

The expressive chimpanzees of Fongoli (Seminar)

Kirsty Graham

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Kirsty Graham (St Andrews) will be talking about her recent work on primate gesture with chimpanzees at Fongoli and bonobos at Wamba:

As someone who has spent 10 years studying primate gesture, I was (pleasantly) shocked by my research trip to Fongoli, Senegal. Here was a small cohesive group of Western chimpanzees waking up, walking onto a flat open plain, and socialising. I could film everything, from approach through to communication, response, departure. In this talk, I'll share some of those videos and insights from the Fongoli chimpanzees – highlighting the necessity of collaborating with others and visiting different primate communities. I draw comparisons with my experience of bonobos at Wamba, DR Congo, particularly around female behaviour and play. It is only through these kinds of direct comparisons and opening of research spaces that we can start to uncover the diversity of primate behaviour.

Dr Kirsty Graham (they/she) is a Research Fellow at the School of Psychology & Neuroscience, University of St Andrews, studying how primates use gestures to communicate.

<https://www.youtube.com/watch?v=Z9apqDnJzU>

Good evening everybody. We've got an absolutely amazing lecture lined up with Dr. Kirsty Graham, who is a research fellow in the School of Psychology in Neuroscience at St. Andrews. And her study is a, an extraordinary, in-depth research on the meanings of chimpanzee and bonobo great ape gestures, in fact, which has been an ongoing project for many years and Kirsty has experienced with a number of different primates, which I hope she's gonna be, telling us about, which she's got this, extraordinary collection of films, which, what nobody else has ever seen or practically we're. We are, it's curated Through this group, The world, the world premiere of many of these films of an extraordinary chimpanzee community here, in Senegal, FGO chimpanzees that I'm gonna hand over to Kirsty to stand in the right position so you can see it.

Hi. yeah, so this is the first time I've given this talk, so it's going to be as much a surprise for me as it is for you. I spend a lot of time thinking about how other species communicate and how they understand one another and how we understand them and something that becomes apparent quite quickly is how important context is, right? Like they get so much information from context alone before communication is even layered on top of that and I was thinking about how often in scientific communication we lack that context. You're reading papers about chimpanzees, about this very specific behavior that they're doing, and you miss all the context of what they're like everyday life is like and so what I'm hoping to do today is to give you a sort of overview of a day in the life of a chimpanzee at Foli to share some of their, like everyday behavior. Some of the cool, interesting things that they do, do a lot of show, a lot of photos

and videos to really like sink you into their world so that the next time you pick up a chimpanzee paper, you're like, oh, yeah, I can picture what their life is like.

So my day starts at around 4 45 to 5:00 AM we start walking to the nests at around five 30, to where the chimpanzees were sleeping that night. at Fungo, I was there in the dry season, and it's quite open.

There's these nice trails that we walk along, and we go to the closest place to the nests and we listen for them.

So there's, can't see them very well, but There's Chimpanzees in the trees here. And you can, we just find where they are.

We know where we left them the night before, and we find them by listening to them as they start to chorus.

So this is what the Fungo field site looks like. fungo is located in the southeast of Senegal, right near the border with Guinea. it's, a 10 hour bus ride from Dakar to cgu. and then we live, just outside of town, in a research site so that we can walk directly into the see the chimpanzees every day.

The habitat type is this Savannah Mosaic habitat and so you have these really open planes.

This was what it looked like just as I was leaving, as the rains were starting.

So the grass was just starting to grow again and there's all of these like volcanic rocks, termite mounds, scattered across these plains. and there's smaller patches of, short woodland and some like bamboo forests as well.

So the chimps are really living in quite an extreme environment for a great ape.

The temperatures reach up to well and beyond 40 degrees Celsius during the dry season. They have quite limited access to water, and they're navigating these like patches of shade and food, amidst these like bigger areas of, open plain and then we have the chimpanzees themselves. And this is Cy.

You can tell he's a very pretty chimpanzee.

He's got almost a bonobo brow line. so yeah, very, very handsome.

He's the highest ranking male at Fungo at the moment. in this group there are, nine adult males, 10 adult females, a bunch of adolescents, juveniles and infants as well. And they're quite a cohesive group, and that really struck me. during my time at Fungo, I spent a long time working with Bonobos, and they are really well known for being quite cohesive.

So you would see almost all Bonobos every single day and then I went to work with Eastern Chimpanzees for a short while, and you would see like one chimpanzee all morning, and then like you might meet up with four other chimpanzees, and they would really split into these smaller parties and they would come back together into like big communities.

But what struck me at Vango was that we were seeing this group of chimpanzees almost every individual, almost every single day. And maybe for a day or two, they would split into smaller parties, but their ranging was really cohesive and that struck

me as something that was quite like bonobo like, and, and really interesting about them.

So when the Oli chimps first wake up and come down from their nests, they come onto these open planes. I turn the volume up, but there's some screaming hair. It gets a bit heated sometimes. They, come up to each other, they greet each other, they travel together.

That video is a really nice, example of some synchrony. but they start to like greet each other. They're very, they come into close proximity and they'll set their direction of travel for the day. as you can see, the visibility at Fungo li is incredible for filming. this was something that was really striking for, again, for my research, having focused mainly on, rainforest dwelling bonobos and chimpanzees before, where you're filming and you can kind of hear that something's happening and then you get your camera out and then you can't really see what happened at the start of the interaction.

But then you have two Bonobos in front of you and you film a little bit, but then they're off again. And here filming at Fungo was very, like, you could see these two chimpanzees approaching from a distance, greeting each other, separating again, and see like this whole interaction and I think that was really, I think it's a really special thing about this field site and about a lot of western chimpanzee field sites is the visibility and your ability to see, like, the whole interaction.

So as an example, here is a beautiful greeting behavior that I filmed on my first day.

So we have Cy walking up there, and he's gonna approach Lily.

Lily's got little baby, but he puts his hand into Lily's mouth there.

So it's really vulnerable to put your hand into another.

Like they have big teeth and strong jaws.

It's quite vulnerable to put your hand into another individual's mouth.

Lily then puts her hand into side's mouth, and then she's gonna lean in and kiss him on the face. And then she hold, she reaches through and holds his genitals.

So like they're interacting with these really like sensitive body parts, right? Like they're putting their hands in each other's mouths.

They're like kissing one another on like, on the face and mouth.

They'll like touch each other's genitals.

It's really like greeting behaviors are really interesting and like affiliative behavior is really interesting in like the way that the chimpanzees make each other vulnerable to one another and I think that's something that really comes across in these greeting behaviors. I have another example here of Mike.

and then Lex is grooming him, like grooming his back and then they stand up and they do this nice bpal swagger. And again, Mike has put his hand in Lex's mouth. Lex stands up and does a big arm swing.

So you're seeing like this is quite, they're doing like quite a lot of, let's see if I lighten this.

So especially as they start their day, they're doing a lot of these greeting behaviors. And I think greetings are, as someone who studies communication really fascinating and, for a lot, lot of different reasons. So we see a lot of greetings.

they, they combine these gestures. They combine vocalizations, they combine facial expressions.

It's like a very multimodal way of communicating with another individual and we find greetings in, all chimpanzee communities that have been studied so far and they usually occur when the chimpanzees are traveling together. So, or meeting back up after traveling.

So they're sort of coming together at the start of the day to set their direction of travel and move on.

Or they've been foraging apart for a little while. They come back, Hey, haven't seen you in a while. So it's kind of this, yeah, this way of like reconnecting, with another individual.

I think there's also interesting species difference here. Bonobos get, have a, a deserved reputation for being quite a tolerant, great ape species. But what's interesting, and I think something that I've talked with, Lorena Mooney as well, this comes through in her work a lot, is that Bonobos are very socially tolerant, but they don't do much to, to facilitate those relationships as much as chimpanzees do.

Chimpanzees are much more proactive in forming like these coalitions and these social bonds.

It's really like they're trying and they're putting in this effort to greet one another to reconcile, and the bonobos while tolerant and while they are able to like reconcile after aggression, aren't doing so in the same, like, in these same sort of elaborate communicative ways, which I think is really, really interesting and maybe speaks to different, different types of social relationships that are being navigated as well.

If we're thinking about this in terms of communication and thinking about what things mean, the way that I usually study meaning in gesture, and as well as vocalizations and facial expressions, is to see what happens afterwards. So like, what is the outcome after this? If I raise my arm, does another individual come to groom me? Like if I, extend my arm outwards, does another individual offer me food? In greeting behaviors, we don't have these obvious behavioral outcomes.

Often they're traveling, they communicate, they continue traveling.

There's no change in behavior and so I think this is maybe for future research, like a really interesting testing ground for different types of meaning, because it doesn't seem to be requesting this specific change in behavior that we see from some other more like imperative gestures.

if you want to do any further reading on greetings, I really recommend Rodriguez at all. 2020 twos paper, on greetings and Leaf takings in Bosu.

So that's another community of Western chimpanzees, in Guinea.

So they've woken up, they've greeted one another, they've come down from their nests. it's time for breakfast.

So around 7:00 AM they start climbing trees, looking for breakfast. often they'll climb up trees near where they've slept that night and they look for fruit to eat. they sometimes continue greeting each other and they're sort of eating, an abundance of fruit before, before they travel for the day.

I also get to eat my breakfast.

This was the nice breakfast at the guest house in Dakar. And my coffee, hot chocolate oatmeal is my regular Foli breakfast, as well as food.

Another challenge that chimpanzees at FGO have to face is water.

so I was there in the dry season at the, end of April through May. and there hadn't been rain for several months at that point. the area that the chimp that the fungo chimpanzees range in is really close to The Gambia. So that's this river and I could see on my g p s like tracks that for this period, they were in this like very particular range except for this one long arm when they would walk out to The Gambia and then come back and they're sort of picking, I think it's interesting how it affects their navigation and their like choices for travel, this need for water, where they may sometimes be going directly to a huge source like this river or looking for smaller like springs like this.

There's also a lot of mining in the area of like artisanal mining and for the artisanal mining, the miners dig holes like, like wells for water and the chimps will actually climb down the wells and drink water from the wells. So this is an ongoing project, led by Katie Gerstner who is looking at, water quality and I think like it's really interesting here to think about the chimpanzees need water. and the question is then around like, are they selecting, water of a specific temperature, water? Like what, how does the water that they are drinking affect their microbiome? There's so many questions about how like their need for water drives them to make choices, that may then affect their health.

So we've had some food, we've had some water, and it starts to get really hot. As I said, it reaches over 40 degrees, so by about nine or 10:00 AM they're looking for somewhere shady to rest and groom. so often they're sitting in these really shady, like dense, shady patches, and I'm just like out here in the sun, cooking.

Sometimes you can't see where they're, where they are 'cause it's so dense and here's a chimpanzee actually inside a cave and you can see they're in a smaller cave here too now. I mean, nothing while they, get to rest in the cave.

So they will spend these long periods throughout the day resting.

I would say as a researcher, most of my work is happening from like 6:30 AM to 9:30 AM and then they'll rest almost until like three 30 or 4:00 PM And if they're resting somewhere, I can see them.

That's kind of nice. I can film the infants while they're playing.

I can film little bits here and there, but when they're inside the caves, you can't see them at all. But it's incredibly, incredibly cool and they go inside these caves to thermoregulate. they, there are a couple of chimpanzee communities in this area that use caves.

there is a specific, so this is a viewing into one of the caves and the entire group of fungal Lee chimpanzees can fit inside this cave, which to me is wild, right? You have this group of like 20 adult chimpanzees sharing space inside a cave.

Like I think it just like, it, it, it drives home the need to maintain those social relationships because you are with your closest friends and family and rivals in a very small space and they are inside these caves to escape the heat. they use the caves more at times of year when the temperatures are higher and the water availability is lower. so they're, they're using it to thermoregulate. lactating mothers will use the caves more than non lactating mothers or males.

So their, physiological state is also affecting their cave views.

It's really interesting the way that they're, that they're adapted and, responding to high temperature and low water. it's, yeah, I don't know.

It's chimpanzees at the edge of what is possible for chimpanzees to survive and they're doing really, really cool stuff.

there has been some cave use documented in other communities.

for example, in Maha in Tanzania, the eastern chimpanzees, have been observed, licking cave walls to get minerals.

so there's sort of an interesting relationship there between chimpanzees and caves, although mainly the most well-documented cave use in chimpanzees does come from chimpanzees in this region of Senegal. and if you would like to read more on that, this Tel and Pruitts paper in 2020, is expl goes into more detail about how lactating mothers, will differentially use the caves.

So, as I said, when they're resting, sometimes they get to see them and it is a perfect time for them to play. they're climbing this bub here and they play with water and with other objects we see age across, oh, we see play across all age groups.

So these are two adolescent females who have recently immigrated to the group and this chimpanzee running away and being chased is si this is the highest ranking male chimpanzee. and he's being chased by an adolescent male mustache. So I think like, again, I bring it back to Bonobos who like have this reputation for being super playful.

My impression in like this short time at Fungo League was that I was seeing much more play in adult chimpanzees than I was like among each other than I was in Bonobos. and I think that part of it is that the Bonobo playfulness reputation comes from a lot of captive research. but I also do think that, like western chimpanzee populations are underrepresented, in the play literature.

so I want to come back to Sai. as I said, he is the highest ranking male, at Fgo League.

Here he is sitting in a nice pool of water. so this was after the rains had started, and near the cave actually, there are these big pools that form and the chimps will sit in them and drink the water play splash about in it. SSAI is only now 13 years old and is the highest ranking male at Fungo and I had some really interesting conversations with another researcher who was visiting from N Gogo who thought that Dawson should be the highest ranking male.

Dawson is a huge chimpanzee.

He is very socially competent.

He has quite a lot of allies.

He seems like he should be in that top spot and when I was there, he was challenging s for the top spot.

Can anyone guess why Dawson cannot take the top spot from Ssai Father? Hmm. Father.

Father, Sorry.

Mother, mother, mother. Which is weird. So, SI's mother Timbo is the highest ranking female or one of the high ranking females and we saw several fights where Dawson would challenge and Timbo would chase. Dawson away would come to support her son, and together they would chase Dawson away and I think this is really interesting because we don't often hear about, female coalitions in chimpanzees. There was one case, so this is, Natasha chasing Dawson and Timbo is off screen, of two females forming a coalition together and supporting one another to chase away. and yeah, a high ranking male chimpanzee, very bonobo, right? so I, the study site, Womba where I worked, with the Bonobos, a researcher in Ako Takayama has done a lot of work on female coalitions there and among Bonobos, when females formed coalitions with one another against, male bonobo, they won a hundred percent of the cases that she observed and female coalitions just are, haven't been reported, in chimpanzees, but I think, well, I, I think so. Some work from Thai, from, Christophe Bush and some, or some work from the Ransom Moonie as well. Well, is is acknowledges female aggression and female roles in aggression.

I think this direct sort of coalition formation against male harassment, is maybe the next, the next sort of thing to look for and if anyone online knows papers, feel free to drop them in the chat.

I'm not saying this hasn't been done before, but, to my knowledge it's like, it's really unusual to see these kinds of coalitions, in chimpanzees.

So for my research in particular, I film the Chimpanzees and Bonobos, to understand how they communicate. There's Lex drumming on the tree.

they pant hoot. they perform really elaborate displays. Again, my boy Lex slapping the ground, throwing stones around. they use gestures like this arm raise. he's requesting grooming here.

and they also use gestures, vocalizations, and facial expressions in combination with one another in these, greetings as we saw earlier. And to communicate different social goals.

yeah, I, I don't think I can express enough like how nice it was to work at Fungo.

having filmed Great Ape gesture for 10 years, six weeks at Fungo, and I was like, this is the best footage I have ever filmed. What, what, where, why wasn't I here? This is amazing.

here I'm gonna show you again this video of Lex, so that you can see this gesture. So he is sitting, he raises his arm up, Lily approaches him, and he starts to groom her.

So this is like, this is my bread and butter.

This is like chimpanzee using, a gesture socially directed as another specific individual having checked where she is checked for her attention, performed this gesture, waited for a response. I'm really interested.

So this is how I generally approach, my studies in communication and so over seeing hundreds of different examples like this, I can then get into the meanings of the gesture. So in this instance, this arm raised gesture was, Hey, let's start grooming.

If I see more arm raised gestures that also lead to initiating grooming, we can consider that as one of the gestures meanings.

I was incredibly intrigued.

This is my favorite video.

I hope it's gonna be bright enough for you. this is a gesture type that I haven't seen before in a very specific context. So here we have Tara Farra.

I wonder if we should Turn the lights off for This one. Turn the lights right down.

She is, I don't want to rob you of this beautiful, beautiful video Back with the Dark. Okay, much better.

So Farra Farra approaching Mike, she puts her hand over his mouth and snarls at him, Snar and then she runs away and sits like two meters down this tree and then four minutes later, she comes back up again, puts her hand over his mouth, snarls at him, and she does this until eventually they copulate and it is just like, I haven't seen Mother Chimpanzee do it.

Farra Farra is one of the older females at fgo, and she is using like a very specific gesture or gesture that seems specific to her in combination with this facial expression, in, yeah, in, in a way that I hadn't seen before. and I think is really, I don't know, I call it the haunting of Farrah Farra. She just, she haunts the males until finally they have sex. and it's quite a strategy. So the next, oh, we can see far again. so th those are gestures. We, you also might have heard of some of the displays that chimpanzees do, particularly these Western chimpanzees. and I'm gonna show you a couple of videos now of their rock throwing display.

So this is Jumpin picking up a rock.

He's gonna do a nice run for us and throws it down at the ground there.

I'm gonna play it again there. It's really interesting. And I think the abundance of the, this like particular type of, rock, means they're incorporating it into a lot of their displays and again, because of the amazing visibility, you can film all the way through the start of the display and get these really long sequences where they'll come, they'll pick up a rock, they'll throw it, they'll drag a branch, they'll pick up another rock, they'll pick up another rock. They come in like drum on the buttress of a tree, they'll shake some branches, they slap the ground and you see this huge long sequence, in these like really elaborate displays that they do. and I think, yeah, you can kind of get a sense of it here where they're combining.

He's been leaf clipping, he's pant tooting, he's running, he throws the rock down, he runs off, he shakes a branch.

He continues to pick up and drag a branch as you go.

They do like these really long, yeah, elaborate displays as they go.

here's another example of Dawson, the big bey chimp. And he is picked the biggest rock he can find, And he's gonna roll it directly into this pool and then he goes up and has a little flick of the branch there. But yeah, this was also, this was, so this is the pool that emerges after the rain, the one where Sai was sitting in, in that picture earlier.

So it's really interesting the way that they're, I keep using the word interesting. It's all super interesting. They're using, they're using rocks as part of their display. They're using branches, they're using tree trunks. here is a drumming display by Lex who's gonna panto and approach this buttress and on this particular day, Lex was traveling.

So he had been in a small group, with Sai and Pist and Farra Farra, and they had been sort of termite fishing and hanging out and then Lex in at this moment is traveling towards the mines where he later goes to drink water. And as he goes, he is drumming on every single tree he can find.

I think he drummed on 11 or 12 trees on his way to the mine. The others didn't follow him, but in some way he was like signaling, and displaying as he traveled.

and you do see that with buttress drumming, where sometimes they're used, in, in elaborate displays that include like lots of different elements.

But then sometimes, they're used on their own or with a pan toot, as a signal, while traveling for like group cohesion.

And, and so you can see that the chimpanzees at Foli are throwing stones and they're doing buttress drumming, but they don't seem to be doing this other really cool behavior that I thought I'd introduce, if you haven't heard of it already, which is used by this community in boa in Guinea bi sal, where they will take stones and throw them at buttress roots.

So in this particular community, they will take the stones and they are specifically choosing trees, with like a resonant, timber for them to, for this like, it's called cumulative stone throwing.

Because the whole community of chimpanzees over long periods of time, enough chimpanzees throw a rock at the same tree, they start to accumulate at the bottom of it. so I think that's, you can see that there's, there's like cultural variation that I think we're starting to see here, where some chimpanzee communities might be stone throwing, and buttress drumming. Some are doing a combination like this. the displays and the communication may also have some like intergroup or cultural variation come at me later for it.

So I mentioned termite fishing and when it starts to cool off in the bit in the afternoon, the chimps start to look for more food. Termites is a big favorite.

Here is Tessa. She's picked a stick and she strips the leaves off it there, Ava doing the same there. So they'll pluck, these sticks, and they strip the leaves off them entirely and they use them to fish for termites. and they will, they eat a lot of termites. There

are, four species of termites that they eat at fgo. and they, the termites are mainly found in the woodland forest habitat.

So if you picture that like landscape image where you have the open plains with the little patches of woodland, the chimps are going into those little patches, to find the termites, and to also find the tools that they use to fish for the termites.

So they fabricate, they manufacture and they use tools. they'll select a specific stick, they'll strip the leaves off it, they might like bite or break the end of it. and they use them. This, Ava is poking her finger into the ground.

They'll often prod at the base of a mound and find somewhere where they'll then insert the stick tool and then just strip all those tasty termites off straight into your mouth. and the chimpanzees at fgo have a left-handed preference.

So we might be starting to see some evidence of laterality. in the tool use of the chimpanzees. I, I'm going to look, so that ground slapping display that Lex does in that video, he always uses his left hand to slap the ground and so I would like to look at their communication and the laterality that they're using for their gestures compared to their tool use laterality.

cause it's really like all of the cases of Lex doing that ground slapping display are with his left hand, further reading. if you want to know more about the termite fishing, I would recommend Bogart and fruit's, 2008 paper, on the ecological context, of Savannah chimpanzee termite fishing.

So you've had a long day, you've woken up, you've greeted everyone, you've had some breakfast, you've traveled, you've played a bit, maybe got into a fight, done a lot of communicating, some displaying, some termite fishing. You're tired and it's time to make your nest.

So at the end of the day, usually between five 30 and 7:30 PM the chimps to climb up into the trees and start to make their nests. Really, you're looking at your clock at five 30 and you're like, come on, it's almost time and they find a nice comfortable place and they're folding in these branches.

yeah. j sleeping, this is one of my last nights with Olli.

This nest is about three meters off the ground.

So they're actually nesting quite low and part of that has to do with the height of the trees at Olli. it's a much shorter canopy because of the forest type. they also have, they may have different like predation, risks that allow them to nest in at different heights.

so for their nighttime nests, as I said, the fungo chimps have a, a nested a lower height.

There are some chimpanzee communities that will sometimes nest on the ground, which is a big puzzle. Obviously gorillas do nest on the ground as well, but most chimpanzee communities will nest quite high up in the trees. Bonobos as well. there are some cool temperature effects actually where, in cooler temperatures, they'll choose, like they'll construct their nests slightly differently. So it, again, like these chimps are

doing so much thermo regulation, like getting somewhere cooler when it's too hot outside, like building a nest differently on a hotter night than on a colder night.

They're doing a lot to like, keep themselves a comfortable temperature to keep themselves hydrated. as I'm always reminding my child, and there is this really nice research, Jill PRSs stayed out with the chimpanzees at night to see what they were doing.

Again, with the thermo regulation, the fungo chimpanzees on hot nights will sometimes feed and socialize well on hottest days, the hottest times of years.

The night's obviously the cooler part of their available time and so they'll get up, they'll feed, they'll do some socializing.

There is some nighttime like nocturnal activity among the chimpanzees, which is very, yeah, very cool and I would love to spend a night seeing what the chimpanzees are up to.

there is, so the further reading I suggested for this was that, Stewart Al 2018 paper on the temperature effects, for their nest building.

So we've taken you in a full day in the life of these fungal lee chimpanzees.

the kind, this kind of research wouldn't be possible without, field site, leaders and managers such as Jill Pritz and Papa Inot and Dia, who are the, heads of the fungo, research site as well as all of the fungo research staff, among them, Johnny Michel, Jacque Remi. many thanks to my, PI Kat Hoer, in St.

Andrews and to all of the Wild Mines lab, and to the E R C for our funding. I do always give a shout out to the animal behavior collective at the end of my presentations. this is a collective of researchers and animal behavior, and we give money, we take money from, from researchers and we give the money to students. and we connect, researchers with student mentees. so if you are a student and you need a micro-grant for anything from groceries, to rent, to childcare, something that your university doesn't normally pay for, you can apply for a micro-grant of up to 200 pounds. and if you have some spare cash to send us, we can send that on to students. so thank you very much and Lex will now take your questions. Hi.

Yes.

I also Lex, so I feel very, I was just wondering, like how, how close were you to the chimpanzee and did you feel like safe and yeah, like what was that like being that close To them? Yeah, so these chimpanzees have been studied for about 20 years.

and they are, so when we study great apes, they go through a process of habitation, where decades ago it was done often with provisioning. So there were field sites that would, leave food out for the chimps, and get them used to humans in that way. Now, the habitation process we do by slowly, following them, and so like, spending more time in their range, starting to like follow them from a longer distance and then you slowly decrease that distance. The, chimpanzees at Fong, different field sites have different regulations on how close to approach, the individuals. At Foli, it was no closer than 10 meters with a recommended distance of 15 meters. And often, and I mean, often you're quite a bit farther than that anyway, if you're standing in like your little patch

of shade and like looking at them in their little patch of shade. yeah, so you're there about about 10 meters away most of the time.

and I think that like, I have felt more uncomfortable around Maccas, in terms of like being uncomfortable and afraid that I might get like hurt by an individual, by like Maccas that are really habituated to tourists who feed them and so then you'll have them approaching you and try to take things off you. where these chimpanzees, they like, they habituated specifically to the research staff and to new researchers as we come in. and they're kind of disinterested in us. We're not, we're not interesting to them. Yeah, yeah, yeah.

Good question. Do they have stereotypes? Yes. Kind like as in specific behaviors that each of them do? Zoom Here the question, sorry, the zoom people May not Ah, yes. The question was do they have stereotypes? As in I think you partially answered with the researchers that, that that they, that one, they have a view of what people should do. Mm and then if people deviate from that stereotype, they get, ground up or Hmm. I'm not sure whether they have stereotypes among themselves.

I was thinking, I guess particularly about like idiosyncratic or like personality behaviors. I think there may be something, there may be something like, like social norms, I guess you're getting at that there's like an expected response to this behavior. Well, where I get it from is that I did a project with Palo Palo Deer in a public deer park. Yeah. They have a very fixed view of what people do.

I think people walk down the path and do that, but, they're fine and they just carry on feeding. If you walk off path, you walk towards them or they think they've seen too much of you that day, then you're breaching the stereotype and they, Yeah. Yeah, yeah. Yeah.

I think they do have expectations and they have expectations of like different things in the environment, right? Like they learn that, like you hear the sound of a motorbike, you probably want to move away from the road because there's a big scary vehicle coming from it. So they do, I think they do associate, they do have those different associations, with particular Yeah.

Like groups, like particular objects or, or people in that way.

Yeah.

okay, Chris, I'll just get the zoom questions.

Absolutely amazing. Wonderful. talk and presentation.

You demolished so many I if they've called stereotypes.

It's certainly six, six people think, ah, everybody knows that about, Chi.

So I'm just thinking that that that's a book this marvelous book, mothers and others by Sarah Hery starts whole book by saying, imagine being in an airplane with a whole bunch of chi.

You'd have your hands and toes all bit off and he just told him you the entire humidity in a dark ca and, of course friends and rivals and everyone's getting on fine. I mean, it just so extraordinary and I suppose you must be thinking that there must be an explanation as to I mean maybe in other areas, Gombe, perhaps Sarah had his

observations would be, would be correct. and I also thinking about play, I I've made a huge mistake in things I've written. I thought that, the wonderful thing about humans is that we, we don't just play in childhood.

That our childhood play equipped us for a life of playful engagement with symbolic culture, narrative, dance song, and all these z and adults adults play what as should as as as kids, but with Chip as ease.

They play until, until six comes along and then of course the play fighting turns into a real fighting and somebody's gonna lose. And the adults don't play with each other. And you, you've just pointed out of course that yeah, MGO actually the adults, I think you were saying, the adults play with each other more than they do among bon overs.

So there's so many things that I suppose you must be telling us some way. it must be ecology, it must be the subsistence of the environment that is responsible for these really practical behavioral behavior cultural differences. Yeah. and I just, one more thing of course is, is the, I mean, when I started doing all this stuff at u c way back in the seventies, there was man the toolmaker. Mm-hmm. And you're, you're pointing at it all the tool make you can do, it's pretty much all of it is female. Yeah. I mean, yeah. Mm-hmm. So, I mean, what exactly are the explanations for these things? Yeah, I, that's a big question. That Question did, how did much, did you hear on Zoom? All of it. Thanks.

Anybody? Did you hear that? All of it. Thank you. You did hear Yep, yep. Yes. We could hear, luckily you've got a big voice.

Yeah. I think, and I think that's kind of what I wanted to bring through in the talk, because I think we have an expectation of what a chimpanzee is. Yeah and like there is no chimpanzee. Yeah.

There are these like species and subspecies differences, among eastern and western and central chimpanzees.

But there's also so much community differences within like regions.

So within Eastern chimpanzees, there's differences across communities in sort of like how steep is the dominance hierarchy? how, how much do they hunt? Like how much aggression is there, how much grooming is there? There's, there's a lot of, there's so much variation. There's a lot of, there's so much community variation in chimpanzee social behavior. And that also changes, it changes depending on who the highest ranking individual is.

It changes over time.

So even the way that one community is at the moment might not be how that community is 20 years from now and so being able to share more of the context behind those papers where I think it's like, oh, well my chimpanzees don't do that. and like more collaboration across field sites where researchers get to visit one another's field sites to see different chimpanzees, to do longer term studies and to go back to the same community and neighboring communities year after year, it starts to break down this like archetypal chimpanzee and you see this whole like diversity of behavior. and

I think in some ways the fungal chimpanzees are special and so is like every other community of chimpanzees.

But in addition to the just louder variable, sorry. I mean, I'm just wondering, is there, in addition to just pointing out this huge variability, is there any like explanation for why in some areas the p m S seems to be relatively dominant? Others there not, I mean, are there any I mean, I, I mean, for example, I think there's a fairly good consensus that one of the reasons why the Bonobos to move south of the Conga River, why they became more female dominated is because the females were in a position to forage together. 'cause the food was more abundant. Yeah.

Whereas at Gombe is very sparse resources and the females have to keep Yeah.

You know, taking cabbage packs and they, they, they don't, And then you have different strategies in these sparks environments as well.

That's Yeah. Fun sparse, right? Yeah. And you definitely Fun and so you might expect like more competition for sparse resources and yet sometimes cooperating and managing like these social relationships as a group is, it's working for the fungal le chimpanzees. No, I think there, there are, there, there are certainly socioecological drivers to these behaviors. There's also, yeah, I, I think there, there is like cultural variation, in chimpanzee social groups. but I think yeah, the, they have completely different opportunities as well.

I think that also comes up, this sort of balance of, sorry, I don't wanna ramble. So jump in if you have another question.

But this balance of like opportunity versus need comes up a lot in thinking about that bonobo chimp difference, right? Like, Bonobos have plenty of opportunity to fish for termites, but do they need to? Sure. and so yeah, there's, there's, But the, these females are solving nutrition problems, not just with termites, but also the bush babies. Yeah. And so, so they, they've got all kinds of strategies there. Yeah.

Yeah.

can I ask some people on Zoom if they wanna ask questions? or we'll read out the questions. Noah, do you wanna talk or are you not able to, you wanna do ask question? I'm happy, I'm happy. Ask the question directly. Yeah, no, thank you for the fantastic talk. I was just wondering, given that the temperatures exceed 40 degrees fairly regularly during the dry season, from what you said, do you see an impact between that extreme heat and the communication between the chimpanzees? For example? Like are they quicker to anger in a way that kind of humans are during very, very hot days? Yeah. Aaron Westling did some research and found them to be like perpetually dehydrated. and I could, yeah, I, I think of how irritable I become when I'm dehydrated. I, so my, because I was only there during the dry season, I only have that to compare to. But I think that would be, yeah, that could be, I think, I mean, in a way, yeah, you might expect to have more communication during the dry season when they're facing more stressors and are having to maybe like socially like mitigate them. Where if you have an abundance of food, you're kind of just getting on feeding. but I would need to test that. So I may have to go back to Fgo.

Might have to, mark, did you wanna say something about the displays? You are asking question? Are you there? Oh, the question is how do you think rock throwing, oh, you there? how do you think the rock throwing select tree stumps with reverberate sounds relates to hunting for prey in trees? Or is it related to male, like lacking displays? Is that, is that what the males are doing with all that going on? Is it only males? Do those displays? Mm-hmm. Or do females? the females do also pan toot and drum. they do it less frequently, but in similar contexts.

and what was the question about, about the reverberant sounds, reverberant sounds related to hunting prairie trees. Yeah, I think they do, they do engage a lot with like hollow trees for different reasons. I don't, I haven't seen them like drum on trees during hunting as a way of like scaring out pre, but they will like stick their head in a hollow tree and like scream into it.

Or they'll drum on the hollow trees and I think they're getting a lot of nice acoustic communication out of those.

Yeah. Out of those hollow trees you can distract. Well, I'm working on a paper at them. so they will, so there's these quite large, the biggest tree in Fgo is, a baobab tree and there's one species of baobab in Senegal and sometimes they hollow out and the chimpanzees will drum on the outside of them.

But I also observed them stick their heads inside the bab and pan tut inside them. and so it dampens the sound from the outside, but inside it must sound so cool. Like, they must just be like, it, it must sound so loud to them inside there and yeah. So I'm, I'm hoping to do a little follow-up study on that to actually test like the reverb of the, of the trees and the sound, have a mic inside and outside to test the difference in the sound. But yeah, it's, it's very, very cool 'cause they're getting a different acoustic experience to their audience. Yeah. Which is quite like, it's changing the way that they're communicating and, and what, and makes you think about like, who are they communicating with? Like who is this for? Is this for the audience or is this for them? So yeah. Are they called pan panes? cause they hang out in caves? Maybe a happy coincidence.

Extraordinary. and there's some more here, but are there any more questions for the, from the room as well? and the big question CIA's asking, I dunno if you wanna ask cia, do, do you have theories as to why this community seems similar to Bonobos? It is a very big question. Yeah. I think that it's like, it's about like we, we have to figure out.

So there have been I think, a lot of questions that haven't been asked of chimpanzee females and I wanna tie this back to one of Chris's points earlier about why the focus on like specific behavior and maybe male aggression, male coercion, like males doing cool stuff.

and I mean like Donna Haraway pointed it out like 30 years ago that a lot of men studying male chimpanzees may result in specific questions being asked. and when you introduce women and people of other genders, particularly those with a feminist approach and a feminist lens, you end up asking different questions and so then you

get researchers like Sarah Hery, and, my mind is going blank and many others, who start to ask questions about like mothering and female relationships and these different things and how like different cultural approaches.

So early bonobo studies were mostly conducted by Japanese researchers. Like, what does that specific cultural lens bring to this study? And so there's definitely these particular views that we as researchers bring to our research questions. and so asking questions about female chimpanzees more broadly.

cause I think at a lot of the field sites, female chimpanzees are treated as peripheral and they're off with their infants doing who knows what.

But specifically focusing on them and what their social lives are like, can maybe start to get at those questions because where those we're seeing those overlaps between the fungo chimps and the Bonobos is the way that the females are relating to one another and forming coalitions being more integrated into like the whole like dominance hierarchy if you want to think about it like that. but yeah, like specifically asking questions about female chimpanzees across the board, I think is, is, yeah, I don't have an answer to the theory, but that is, that's what I would say to get us there. Mm-hmm.

Yeah. And, and there's also the issue of being such an open environment and whether that creates more cohesion of the group as Leoni is suggesting. cause we've gotta think these are Savannah chimps. Yeah. Are they, are people getting excited about this as a sort of model for Hominins in an open Savannah environment in some senses as well? Yeah, I think, have people been talking? Yeah, It's really torn. 'cause there's, there's these chimps, there's a new field site, in Guinea and wine bing with Savannah chimpanzees too, doing awesome tool stuff. and I think there is, it's kind of split it. Yeah.

It's like people do get very excited about chimps in a Savannah habitat facing potential challenges that early, hominins would have. And at the same time, these chimps are spoken about as if they're the weird ones and not real chimps. and so there's that, there's that conflict there.

any more query questions in the room? And Latisha? he's got the hand up.

Oh, Shakti, please.

Hi. that was a really lovely talk and I have to say I, I wish there was much more of that kind, this kind of talk around, where we actually get to see in a way a day in the life of the species that's being studied and also the researcher, because it really without that context, it's kind of actually hard to make sense of, most science or information that comes at you. So, and, and, and, and, and also with this new push for open science. I mean, I think the methods also of actually what it involves to collect these kinds of data and all of that to see it visually now that we have the technology.

That was really lovely. So thanks for that. Thank you. And, I guess my, my question is about, so this group of chimpanzees, you said they're basically about nine or 10 females in male, so eight or nine. but are there other groups, other groups around, and what kind of distances are they at, are they at? And I guess that that's the background question, but it, where I'm going with this is that's, say if we are starting to see these

cultural differences between chimpanzee groups then, and, and, and then the ones you are pointing out are read quite far off sites in quite different ecologies.

But I'm wondering whether there might also be this kind of community variation going on at much smaller, scales. but I'm wondering what that system looks like in terms of the possibility of looking at it, at these community differences.

Yeah, so Fungo has, because of its location, in relation to like the town and the mines, it has a neighboring group on one side, but then from there that they have multiple other neighboring communities. And so, for chimpanzees, the females immigrate at adolescents, so like a, a teenage female chimpanzee will go to another group usually. and so from Fungo would go to the neighboring group and then could then maybe go on to other groups. and that I, that's a very cool, that's like a, it's a, it's a neat time to look at those potential like cultural interchanges when an individual from one group is entering another.

The neighboring groups near Fgo, there are a couple, so Papa Inu, is at the university in Dakar and supervises several projects of chimpanzees in the area that are mostly camera trap, projects.

So we know a little bit about the other chimpanzees, but I don't know that we know enough to talk about that sort of close range, cultural variation yet, although that work is underway.

Thanks and there's a, a neat little question here from Eleanor or Ian, do you wanna say anything about it? About the nocturnal activity? This was the question Chris was thinking about. you've talked about the nocturnal activity in hottest nights.

Is it lunar phase locked? Yeah.

So it is also on the nights when the moon, like when it's fuller moon. So it, it does also, there is also an effect of, the, the brightness of the night. So when it's less cloudy, fuller moon. Yeah.

and about any, any more here? Sorry.

Yeah. I had a question which just occurred to me, really, one of the things I found most fascinating was this idea that size power within the hierarchy was underwritten by the female, kind of, yeah. Who, who would like come and join in the conflict and you implied that that's due to the maternal relationship there, but does s have to do anything to maintain that power or do other chimpanzees to, to maintain that sway over the female chimps? Like is there an element of like, give or take there, but, Cy has to provide for them or in some other way show himself to be a, a good, a good, talk of the hierarchy? Yeah, I guess that remains to be seen for s there was, a case at, with the Bonobos at Womba while I was there, where Aya was the highest ranking male, and the females would support him in fights. And then he, one day he aggressed the wrong like, individual and they all, like all of the females attacked him and he left the group for a couple of weeks and then came back at a much lower rank. Mm-hmm. And so, I don't know, I think that for, and in Bonobos it's like quite well established that their, the mothers will help their sons in fights. And maybe in that case, S'S mother wasn't in alive in the group anymore. And so with Cy, I think it remains to be seen, like he

probably has to maintain some level of like not being too annoying. Yeah, yeah. Yeah and Letitia, do you wanna Hi, tha thanks for that. That was amazing. I, I was just wondering, do you find that your research as well as the research of other, others in the area is, helping chimpanzee conservation like more widely? I know you mentioned mines, and obviously there's a lot of climate change issues happening all over the world, I imagine Africa as well. so do, do you find that your kind of really positive sort of, interesting research that appeals across, a lot of different like it's something very relatable that you don't have to be a primatologist or an anthropologist to really, sort of be interested in it. Right? We can be late as, as homo sapiens to, to all of what you're talking about really. do you find that that, that this is going to be good for conservation? I know it's sort of a little bit of a left field question, but I'm quite interested in that aspect of our work as, as scientists.

Yeah. It's, it's really important and there are a lot of elements at play there, right? So there's the like public outreach, communication science education part of it, which is getting people excited about chimpanzees or about primates in general, or about mammals in general and about like forests in general, and sort of a, an awareness raising. There's direct, so the presence of long-term research sites, in areas does seem to have, like conservation benefits in terms of like protecting the immediate like, study groups in the area. Right. but I think there's like, it's, it hasn't always been done in a way that connects With the people locally with Conservation. Yeah. Yeah. So, and I think the way that fungal, so Jill PRTs is an American researcher, who has collaborated with Senegalese researchers to establish Fungo as a field site and is looking to for it to continue as a Senegalese project, right. And in Uganda, like at Badongo, one of the chimp fields sites there, that's now run by the Ugandan Wildlife Authority and other Ugandan organizations. And so I think we're in this period of reconciling like the idea of field sites and field site ownership, where field sites do have conservation benefits, but they can also be like very extractive and exploitative. Yes. and to like, to people who live in the area. Mm-hmm. and so yeah, I, I hope that we're going to come out of this maybe with a different view of like what field work is and field research is, and one that like, as you say, like promotes conservation while also putting research in like The hands of the people who live Yeah. The people there. Yeah, sure.

Just like decolonizing sort of field work research across the board. Yeah. Yeah.

Thank you so much. I appreciate that. Thank you. Thank you, thank you.

Yes.

I just wanted, were there any, gestural, vocal facial combinations, Combinations that were specific to this group? Yeah, so I think Farrah Farah's example was my favorite. yeah, that, like mouth covering is really, they do like a lot of chimpanzees will put their hands in like each other's mouths as a greeting, but they're like specific face covering. and like snarl was a combination that I haven't seen or heard of before.

I would like to dig into the displays more. Like, as I said, they have these really long sequences in their displays and you can see from start to finish. 'cause I think that

like, that's also quite, quite a unique opportunity to be able to, like, if we're thinking about like syntax and like sequences and how, how signals are constructed together.

I think those displays present an interesting opportunity to look at those combinations. 'cause they do include their vocalizations, their facial expressions and all of these like bodily movements as well.

Can I ask about the, the putting the hands in the mouth because in some other animals that possibly smelling each other's breath is a very good way of finding out what you are need to be eating. And I, I did actually wonder about your female. did where she'd be putting her hand before she stuck it over there? That's a good question because they do spend a lot of time inspecting each other's genitals.

Yeah. Yeah. But I, I just wonder whether she'd been inspecting for Yeah, I know.

Yeah.

Yeah.

Basically. Yeah.

No, that's interesting. I, I could check. I didn't notice at the time, but I could check the videos and see. the researchers who are working on the water study are looking specifically at how the chimpanzees, share or differ in their microbiomes depending on where they've been drinking.

But she was also interested in this, like how much are they sharing in terms of their microbiome when they put their hands in each other's mouths when they're like interacting, like in those close contact ways. But yeah, it could be partly olfactory.

There are some, like, you also get like a mouth stroke gestures or request for food that's more like around the mouth. yeah, it could like, there could be an element of like old faction or taste to it and I think like a big part of it is that like it's, you have to be quite confident that your fingers aren't gonna get bitten.

cause when you see injuries on chimpanzees and bonobos, it's often fingers, it's often ears, it's often genitals in bonobos, it's often lips. So there was one bonobo with all of his lips missing.

so these really are like, they're very sensitive places and so to, to greet one another. Trusts. Yeah. Yeah.

That's the follow up. when they put their hand in the other chimp's mouth.

Have you seen any examples of the other chimp, the recipient having their eyes shut at the time? No, I think they're doing it in quite close, like face-to-face contact. Yeah.

So they know what's coming basically.

Yeah.

Impression on the smile within that same secret, when the female was more or less demanding sex being back on, I said she, he was smiling and then when she did it again, put it smiling. Yeah. And of course the conventional, the evolution emerge of the human smile.

A it's a fear under relaxed conditions. Yeah.

It's sort of turned into its opposite. But can you say a little bit about, about fear, smile? Yeah.

You some really confidently categorize those. how do you do that? How do you do what, what's a smile? And what's And what's a smile? Yeah. Yeah. 'cause you have like, you have a play face, which is quite like a relaxed jaw, like open your teeth are showing me.

It was like, and what far f r was doing, I, I was thinking of it as a snarl.

cause she's really like, she raises her teeth, her lips back quite a lot and then she like, it's like a, a low like bark or like cough almost.

It's like this as she does it. Like, but they do also, you'll see like, oh, I don't have my laptop hooked up. But they do, like, also when they're greeting they'll have like, they'll sometimes bear their teeth as well. And I think, yeah, there's this, this, yeah, I could, I could nerd out about what the, like how automatic versus how intentional and voluntary facial expressions are.

cause I think there's some really cool research I'm thinking of like Peter Clark's work on macca facial expressions and how like they're contextually flexible in a way for the crested Maccas in a way that facial expressions have been assumed to be like, quite emotionally fixed in other species where like, obviously for us, like I can smile and laugh automatically, but I can also like smile on demand and so to think that other species don't also have that or might not also have that, we've just assumed that they only have the automatic version and I think in vocalizations we're definitely starting to understand those more, as like intentional signals. and I think facial expressions are, are maybe next to where there may be more voluntary control over some of the facial expressions or over some facial expressions in some contexts, than we previously saw.

Very interesting and those macca variable control is related in that work to social tolerance, doesn't it? It's related to Yeah, yeah.

With the question. Yeah. Yeah. So yeah, look into each other's eyes. Guess what? I think, Letitia, did you want to ask another question And then I'll go to Shaq and Then we, I, I just, I was just wondering where those long, those long signaling, sequences where they're doing a different actions, have you ever seen them doing them in unison at all? Or is it a singular thing? Like do will they do it as a group, like a few of them as a group, as a, I'm not saying ritual, I don't wanna use that word, but would they do it as a performance, like, like to communicate something to others in that way? Most of the time they are, it's like one individual doing a display and maybe one individual will display and then another one will, and there's kind of like back and forth.

One will go after someone else. Mm-hmm. Except in, I'm thinking of like that video that I showed where Dawson's rolling that huge rock into the pool. Mm-hmm. It was a really windy day.

The rain was coming and many chimps were displaying at the same time. And you see this also with like, rain dancing in the eastern chimpanzees.

So they'll like do this really sort of like rhythmic swaying and moving when the rains come. And I don't know, there's, there seems to be something like acoustic and affective about weather and display as well, which Is, and like maybe it's, it is actual

joy or relief or like, I mean, they are sent you and they feel, so that would make sense. Yeah. Yeah.

That's great. Thank you so much. Appreciate that. Thanks.

Shati. Did you wanna Say Yeah, sorry. If there isn't anyone else asking, then I'll ask a second one.

I, I, I guess I'm, I wanted, yeah, so based on what you said, so the, so basically, there are humans living quite close to these groups, right? So I'm wondering actually whether you might be able, or maybe you are already in some ways harnessing, cause these people are then potentially coming in contact with the chimps and I mean, especially thinking about children running around and spending time around them in the forest and things like that.

So whether, um also thinking about how, what you were talking about decolonizing and making things more fair and involving the community, whether you might be able to generate hypothesis, basically through the observations of children and other people about, some of these gestures, um because they're living there and, they're observing these animals and actually those, they tho the, the, the presence of those animals does affect their lives. So there are for instance, safety issues and things like that. Or if the, if that group is doing something at a particular time, I mean, if it's meeting time or whatever it is, then, maybe it's good to know that that's going on in terms of avoiding them or whatever. And, and then it might make sense to know what the signs of that are and things.

So I'm just wondering whether there's been any attempt to kind of, harness those natural observations of people to kind of work out what they think some of the gestures might be about and then kind of use them as leads in further work.

Yeah, I think so in the range of this chimpanzee community, they're mostly encountering, workers at the artisanal mines. And there are like, like people are interested in chimpanzees, right? It's like, what's this, like, what are, what are the chimpanzees doing coming to the mines? And so the, the miners have started, like, they'll turn off the generator when the chimps are around and like stand at a distance and watch what the chimps are doing, doing and there has been like, there has been quite a lot of, work done between like local and regional research staff and miners and like the mining company at large in terms of like education in the region. But I think this, this idea around like children and local communities is a really neat one because often when we're thinking about like science education, it's like what can I come and teach the children Exactly where it should? It can often be the diverse Yeah.

cause they're the biggest observers of everything. Yeah.

Yeah. Just Sponge it up and particularly in, 'cause we're only following one study group, right.

So particularly in like the wider area, like where have you seen chimps? What have you seen them doing? Exactly, Yeah. 'cause, there's this new work coming out by China and Lou Levy and other people. Yeah.

Right. Which is all about basically how the children are the cultural banks of innovation, and transmission as well. You know, so they're also transmitting information to each other and then obviously one kid will hear, oh, chimp did this or whatever. Oh, the next day they go check it out so you've got a repeat observation.

Do what I mean? There's science going on all the time amongst them.

So their observations are often verified as well by multiple individuals. Yeah.

I think it's a, and of course then it becomes a very cool way to involve the community and the children learn by doing because they're involved in your science so you're going back and forth and, so they learning about science basically. Yeah.

With you.

I think that that particularly has potential for like urban primate communities as well. Yeah, of course.

So yeah. Yeah.

Boo and stuff even, . Yeah. Yeah. Okay, cool.

Cool. Thank you.

A question, I'm just wondering about, it's kind of slightly related to the question. Like if you, if you had within research community, local knowledge or people who have established somebody who, and therefore external people when they arrive even from years ago, they can access the area. Can we Repeat that a bit louder? Yeah. so I can, yeah, I'll repeat it. the question was around, local knowledge and whether like at the point of establishing this research site and other research sites, connect with people who are already knowledgeable and who then like continue to, work alongside and like within the research project.

Is that decent enough summary? yes.

So the fungo was established, and the field site is, in like a small hamlet with, like a group of families who helped, so who Jill connected with because they knew the area and were living alongside the chimpanzees and, has hired in like field sites wouldn't work without local, without local research staff and often local research staff aren't acknowledged for their knowledge and for the valuable like, and for all of the work that they do, and are often, yeah, it's hard work and it doesn't always pay very well and so I think, yeah, I think Fungo does it pretty, pretty well. yeah. I'm not sure. Yeah, I'm, I'm trying to think like how, how, how specific to get, I was just like thinking about, I've done some, was really, really surprised how many people who had secondary, like second jobs or something, taxi driver or, or a doctor. Yeah.

They have this immense knowledge that, that they they, that they inherit from.

Yeah. But then we attract and yeah. And that, that, that kind of like really opened my mind about like how this research like could not be possible without this kind of local people again, have their own career and accessory working.

Yeah. How does, Yeah. Positive information, that's pretty much impossible to gain from anywhere.

Yeah. I think it like, and it comes back to the conservation question earlier and thinking about, like, thinking about who owns the means of production in science, right? Like where, where does the power sit and how do we shift that power? yeah.

sorry.

No, I guess I, I was yeah, You wanna speak to that? There is a question on screen and then we'll come to, unless you are directly to this point. No, no. Okay. Vte, anyone ask, you're mute, can't hear Self. You did mention that there is a, a difference in behavior and I, I realize this among captive populations and, and all that, but I was wondering if you ever see children come up to like the, the dominant male and, and do something with him because we have a, a zoo here in Sacramento that was designed by Jane Goodall herself, right? And it has all these lianas on it and there's a ch a, a juvenile chimp like is about half size basically and the big dominant male, the badass that everybody gets outta the way for just sitting around sort of glowering at people and from behind him sneaks this little little guy and he smacks him on the butt and, and then takes off running through the lianas knowing that he can't do that.

Yeah.

So there's a juvenile chimp Ajay, who is a real s**t disturber, and will sort of like approach and like, I don't know, approach like Dawson the like big male who's trying to challenge side and just like shake a branch at him and then like shake it again and then like really lean in and shake it. And he's kind of like, I think he is, it's like, he's like testing it.

I think in a way the infants and juveniles like often do get away with like playing and like rolling all over like the adults and like the high ranking individuals and it doesn't really matter.

I think there's also this, like some of them are just like really seem, it just feels like they're testing their boundaries. and yeah, it's kind of cool 'cause you're like, Aja, what you're doing, like pick up a little rock and like throw it at someone. Just yeah.

This kind of like, it's, it's almost, it feels, and I guess like it is one of the things like in science, but like it feels like he's trying to like get a response.

Like he knows what he's doing and he is trying to get a reaction.

You wanna go now? Maybe that's the last question. No, you were saying that when, when they, female get ostracized, join another, so, so their signals in their size that they used in the treatment left, they misunderstood by the new truth and say they have to learn new language when they join the new one, but they misconstrued like with their old sign.

Yeah. So to repeat for Zoom, the question was on the adolescent females, when they immigrate to a new community, do they need to learn new signals? So across all great apes, chimps, Bonobos, gorillas, orangutans and humans, we share like this gestural repertoire.

So chimps and Bonobos use like 95% the same gestures. Chimps are using a few more object gestures.

Bonobos are doing a bit more like leg flapping. and so within chimpanzee communities, most chimpanzees use the same, use the same gestures and there's questions there about whether the gestures themselves are like biologically inherited or whether they're naturally meaningful and they're like co-opting these naturally meaningful actions. and so when a, adolescent female immigrates to a new group, she will still be able to understand all of their gestures and vocalizations.

but their like whether or not, if we're thinking about this as a largely shared gestural repertoire, the question of whether misunderstanding can and does happen is quite a crucial one because there are gestures that have multiple meanings.

So the arm raised gesture in that video, Lex used it to request grooming, but it can also be used to request sex or it can also be used to request play.

and those are all very different things and like how do you interpret that? And for them contextual information seems to be really important.

What have they been doing before this happened? Who is signaling to me? So I think there may be room for misunderstanding there if there's sort of like contextual differences and they're using these gestures that have multiple meanings, but they're not sure which of the meaning in this particular setting.

Last question Chris.

A point made by Michael Thomas about pointing, he has this little anecdote, that all no idea where she was, any of these other females around all males could easily disappointed.

There she is. They did perfectly well with it, but it's, he says it's, it's not that they dunno how to point, but they're currently able to point to this. Please scratch me here, but they can't be bothered. It's not my kid in pair.

So is any it is any helpful pointing going on? Yeah, so pointing is a bit of a puzzle because in captivity, great apes point like quite frequently and it's something that they're probably able to acquire.

They see like people around them pointing at things all the time.

They learn that if they point to this food, they get this food and so there's a an element of like associative learning or conditioning that happens and they can, they can learn to point in captivity. and we see pointing very, very, very rarely in the wild.

there is like, there's one study, KA to Bater is the first author on, on like a potential like whole arm point.

But like if it's like the case study then like they're just not doing it that often. but I think that's, I think maybe, maybe you see it something like gaze alternation where they're like pointing with their eyes so that might be something similar but they don't seem to be doing like any sort of like bodily pointing Except directed scratch when they, when they turn somebody else would Directed. Scratch is another like controversial one.

So there's a new paper by Claudia Ilca, et all that was examining the big LA scratch and it often seems to be a general request to grooming so it's not always followed by grooming in that specific place or it's combined with a present of that body part. and

so there is a certain amount of like presentation of like specific body parts that can be referential or towards themselves or like possibly towards like contact gestures towards locations on others. But yeah, we don't see any much like third party pointing, like pointing to something else around.

I think we've had everybody in Zoom ask their questions and everybody in the room.

You can always email me if you think of something later.

The Ted K Archive

Kirsty Graham
The expressive chimpanzees of Fongoli (Seminar)
Oct 10 2023

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