course, the women who are laughing are using verbal language, it's not the critical point.

The critical point is the enactment, it's the gesture, it's the movements.

You can see what's happening without needing to use words, words that nowadays, of course, because people who've got language, they're going to use words.

But the displaced reference is, of course, the humor and the humor wouldn't work.

When those women are putting on that performance, the reason why everyone laughs is because they can remember that, yes, that's exactly what Sugu did just maybe the previous evening.

It's displaced in that sense, but within, of course, very recent memory.

I just want you to sort of see what I'm trying to say here.

It's not that you have language and that has these qualities, these intrinsic features such as displaced reference and digital format and all the other things.

It's actually that these things we think of as features of language, they had to have already evolved and without language as we know it, you certainly don't need grammar to do mojo.

You don't need all these complicated things because it's all sort of it's acted out in real life.

So I'm kind of known, I suppose, within, I mean, Camilla mentioned Diva Lang and setting up this amazing biannual conference series, but I'm also known for two kind of things, I suppose.

Those people like Jim Hurford and others have written about my stuff, known for this idea, which I think I was the first to come up with, which is that this very, I mean, in principle quiet, I mean, it's true that we can shout.

But language is actually itself a very quiet, low-key, very, very cost-effective, very, very efficient method of communication.

You don't need to shout.

If we're having to shout, there's something wrong, we're meeting resistance and I'm known for saying that extraordinary levels of in-group trust must have been generated before language could even begin to evolve.

Now, that brings up a whole The whole science— modern Darwinism is all sorts of different branches of it, but one branch is called signal evolution theory.

The great inventor of signal evolution theory in this modern form is Amot Zahavi, who's working with babblers in Israel and to cut a long story short, he's basically saying that animal signals involve costs.

the animal has to put its body into the signal.

He has to put muscular energy, time, into each and every signal in a costly way and the more resistance the signal meets, the greater the costs and I'm kind of known for saying that we have this paradox because Zahavi was saying that actually about language, which is zero cost in terms of these little switches, He said, language is a really great idea.

It'd be wonderful, but it would never work.

He actually said, it's a theoretical impossibility.

Nowhere in nature will anything like language evolve because in nature, and he's talking about Darwinism, of course, in all relationships, there's at least some element, even when the animals are cooperating with each other, there's going to be some element of conflict and that means some element of costliness in each signal and the point about costly signals is that they are they're measured on an analog scale.

So when a chimpanzee, for example, goes, and I won't go through the whole thing, but it's actually quite difficult.

You can't be a bit emotionally exhausted when you've gone through a huge big pantoot.

But the point is that the other chimps don't just think, oh, it's a pantoot, lock that in.

They want to know the form of the pantoot, how long it goes on for, how much arouse, what it's all about.

There's a whole lot of graded elements to the evaluation of that signal.

They don't just put it in a certain category and costly signalling theory is just saying, I mean, a great example, of course, of costly signalling is peacocks with a huge tail and why does a peacock have to make such an effort and have to evolve this incredibly Costly long tail, all sorts of, so many things could go wrong with that tail.

Any tiny little bit of asymmetry, any kind of infections, any kind of, and of course with a huge long tail, it's gonna get eaten by a fox before.

But the reason is because peahens are skeptical.

It's like the peacock is saying to the peahen with its display, I'm the best **** around here, have sex with me and of course the peahens are saying, Yes, but you all say that, prove it and so sort of setting the peacocks into conflict with each other and driving them to the limit of what they can afford in terms of costs.

Of course, other signals are less costly because the conflicts are less severe.

But there's always an element of cost and in every case, the signals are evaluated on an analogue, which means that in a more or less scale, not a digital scale.

So I'm known for saying that somehow, as I mentioned at the very beginning, the levels of trust must just shut up in the human case and of course, it doesn't mean we're absolutely, obviously, we humans aren't totally trusting of what people say to us.

We always sort of weigh it up a little bit.

But the point is that we're interested anyway.

Even if you're telling me a complete fairy story, I'm interested in what's in your head and I'm not going to resist your signals at the moment you open your mouth and start producing a vowel or a constant.

I'm not going to say stop there, I want to know that that's true.

because we're interested in the contents of each other's minds and that's part of this whole thing of intersubjectivity, of awareness of ourselves as one of others, and a whole series of psychological developments, which of course, Sarah Hurdy has helped to explain in terms of her theory of communal childcare.

But okay, so what am I going to do now? The other thing I'm more recently become recognised for I'm quite pleased about is the idea of what a symbol is.

So what is a symbol? There are all sorts of efforts to define symbolism and what a symbol constitutes and the sort of conventional idea is a symbol is a kind of conventional which means socially agreed connection between a sound or image and a meaning.

Now I wasn't very happy with that because it doesn't place the problem of what symbolism is within a Darwinian evolutionary context.

So I realized quite a long time ago, partly because of somebody called Dan Sperber, who wrote a lovely book about symbolism, rethinking symbolism.

Perhaps I should just quickly go into this.

Sperber was working in Ethiopia with some of his people, and he was listening to things being said to him and what he noticed is that sometimes they would say things which like pregnancy lasts nine months and you think always they know that and then you hear them saying something else like um but in some clowns it lasts 10 months and you think well that can't be right therefore it must be symbolic or he heard that the leopards in the region were Christians how do they're Christians is because when a leopard gets an animal and kills it.

It throws it to the left side as a form of sacrifice and again, he thought, well, I don't think leopards do that.

It must be symbolism.

So anyway, in his diary, he wrote, how do I know that these things are symbolic? And he had a very simple solution because they're false.

So he had this idea that a symbol is a socially acceptable falsehood and so we have this paradox that if everything that humans say is symbolic, all our words are of course symbols, there must be falsehoods, which we accept.

So by chimpanzee standards, given that all chimpanzee signals are like bodily signals that in the signal, in the panto, in the copulation squeal, in whatever the food call, whatever, is evidence of like a chimpanzee, when it sees food, it gets very excited and you can almost hear the salivation, that the food call is evidence of the presence of food.

But of course, when we say dog, cat, food, whatever, it's absolutely no evidence at all and these symbols are falsehoods, which are socially acceptable and we've got to work out how it was that falsehoods have become socially acceptable.

Now, there is a kind of theory.

Merlin Donald came up with it.

It's a theory of mimesis and he argued that somehow in the course of human evolution, maybe around the time of *Homo erectus*, about maybe too many years ago, humans began to, he calls it mimesis, begin to act out hard to fake signals.

So humans, we can cry because we're upset or we've got something in our eyes or something, or we can mimic crying in a display.

We can eat food and feel, Oh, that's horrible, and spit it out.

Or we can warn somebody else, Don't eat that mushroom by spitting it out.

So we're acting out something which clearly is false.

you know, these actions are false, but the thing is, why would chimpanzees take notice of another chimpanzee who was expressly good at acting things out? And the point is, of course, the chimpanzee who was good at acting would be using those acting skills, those skills that producing false signals, they would be doing it for deceptive purposes, they would be tricksters, they'd be tricking each other and so a particularly clever chimp, particularly good at faking signals, would be like the boy who cried wolf, wouldn't be listened to, would be ignored.

So there's a powerful selection pressure preventing other animals from faking their signals because the faker, the explicit faker, the visible patent faker of signals would be ignored by others.

Which sort of brings me to what I want Jerome to talk about next.

We need a theory to explain how it was that we became so good at acting, so good at faking, including vocal faking.

I mean, animals, chimpanzees and other primates, vermin monkeys, are quite good at deceptive signalling, but you'll find they're not very good at, or not at all good at deceptively using their voices, as if they need to keep at least one modality, one channel of communication under bodily control because otherwise you wouldn't believe anything.

There's a kind of need to keep a kind of reliable channel open, namely the channel of vocal signal, even though they might be able to fake things with their hands and other parts of the body, they can move more easily.

So one of the things which Jerome, for me, at any rate, solved, one of the problems he solved, he gave a story from his work with the Benjelli to explain how it was that we could become so good at faking vocal faking without suffering that problem of being ignored as a result of it.

In other words, without suffering the problem of being resisted, resisted precisely because we got more, more and more expert at that faking.

Jerome

Jerome: So thanks, Chris. Yeah.

So baking when when women go out into the forest to collect food.

one of the things they will do is sing, and they have a particular style of singing, which is yodeling.

So it's a shifting from a chest voice into a head voice.

So you get, as probably some of you may have heard, Swiss yodeling in the, it's a form of song which travels very well across distances and so what the women, if you ask them, why are you singing? I mean, apart from it being very beautiful, is they're saying, well, we sing to keep the wild animals away because we don't want to

be attacked by wild animals and this got us thinking about this early period where Homo sapiens or whoever our evolutionary ancestors were coming out of being tree dwelling creatures to being multiple environment dwellers and one of the things that would have been a big problem at that time was the number of big cats that would find a human being as just the ideal meal and it must have been, and we all know how terrified we are of the dark.

Part of the skill which big cats have is extremely good night vision.

They've got reflective retinas.

They can see in what would be pitch darkness to us, and that's when they do most of their hunting when it's pitch dark, because they can just creep up on their prey and so how might those early hominin communities have protected themselves? And if we look back at Sarah Hardy's work that Chris just mentioned, you've got mothers and others, mothers and their grandmothers looking after children, growing up in groups, whether or not males were associated with these groups, we don't really know to what extent or whatever.

But How would those women and children have protected themselves from these terrifying cats? I mean, some of these simians and things, I mean huge lions.

We think lions are big, but they were really huge saber tooth tigers.

We're all familiar with as these terrifying creatures and so what we suspect is that there's a natural response that most people have if confronted by a large, dangerous animal, which is to make yourself large and to make lots of noise, to scream.

But if you try and maintain that kind of posturing for more than a few minutes, or well, in my case, a few minutes, maybe some other people can go for 10 or 20 minutes, maybe half an hour, but after that, you're just, your voice will be lost, and you'll be very vulnerable then to being eaten.

But if you can somehow modulate that scream into something that is more easy to sustain, then perhaps you might be able to keep up that sound for a longer period and what's very characteristic of not just the hunter-gatherers of the Congo Basin, but also the hunter-gatherers of Southern Africa, both of whom are at the root of the human phylogenetic tree, they are the closest to whatever that group was where we emerged initially, they sing in a very distinctive polyphonic yodeled style and one of the very intriguing elements of polyphony is that if you've got five people singing polyphony together, each has to sing a different melody, and then together those melodies interact to create a song which sits above the individual melodies that each is producing and that polyphony is one way that these early groups could have been vocalizing in order to keep those dangerous big cats away, because actually predators are very risk averse.

If you're a lone hunter and you lose some of your paw or you break teeth, it can be really catastrophic for your long term interest.

So predators are very risk averse.

So for instance, big cats tend to like to attack from behind.

They don't like to attack face on and there are various other things that show this.

But the point being that by making noise over a continuous period, women were starting to create a system for resisting attack from Big Cat because the Big Cat couldn't work out how many people were in that group because there were so many noises coming out in this polyphonic yodel and therefore, I'll just be a bit careful.

I may get into trouble if I attack that group and the women and of course the children who were there were developing their vocal dexterity and those women and individuals who could develop more vocal dexterity would have presumably been more successful at maintaining that sound for the duration of the night and it's very curious that human beings love to party all night.

We still do today and we are frightened of the dark.

We do like to be together if it's very dark.

So these are parts of this sort of ancient memory that come up from the past, and which created the ability to not be, to develop our vocalisations without deceiving one another.

So you've got this group of women and children sitting together, vocalising, knowing that it's just a song.

But aware that it's deceiving those predators or potential predators that might be around camp and keeping them away and what's very, so that's a sort of women's version of this vocal dexterity, how we develop vocal dexterity.

Chimpanzees and these other animals that don't use vocal signaling have very limited vocal dexterity.

The men And this is something very common in Central Africa and as I'm learning more and more across the world, hunters will use vocal lures as a way to attract animals to them and while I was in the Congo and going hunting with men, they taught me how to call different animals.

So you can call small duikers by going, you can call, I'm not sure if I'm going to be able to do this very well, monkeys out of the tree.

Which is the sound of a fallen baby.

So all the big guys come down, oh, where's the baby? Where's the baby? And come into range of your crossbow and you can call crocodiles, you can call buffalo and I've even heard someone who can call elephants.

I've never heard how he does it, but it's the sort of thing that's very dangerous to do if you're not prepared for an elephant to suddenly arrive.

So, but what's happening here is that These human groups are using vocal dexterity not to deceive one another, but to deceive non-humans and this is the key place where you jump that impossibility, that evolutionary impossibility.

How can vocal dexterity, deceptive signalling emerge, evolve? It's because it wasn't done to other humans, it was done to other species that humans had a very important need to deceive and so I don't know if you want me to go on more or is that.

So what I started to look at being interested learning Bambenjeli, the language that they speak, was that actually their language is a continuum from... So they have signs, they have silent communication.

So, people will chew leaves and make different patterns, distinctive patterns that are unique to that person when they chew the leaf.

So there are lots of leaves in the forest, of course and they will use these as signs that they leave on the paths to tell other people where they are.

So for instance, two young lovers will, the girl might go off and she'll leave a leaf at a particular path with her sign on it so that her lover knows she's gone over there in the forest and can find her.

A clan who's going off on a big journey will leave particular leaves on the path that indicate that clan has passed this way and the way the leaves are pointing tell you which path they're going and they put barriers on other paths.

There are all sorts of ways that the forest is actually full of signs And those signs are being left deliberately by people to inform one another of what's going on and so that's silent on the one hand.

But but and I guess it's writing in a sense, but just without paper pens or stone tablets, it doesn't survive.

But this is probably very, very ancient and then as you move across this continuum, you start to use sounds and of course, we've just talked about the mimicking animals and so on and using these sounds to deceive other animals.

But then when we're hunting, for instance, if you go pig hunting, pigs often arrive in a group and so the key is to be able to encircle the pigs or what you anticipate where they're going to come, you create a circle and then the men who are doing the hunt, and this is often with spears, They will be using bird calls to keep each other informed about where each person is and it's very important that you don't accidentally spear one another when all the action starts.

So as the pigs arrive in that area you've encircled, whoever, there's often someone who will be leading the hunt, they'll go in first and with their entrance into the group of pigs, all the other pigs start to scatter and they then come towards the men who are hiding and they can be speared in turn and so that kind of communication is again deceptive, but it's much more about keeping yourself invisible to the animals but visible or audibly visible to or audible to your colleagues so that in this very dense forest, where people are and then you get to styles of speech, which are very distinctively restricted.

So for instance, they drop all the consonants so that you just speak the vowels and the tones of the words you're saying.

So if I'm speaking to Camilla in this way and Chris just arrives, he won't be able to understand what we're talking about.

He could guess, but he won't be sure and it's a way of, and they call it speech between four eyes.

It's for talking about very sensitive topics, very careful things that you don't want to share and then you have ordinary speech that happens as people just chat.

But it's never the sort of speech that we have, which is just as we are now, me talking and you all sitting silently.

You will be constantly responding to what I'm saying with particular sounds and there are a whole range of these sounds for different situations, for different.

So duration they walked, they walked a lot and so on and arriving somewhere.

Anyway, there are all these different sounds.

So as a person is telling a story or talking about something, you are all responding with the appropriate sounds that give a certain musical and animated quality to the storytelling and that's effectively how groups interact and then there's this thing, public speaking, which is a very formal way of speaking.

You say, Oka, Oka, Oka, listen, listen, listen and it's extraordinary.

The camp becomes silent.

Even children who are crying will stop crying and start listening and then you speak your piece and you say, oh, I'm finished and then you sit down again or whatever, and someone else can start speaking if they want and anyone can join this public speaking and it's the way the camp communicates with itself and it's a particular form of speech, which is very early in the morning and in the evening and it's a way that people hear about what's been going on and what are the problems different people are experiencing and then if you want to extend that communicative action beyond the group, you start singing and the singing actually is communicating back to the forest.

Now, if you're sitting in the forest and listening to it, there's a little bird going, do you live, do you live? There's some monkey, somewhere, whatever it is and different animals will be making their little sounds at different times and if you're sitting there quietly, it's like a polyphony itself of these regular sounds coming from different creatures.

but all coming together to compose this stream of sound coming from forests and people never shut their ears there.

We're urban dwellers, traffic and all these things.

We're constantly shutting our ears to stuff.

There, you keep your ears wide open.

No sound is insignificant and people going pig hunting, for instance I was surprised.

So, oh, the pigs are over there.

The monkeys have just seen them and the monkeys are making their calls, which they use when pigs are on the ground below them.

So we know the pigs are there and there is some fruiting trees over here.

Let's go over here.

We'll create our ambush.

So the forest stings to us in a polyphonic.

So if we want to speak forest, we need to sing back polyphonically to the forest and so the form of song is these yodeled polyphonies and when the group comes together and they produce this yodel ponding beautifully, forest spirits come out of the forest, these leafy characters who dance to the songs that the people are singing and it's a

very beautiful experience and each one produces a particular quality of joy and they have different names for these different qualities of joy.

But that community continuum is really something, the idea, there is a word for singing and there is a word for talking, but the idea is that communication is something that happens silently, it happens through words, it happens deceptively, it happens in ways that deceive one but don't deceive another, it happens in ways that groups communicate with one another, or one person communicates to a group, or a group of people communicate to the forest as a whole.

So communication there is something much broader than the rather limited way that we have with the very categorical distinctions between different forms of communication.

It's a continuum across a whole range.

Chris on Paradoxes

Chris: Okay. Now, in many ways, thanks to Noam Chomsky.

we all agree, all all scientists agree that every child human child is equipped with a kind of language instinct.

I mean, whether you call it an instinct or not is up to you.

But it's certainly a child can at a very young age internalize a theoretical structure, which is just, I mean, among the most complex theoretical objects in the universe.

It's like linguists haven't even worked out really in any real detail the grammar of one language, but a little child of two or three, hearing a few sentences from this ambient language, it will internalise this extraordinarily complex theoretical structure as if it knew it already, as if it knew the basics.

already and this is what Chomsky means when he talks about universal grammar.

It seems to be an instinct or a part of human nature, this ability to internalize within the head somewhere this theoretical object.

That's very puzzling because if it's some kind of instinct or innate capacity or language acquisition device is what Chomsky calls it, it's puzzling because when you take other instincts, like, say, the sex instinct, Well, yeah, chimpanzees have that, orangutans have that, we've got sex instinct.

If you take the maternal instinct, okay, yes, we understand that.

If you take, I don't know, all sorts of different instincts, we can see that our versions of those instincts have got evolutionary precursors.

So, where does the language instinct come from? It seems to come from nowhere and so I have all sorts of difficult arguments.

It's like you'd need for an instinct to emerge from nowhere.

You'd need millions of years.

But if the language instinct emerge in our species like two or three years ago, it's very odd because there's absolutely no evidence.

It doesn't look as if humans were speaking at that time at all.

If by language being the kind of thing that produces the rest of culture, it doesn't seem to start till much, much later.

Half a million years ago, obviously depends quite how you define things.

So where the hell did it come from? And if you have a late date, it's too late.

If we just say, OK, maybe when we first find archaeological evidence for symbolic culture, that's nowhere near time.

An early date was— so we just have these paradoxes and I could— Joanne suggested I go through the seven paradoxes of language evolution.

We don't— we don't have time.

I'll just tell you very quickly the answer, if you like.

The language instinct is a version, a particular version of the instinct for social play.

It's the play instinct and all animals, I think even reptiles and fish apparently have some kind of play instinct.

Play is kind of symbolic.

So just think of two chimpanzees, two monkeys perhaps have engaged in fighting, play fighting.

So what happens is that, oh, you would just go to the park and watch two dogs.

You've got a big dog and a little dog and the little dog rolls over and it lets the big dog bite it.

But then the thing rolls get reversed.

The big dog knows that if it doesn't take turns to be rolled over by the little dog, the game will stop.

But so one dog would bite the other one.

But it's not a bite, is it? It's a pretend bite.

We might call it a nip and I won't go into all the details, but a nip is almost a symbolic bite.

It's a sort of false bite.

It's a bite, but not really.

It's a bite with a minus sign.

It's only pretend.

So already in play, in social play, we have a sort of elementary principle of something like symbolism, like a not really, which is what symbolism is.

I use the word falsehood sometimes just to emphasize the difficulty we have with it.

So somehow this play instinct that was going to take the form of not just language, but you can argue that the whole of everything which matters most to us humans, well, I mean, when we fight wars over flags and when we, I don't know, all sorts of things, it's a symbolic domain.

It's as if the whole of our societies as adults are sort of subject to the rules of a kind of game.

Like for example one of the things that anthropologists study, classically used to study, is a kinship system.

Kinship is like you have biological kinship, genetic kinship, how closely related people are genetically to each other.

But that's got nothing to do with the kind of kinship that antibiotics study, which is the way in which sexual relationships, relationships between parents and children, and so on, are subject to the rules of a kind of game.

So it's as if play, in the human case, has embraced the whole of social life and the paradox there, as Jerome's just suggested, I at least mentioned a little bit about sex.

What tends to happen with non-human primates, the creatures that most closely related to us genetically, is that while when you're young, when the chimpanzees are young, they play, what tends to happen, there are some exceptions and it's all rather more complicated than I thought at one stage.

What tends to happen is that when the hormones begin to rage and two chimpanzees have been playmates fighting each other in a playful way, what happens is that suddenly one chimp feels, I can't afford to lose and because sex is at stake.

In other words, your genetic future is at stake and then suddenly this playful play fight suddenly goes nasty and one chimp is biting another, chasing another, and the play stops.

So to an extent play is confined to early years of life, doesn't get into adulthood, and therefore it's obstructed from enveloping society as a whole.

What's happened in the human case is that somehow play Instead of being subject to termination as a result of sex in our case.

Play actually has managed to turn the tables and embrace even that most difficult thing to subject to rules.

It's nothing more difficult for humans to subject to rule rule than sex.

Sex is an instinct which tends to break all the rules unless we're very careful about it and help each other.

So we all know that.

So somehow.

You know, even sex, which normally would dissolve play, has become subject to rule, and we call that a kinship system and so many other things.

So how that happened? Obviously, that's another whole debate, but it's something to do with my joke.

It's something to do.

Okay, I perhaps I'll just end here.

If females, let's say female chimps, are behaving in terms of sex.

in ways which are individualistically competitive, so that females go for the more dominant, aggressive male.

A male who's going to have his genes in the future is going to be the dominant male who's good at fighting, who's good at grabbing hold of females at the right time, getting rid of his rivals.

Can you see what's happening? If that's the game being played, you can see how The rules of the game are gonna be set by the females.

If the females are setting those rules, they will go for the more dominant males, the more aggressive, the more assertive ones, on the basis that their little babies themselves will be successful when they grow up.

The males don't have any choice.

Every male is gonna have to play that game.

Somehow, for the game to be completely changed, the females are gonna do something different.

They're gonna make it fairly clear to the males We're not going to just have sex with whoever is the most violent or threatening.

If you want sex, you're going to have to behave and as we became increasingly involved in hunting and gathering, what did behaviour meant? It meant females signaling to males with their bodies.

Yes, we like sex, but we want males to be helpful and being helpful means, yes, we admire your violence.

We like males to be muscular.

But please, will you use that violence against the against the zebras or against the elan or the other animals? Don't use it against us.

So somehow females had to develop a solidarity sufficiently to be able to say no to sex as well as yes to sex and to say to give out that no signal collectively, the message being Yes, sex would be nice, but first of all, go out, all of you, go somewhere else, go and find a zebra and bring it back and you'll think about it.

That's something nice.

So we're arguing in our book that the world's first word was something like that.

It was a no.

It's like the first word was spoken by a woman and it was no.

But that woman wasn't on her own.

She was part of a chorus and the very same chorus that Jerome's just described being used by women to keep away the lions, on occasion, women would need to chorus to keep away an equally annoying, threatening danger, which is males of their own species being a nuisance, wanting to harass you, perhaps even rape you.

No means no, and you signal that no by singing and I don't know, we'll need to stop because otherwise you'll have gone all night.

The main point really is that in Eva language I have set up, I was just astonished at the way in which the people involved in it, most of the people involved in it, thought you didn't need to learn anything from hunters and gatherers.

There's almost no, over all these years, of all the books piling up on the original language, the amount of hunter-gatherer ethnography It's almost zero.

It's like, why would we bother to listen to hunters and gatherers? Well, I think you in this room here will have understood from what Jerome's saying.

They can teach us more than anybody else.

If you want to know how language evolved, don't go to college students and ask them to tick little boxes.

They haven't a clue.

Any city builder won't have a clue.

But hunters and gatherers, they know how hunting and gathering works.

they're much more likely to be intelligently informed in so many ways.

If you say that, I mean, what makes us human? You know, if it's violence, many males are going to be better at it.

But it is true that the human female isn't very good at one thing, and that's violence compared with males.

But being violent, I quoted that thing from that amazing anthropology of Pierre Class, violence is the opposite of language in order to open up a space for language.

Sexual violence, above all, had to be ruled out, and only women could do that.

They did it by singing and one of the chapters of our book is all about how singing involves kind of two things.

It's like singing always involves lots and lots and lots of synchrony and repetition, but it's variations on a theme.

If the repetition was too monolithic and unchanging, it would just get boring.

this the repetition has to go through through variations and it's the variations which turn into um which are the variations themselves aren't costly the singing is needs time and energy the varying between one style of singing and another can be done almost with a flick of a switch and after that um if you like switch flicking between one part of a song and another um comes this strangely digital method of communication that we call language.

Thank you very much.

Now, one more thing is you might be interested in how in seeing a bit of film from Booth Parry to say the kind of performance that women would have mounted to signal no and to speak the first word and so I think we'll have an illustration of Goku.

Camilla will put on again.

I perhaps need to warn you.

This.

This was.

This was filmed with Jerome's support by Bruce Parry.

When Bruce Parry finally put his film on the cinema screens.

This was all censored.

You can sort of understand why.

But I have got no sympathy or patience with it.

It's like this, this, this is it.

It just didn't get through the BBC.

Censorship, all the others, and you could sort of see why, because This is an illustration of patriarchy, women's power, but you'll see that it's for real.

These girls and women know what they're doing.

It's a brilliant form of sex education for girls and boys, and it's designed to get males to understand proper behaviour in the most important area of all, which of course is sex.

But anyway, have a look.

Film Clip

Jerome: By not wanting much, you can quickly achieve affluence.

If you have unending wants, then you will have great difficulty ever achieving affluence and so hunter-gatherers feel contented with much less.

than we do, because those are things which are readily available to every individual in the society.

It's food, it's companionship, it's song, it's these basic things which human beings need to feel fulfilled, to feel happy.

Ingrid: And if feeling good could be achieved through a different way of being in the world, through really deriving joy by Seeing someone else being happy too, and not just you yourself, but actually wanting to create the happiness that you feel in everybody, wouldn't it be so much more desirable?

Bruce: Of course, people would say that within our own small groups, we are doing that still.

I am happy because my best friend is happy.

I am happy because my girlfriend's happy.

It just doesn't seem to extend beyond a very small group.

But what you're suggesting is that this is actually a universal thing.

that can happen in a much wider society.

Jerome: Well, it won't happen just effortlessly.

It will only happen through work and effort and that's one of the lessons you get living in an egalitarian society, is that you need to work to this.

You must be really strong in resisting hierarchy, showing off, hoarding, all these things when they start to emerge.

Bruce: So how do they manage to maintain this balance so effectively?

Ingrid: I think it's mainly through women.

Women really give that balance as the bringers of life.

Bruce: But you're not saying the women are in charge, they're just...

Ingrid: Oh, no.

The Benjele women that we live with, in a way, periodically, they assume power and they relinquish power.

Bruce: Okay.

Ingrid: In order to put everybody in their place so that there is proper sharing and proper respect for each gender's contribution to life.

They do that by an activity they call masana, that is play, playful play, singing and dancing.

Because when you hear music, you become happy, you become softer, you become more willing to share, to be generous, to be kind.

It enchants people to bring out the best in them, to celebrate that oneness.

What do you mean by that? this is the difficult thing to describe.

Jerome: It's the business of Masana is to turn a group of individuals into a cohesive group of experience, of consciousness that expands beyond the individual and it's difficult to describe unless you actually participate in these sorts of things.

Ingrid: And it's done also to entice people back into a better kind of behaviour.

It's done very humorously.

It's not, you can't really go and say, oh, don't do this, do this.

It's done with so much humour to show people it's actually rubbish to behave like that.

It's silly, it's not necessary.

Yeah, They have something that we all long for.

We really all still, I think this is why you are here as well.

You're looking for something and it's something so sweet.

It makes you feel so sweet that you feel you found something of that, we have lost.

Jerome: And the drama of everyday life here is just so exciting.

I mean, you see life, you see death.

Someone dies, it's there in front of everybody.

Someone's suffering and really sick, it's there in front of everybody.

It's not put away, compartmentalized as we do in our society.

Ingrid: And you're never alone.

It is that, you are carried by the community.

No one, if you are sad, Even if one member of the group is sad, immediately something will be done, because they know if even one goes down the drain, the whole group will go down the drain.

That sense of community, of being carried, however you feel, at any stage, that I think is phenomenal.

Jerome: It's a way of losing yourself, especially if you come from the West.

We're so focused on the importance of me, of my individualism, my career, my this, and my achievements, my.. and then what happens here is that suddenly all that my stuff, give it a break, and then just join in this group and they have verbs like mix your bodies up, mix up your bodies and when you do these rituals, you don't sit, separate, you mix up your bodies, you lay bits of you over each other, you hold each other and as you start holding each other and then you start singing these overlapping melodies together, where you're singing one part, I'm singing another part, Ingrid's singing another part.

Suddenly, that minus is lost in this us-ness, and in that us-ness, it extends to the forest, and you get this big us-ness, which is not divided anymore, but to just start to connect into that multitude.

Women singing: ...making love, making love, making love... How is the penis? Is it strong? No it's not — it's useless! Making love, making love, making love...

Group of men being interviewed: When the women dance, it makes us men happy. When people sing and dance, it brings joy to the world. We don't feel any anger about this. It makes everyone happy.

Women singing: The owner... wibbly wobbly, wibbly wobbly goes the owner, goes the owner. Like the millipede stumble goes the owner, goes the owner...

Bruce: I feel it inside as a man. It's powerful coming from the women.

Group of men being interviewed: They are celebrating their thing. They are telling us how good we look as it swings from side to side.

Women singing: Look at his penis! He trembles, why? Making love, making love, making love...

Group of men being interviewed: When the women sing they insult us men a lot. We, the men, do not like that at all. But that is the way they do it, so we have to let it happen.

That's the world of Masana, we just accept it, that is the way the ritual goes, that's how Masana is!

Bruce: And is there a male response to this?

Group of men being interviewed: Once the women have don Ngoku, it is time for the mens dance. Edjengi. We won't refuse them or stop them when they dance like this. But when it's time for Edjengi, then we take over. It's Edjengi. Not us! When the spirit of Edjengi dances, we are going to the roots of our life, to the beginning of the world.

Bruce: The Benjeli women say that Ejengi represents the spirit by which they became pregnant before the time when they invited the men to join the group.

All the spirits used to belong to the women in ancient times.

Beponga said that the women should give this very strong spirit, Edjengi, to the men so that the men can keep it as their own.

The women said to the men: "Take these spirits and keep them." Because the spirits were too painful for the women.

That is why they gave them to the men.

The women refused to keep them.

Once the men's spirit is awake, the women sing to him.

It is not like the women would refuse to sing for the men's spirit.

There are both men and women in the world.

Right? (laughs)

Jerome wonders if this is a reenactment of the moment when the women rejected the alpha male and invited the other men to join with them, the beginnings of human society.

The men need to keep him under control and away from the women so that all can live together.

No chiefs, no shaman or leaders of any kind, but men and women playfully but seriously working away to maintain balance and respect for all.

This extraordinary way of being, I'm told, is not just limited to small isolated groups, but extends out and overlaps with hundreds of thousands of people and communities across vast areas, and very possibly our shared human ancestry.

We people all live in the forest, and we share it with everyone else.

So we must share, everyone, so that we can continue to live together.

If you find something to eat, everyone needs to take advantage of it.

So when you come back with your food, you give a piece to everyone, so that everyone can be delighted with you and eat.

It's not like you can eat a lot on your own and then show off when you become stronger. No. It's not like that. Everyone needs to eat.

If you see that your family is lacking clothes, you must give them all something to wear. If you see that this woman doesn't have a cooking pot, you must give her yours saying: "Take this cooking pot and cook your food with it."

It's all about love. Love. We, the Baka people, are like one big family...

Every member of this community takes their part in maintaining the balance.

If one person tries to show off or get out of hand, like a man claiming to be a better hunter, then the other men would simply remove his weapon, and the women refuse to cook his meat.

The power of these women is really evident, accentuated by their being together, their solidarity in the public space.

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