

Welcome to *Entanglements*, the new podcast from the Jesus College Intellectual Forum. I'm so excited for you to join me, Noah, as we unpack and explore the human-nature relationship.

In the previous episode, I met with Professor Marcus du Sautoy, who highlighted how maths can bridge the gap between being an observer and a participator in the natural world.

In this episode, I met with Dr Gladys Kalema-Zikusoka, Uganda's first wildlife veterinarian and founder of Conservation Through Public Health, a grassroots NGO and non-profit that promotes holistic conservation, enabling people to coexist with gorillas and other wildlife, while also promoting the health of people and the livelihood of the local communities.

Unfortunately, my train had been delayed, and so I had to meet her online from Paddington Station. So apologies if at points you can hear background noise. But I really enjoyed our conversation, and I started by asking her about her early experiences of connection with animals.

Dr Gladys Kalema-Zikusoka: I grew up with very many pets at home. My elder brother was an animal lover as well and he used to bring home stray cats and dogs and they became my friends because my sister who I follow was over five years older than me so we're just outside each other's age bracket to play.

But one time our next door neighbour acquired a pet vervet monkey. They're actually pretty common around Uganda but this very intelligent. This particular monkey used to like climbing over the fence. And one time when I was practicing the piano, I felt like I wasn't alone. And I looked over my shoulder and I saw that the monkey was staring at me. So I continued practicing and I thought, let me see what this monkey will do. And I left the room and this monkey came in, played one note with one finger. I was like, wow, I can't believe that they can be so intelligent. So I rushed into the room and of course he ran away and that was my first entry into primates and I really became fascinated by primates.

But a few years later, I got a chance to study in University of London at the Royal Veterinary College and you're allowed to work with animals of your choice in the holidays as part of the mandatory practice. So I spent some time working with chimpanzees in the Uganda Wildlife Education Center. At that time it was called the Entebbe Zoo. I spent a week there and that was really fascinating as well because chimpanzees were very intelligent as well. They're just two or three years old because their parents had been killed, unfortunately, by poachers and eaten across the DRC. But the babies were too small to eat so they would sell them to people to make money. And these chimps would escape from the cages because they were very flimsy. They would escape when you're not looking and then they would want you to carry them back in. And I was like, okay, this is another very intelligent primate. Then I got to work with chimpanzees in the wild in Budongo Forest, actually under Professor Vernon Reynolds, who was an Oxford professor of biological anthropology. And then finally, two years later, I got to work with the mountain gorillas.

But I set up a wildlife club in my last year of high school in Uganda, and that really got me engaged in conservation because we're able to take the students to Queen Elizabeth National Park. And that park was one of the first parks to be created. It used to have a lot of wildlife, but when I visited, we found that there was very little wildlife and I was a bit disappointed. But this was because of the present Idi Amin era, animals started to be poached and killed even in the national parks. So a lot of animals disappeared or died, like elephants went to DRC, Democratic Republic of the Congo, which is neighboring Uganda. Other animals got eaten. We could even take walking safaris because there were no predators. I enjoyed the safaris but I felt sad that there was very little wildlife and I thought why don't I be a vet who also brings back the wildlife. And so that kind of guided my path while I was at London.

And when I finally got to work with the mountain gorillas in 1994, it was like, wow. When I was setting up the wildlife clubs, they had just been discovered. A warden came in and said, we have mountain gorillas in Uganda. I was like, wow, that's really fascinating, can I see them? He said, no, they're not yet habituated, you can't see them. No one can see them. It took a number of years, seven years, before I could actually see the mountain gorillas. And so I got to Bwindi and tourism had started a year previous to that.

That was a very exciting time for me to be at Bwindi because tourism had just begun, there were only two habituated gorilla groups. And I went there as a vet student to look at parasites in the gorillas visited by tourists and those visited by researchers.

Noah Rouse: I think that's one thing which in your book comes through is this sense of almost being on the frontier of a new discovery. Obviously, tragic things happened under Idi Amin. I'm also interested that there was both the cruelty to the human population, but also the cruelty to the animal population.

You speak in the book about coming to this one health approach. Would you like to reflect on how your view of conservation changed and started to include communities and started to include recognition that everything is interconnected?

Dr Kalema-Zikusoka: Yes, actually the one month that I spent in Bwindi comparing the two gorilla groups visited by tourists and one by researchers was a big eye opener into one health issues because I saw that the ones visited by tourists had more parasites than those by researchers and I thought it could be due to stress due to tourism or you know they were just at a lower altitude at the time. They had some parasites and bacteria. But that very time when I arrived, I had a nasty cold and I couldn't visit the gorillas until I got better. And then after I left Bwindi, I was like, I want to become a full-time wildlife vet because I was so concerned that there were very few mountain gorillas left. There were only about 600 at the time. And I could see all the threats from disease and the loss of their homes, their habitat.

So I wrote to the executive director of the Uganda National Parks and said, I want to be your first vet and this is what a wildlife vet does. He was convinced to hire me because gorilla tourism had begun and we were concerned that tourists could bring a fatal flu or something

like COVID-19 to the gorillas. And so when I was hired though, the first disease that the gorillas got from people was not a fatal flu from tourists. It was scabies, sarcoptic mange, which—where I did my training in the UK, people rarely got scabies because it's a developed country, but when I spoke to a human doctor friend of mine, they reported to me that the gorillas are losing hair and developing white scaly skin. I said to her, what is the most common skin disease in people? And she said it's scabies and I was like, woah. I'm like, how come?

She goes, yeah, because low-income groups of people have poor hygiene, they don't wash their clothes often and scabies is very common in them here in Uganda. It wasn't the case in the UK. People occasionally picked it up from their pets, but it went away. And so luckily you could treat scabies with one dose of ivermectin. I went to the vet from Kenya who had seen scabies, Sarcoptic Meningitis, in cheetahs in Maasai Mara, those that were stressed and being visited by too many tourists, had scabies. And so it turned out that it was scabies. We treated them and they recovered.

But later on people started asking, you know, why don't you set up health education workshops? Because people also not only encounter dirty clothing when they leave the park to eat banana plants, you know, because of the habitat loss. Once they lose their fear of people, they go back to places that they used to range before their habitat was cut. They said they're also finding open defecation, uncovered rubbish heaps. You need to do something about it.

And so that was a turning point in my life where I get engaged in community conservation and public health. We met with around a thousand people in eight villages and I went with the community conservation ranger and warden who talk about the benefits of the park. They focus on conservation education. We went with a sub-county health assistant who caters for the health of the communities. And after we spoke to them, I told them basically this is the problem, so the gorillas got sick and I was about to tell them what the solution was. And the ranger touched my arm and said, let them come up with a solution. And they came up with very good solutions, better than I was proposing for them, which was amazing.

And I thought, well, people may be poor, but they know what's best for them, and they'll own it afterwards. And so that was my entry point into participatory rural appraisal, where you actually get people to come up with solutions to their problems. And that has always been a guiding principle for me all through my conservation career. Because then after that, I left the Uganda Wildlife Authority. I felt like I wanted to start a charity, an NGO, that can also improve the health of the people, together with the gorillas, so that the people don't make the gorillas sick.

And disease doesn't go both directions, because people are also eating bushmeat that could make them sick. And I saw that by improving the health of the people, we could improve their access to conservation. Because just by meeting them that time, I could see they were

very happy or very curious that we're actually talking to them about their health, which is, you know, healthcare is a basic human right. And so that's been my journey.

And so when we founded Conservation Through Public Health in 2003, together with my husband, Lawrence Zikusoka, and then a vet technician called Stephen Rubanga, we founded CTPH. And we started off by mainly focusing on preventing disease between people and animals, people and gorillas, but later on we added livelihoods when we found out that many people are unhealthy because they are poor and we also need to look at community livelihoods. So that's kind of what CTPH does, we look at both community health and wellbeing and community livelihoods.

Noah: There's a really good line in your book that says you cannot help gorillas without helping people, and I think it's really interesting there that it's about not leaving anyone behind. Looking at other situations in other areas, that focus on tourism leaves behind the local communities. However, it's really inspiring how it's become a cohesive whole.

When you've talked to these people in the villages who have been living in the same areas and living in the same spaces as the gorillas, do you think that their view of the gorillas or wildlife more generally changed after your group interacted with them, or was it the way of conservationists were thinking that changed, or both?

Dr Kalema-Zikusoka: I would say it's a combination of both. I would say that community conservation has really taken shape and grown. It used to be all about fences and fines, keep the animals in, the people out, and it was just protecting wildlife through law enforcement. But it's very difficult to protect the wildlife without engaging the communities. If a gorilla goes to someone's garden, they could kill it, because they're like, this gorilla is not helpful to me and it's destroying my livelihood. It's eating banana plants that we need to eat. It's eating the back of the eucalyptus trees which I sell in order to pay school fees for my children. They just become a menace to them and so they're not going to try and protect them at all. When we spoke to them and we talked about the fact that the gorillas are bringing them a lot of benefits through tourism, tourism has actually created a lot of jobs. 90% of the park staff are from the local area, you know, the rangers, the truckers, schools, clinics and roads have been built through revenue-sharing money from Uganda Wildlife Authority, like 20% of the park entry fee and then \$10 from every permit.

So they are beginning to see the benefits and so they are much more willing to listen. But one thing that they really liked is that when we talk to them about their health, we show them that we're not only concerned about the wild animals and the forest, we also care about them and it makes them more willing to protect the wildlife. So over time we've seen that people are more willing to tolerate gorillas in their land when they come to their land.

One time the head of Mubare Gorilla Group, which is the first gorilla family to be habituated to tourism, he got too old to keep up with the group. Typically when gorillas get very old, they can't walk the one kilometer per day at the same pace as the rest of their group members, and they start to stay behind and settle by themselves.

And because of this symbiotic relationship between the gorillas and the people, Ruhondeza, who was the head of the group, chose to settle in community land. So when the park called me and said, Ruhondeza is in the community land, come and see what you can do, maybe we need to translocate him, I went to check on him with my team at Conservation Through Public Health, and I saw that he was actually very well settled in community land. If we had moved him back, he would come out again because he doesn't want to be competing with other gorillas in the forest. And so we educated the communities to tolerate him taking an occasional banana plant because he had done so much to lift them out of poverty. And they did. They looked after him. They're the ones who even showed us where he was when we were looking for him outside the park. And they said, even when our elders get old, we look after them. And so when Ruhondeza died, everyone came to pay their last respects.

And I actually have a chapter of that in the book, *Walking with Gorillas*, which just simply showed how people were beginning to realize that gorillas are their future. You know, they really wanted to protect this gorilla because they had really changed their lives. So we're seeing people are more willing to tolerate and coexist with wildlife because they see them as their future.

Noah: I felt personally when I was reading, people paying their respects, there is that element of a transactional relationship between the gorillas and the community in the sense that the gorillas are bringing tourism. Also it seems like there was almost an emotional connection or a familial connection in that there's a slight sense of perhaps even solidarity and also fascination at these amazing creatures.

In one section of the book you talk about the translocation of an elephant and the whole community came out and were amazed at seeing this magnificent creature and helped move it for free. There's that element of tourism which is very important to local communities and bringing money in. But do you think also seeing these animals as not necessarily a threat or not something which is opposed to the community and its needs, do you think that's changed how people interact and connect with the wildlife and the nature around them?

Dr Kalema-Zikusoka: I would say that it's changing. Instead of seeing the wildlife as their enemies, they're seeing them as their friends. And a lot of the local communities around Bwindi actually know the names of the gorillas, or at least they know the names of the silverback. They're really connected to them. You know, when Ruhondeza died, there's actually a Ruhondeza walk.

Kanyoni is another one that was my favourite. He was a son of Ruhondeza, and he was born the year that I started working as Uganda's first full-time wildlife vet. And when his dad died in 2012, he took over the group as the lead silverback. And because he had got so used to people since he was born, he had no fear of people at all. But then when he became a playful silverback, he used to frighten tourists to see their reaction. It was really mischievous. But sadly, five years later, he fell off a tree, which is actually very rare in gorillas, and he never really recovered from that in spite of treatment. Then he got into a fight with another gorilla that wanted to take over the group, which is all normal behavior

in the animal world. And he just kept going downhill in spite of treatment. And so sadly when Kanyonyi died in December 2017, it was a very sad day. I wrote a tribute on Facebook, we go over 300 shares, because people are just like, wow. And a lot of them were sharing also their experiences they had when they met Kanyonyi. So we named our first coffee brand after him, because when we started Gorilla Conservation Coffee in 2015, two years before that, we were like, why don't we name the first brand after a known gorilla in the forest, so that people know that this coffee is actually being created, this social enterprise, to protect gorillas.

After he died, someone said to me, are you going to keep the name? And I said, yes, we will. Because even if the whole idea was people read about Kanyongi and visiting in Bwindi, now this legacy can continue through the coffee and so it has. Because really it's about him and all the other gorillas in the forest that we're trying to protect by improving the livelihoods of the farmers.

Noah: And almost bring that sense of connection into your own home. Would you just talk more about the coffee and the structures and where the money from the coffee goes?

Dr Kalema-Zikusoka: Whenever I'm going to visit the gorillas, very often we cross coffee farms and I hadn't realized that these farmers were not getting a fair price or a steady market and that meant that if they wanted to eat meat, sometimes it's easier to just enter the forest and kill a bush pig than try to sell their coffee.

And when I got to hear about this, we said, why don't we engage these farmers so that we can build a global coffee brand that can save gorillas through coffee? It actually happens to be very good coffee, thankfully, because it's a high altitude. And you know, that's what you need for good coffee because the gorillas live in a mountain. Just one getting a fair price, a steady market. So we give them a good price only for the good coffee because they're all capable of producing good coffee. It just depends on how they harvest it and how they process it. And we train them to do that. We work with well-experienced agronomists.

And then the coffee is medium roasted and sold to tourists, people who like drinking coffee in Uganda, maybe the expatriate community. The growing number of Ugandans are beginning to really like coffee. And every time I gave a talk I said, even if you can't visit gorillas, you can still help them by buying coffee from farmers, because then that money would pay to farmers and they didn't have to enter the forest to poach. But a donation from every bag sold goes to support the work of Conservation Through Public Health to improve the health of the communities, the health of the gorillas, and the conservation attitudes and practices of the local communities who share their habitat with the mountain gorillas. We're really excited about it.

We're currently engaging 500 farmers through 25 model farmers, teaching them to grow good coffee, do it using proper soil and water conservation, planting trees, not going into the forest. We're members of the Conservation International Sustainable Coffee Challenge, which is trying to make sure that all the processes of the coffee that's grown are all done

sustainably with a commitment to zero deforestation and the farmers are all getting a fair price for their coffee all along the way. And so it's really amazing. Glad to be part of that.

Noah: It's so inspiring how, if we think this all started with the focus on tourism, which as COVID illustrates is really effective, but isn't necessarily always a sustainable way of bringing money into local communities and empowering local communities. However, out of that has grown this wonderful thing. And this, it seems like it's really coming together and helping people around the world not only think about the food change that they're part of and what they're engaging in but thinking about conservation in a different way. And I think part of that is seeing the connection between personal and animal and the entire world's health.

How, if we think back to the young Gladys, if you don't mind me asking, how do you think your work and thoughts about conservation have changed?

Dr Kalema-Zikusoka: I'll say that my conservation journey has enabled me to appreciate the role that communities play in conservation. When I started out as Uganda's first wildlife vet, I was only concerned about the animals because at that time no one really cared about animal welfare in conservation. And animal welfare in general, it's not given as much prestige as medical doctors. And like the UK where I did my vet training, I really thought we needed to get people to understand that wildlife is important and animal welfare is important in conservation.

But when I saw how people are making gorillas sick, and how poor and limited social services they had when we met them, it made me realize you can't protect the people without improving the health of their human neighbors. And that set me on a different journey.

And I also realized you can't impose your ideas on people as much as you want to help them. It should be community-led. They should propose the ideas so that those ideas can remain long-term. And so at CTPH, Conservation Through Public Health, we have village health and conservation teams who are really community health workers. We teach them to do conservation work. We also have a similar group with animals, community conservation animal health workers and community conservation health workers. And they're currently visiting over 7,000 homes with over 40,000 people, improving good health and hygiene practices, nutrition, sustainable agriculture, promoting family planning so that people have the number of children they can manage, so access to contraceptives. And also telling people how they can access the ecotourism money so that it's more equitably shared because they're able to reach everybody, including those that are very remote that can't make it to village meetings because they live so near the park boundary and half the time the children are just chasing wildlife from the garden and don't even make it to school.

And so it's great that we're able to reach everybody through our work, as many people as possible who have an impact on the gorillas and their habitats.

We also have a Gorilla Health and Community Conservation Centre, with the support from Task Trust and other donors. And what we're doing is we're trying to make sure we regularly monitor the health of the gorillas every month, and also when they're abnormal, and see if they're picking up anything else from people or cows or goats. And then if they are, then we work together with the health authorities to deworm the people, to deworm the livestock, and in extreme cases, deworm the gorillas. Because they're wild animals and they really have learned to exist with parasites in their body, but it's when the parasites are making them sick, whatever disease is making them sick, then you intervene. But the way that we're doing it is rather than just focusing on gorillas, which is what I was doing when I worked in the wildlife authorities, the first steps, we're also looking at preventing disease for gorillas by improving the health of the people and the livestock and treating them where necessary.

Noah: It's really interesting because obviously they are wild animals and wild creatures, however they exist within almost human space. Boundaries are created by humans, and I think tourism shows that really well. I think that's an interesting microcosm of maybe more modern relationships with the natural world, for better or for worse.

I think it's really interesting what you're saying there about going through communities on the way to the gorillas. That's actually the conservation changing, not only focusing on animals, but conservation work changing your view on people and human communities and the importance of those human communities. And it's fantastic.

And so what work are you involved in now? And what does the future look like for the organisation and that connection between humans and animals?

Dr Kalema-Zikusoka: We still have a lot of exciting initiatives that we want to do, except we just have to raise money for them. But some of the things we want to do is continue to expand the components of our work that seem to be working, like the village health and preservation team models to other parishes around Bwindi where gorillas come out and other protected areas in Africa where gorillas are found.

Because the little that we've been able to do there has shown us, has created a lot of benefits. People are caring more about the gorillas and they're caring more about their health because they see an additional benefit that it's protecting gorillas, that can bring money from tourists, that can lift them out of poverty. So that's something that we want to scale up all over Africa. We are promoting responsible tourism to grade apes that came about because of COVID. And we're educating tourists now so that they're more aware about the positive and negative impact they can have when they go out there to visit these wild animals. And they can have a positive impact by following the regulations and being a responsible tourist, be willing to wear a mask, maintain a distance and buy crafts from the community or food or something. Because by doing that, they're really stopping somebody entering the forest to poach. Because once a local community member meets a tourist, they're much less likely to poach. So it's not enough for tourists to just come and say, I've seen the gorillas, I'm going home. You should put aside an extra day to also visit the local

communities, understand how they're living and find ways to support them. And so we're looking into, as you mentioned earlier, responsible consumption, responsible tourism, buying coffee, honey, is this honey helping the communities? If the communities produce it, is it reducing their need to poach, collect firewood, destroy the habitat of the wildlife.

Because we realise that you can't only look after the wildlife, as the people who live there, you need everyone. It's a global asset for everyone. It's a global good, it's a global inheritance for all of us. That we should all be concerned about looking after wildlife.

One thing we also want to do is try and see how we can expand the park, because it's getting too small, and as the number of gorillas increase, the space isn't enough and there's more and more human wildlife conflict. And so we're working with the communities on this to see how willing they are to sell and how best to do it so that they continue to benefit from conservation. These are all the exciting things we're trying to work on.

And actually this year we're celebrating 20 years of the NGO Conservation Through Public Health. And going forward, we just want to continue to see what we can do, work with partners to scale up what we're doing.

Noah: And so just one final question there, you were talking about more global outreach. Obviously, you're in this really privileged space of close on human-gorilla interaction and human connection. However, when we think about responsible consumption, unfortunately, it is often not those places which are the cause of irresponsible consumption. How do you think the ideas of CTPH and the work you've done might be able to affect a more global population? How can, for example, people sitting in a train station in Paddington, where there's not gorillas to the left or right of me, how do you think that that can change how people think about their world and the place in their world and the connection to nature they have?

Dr Kalema-Zikusoka: It can really change. I mean, the one health approach is something that when we started out, everyone thought that was crazy. Why are you combining human health and animal health together? And I've got goods at that elevator pitch better to address them together for more holistic outcomes. All of these things that we're talking about are all part of one health. And somebody sitting like you in Paddington Station, you may think, what can I do to help gorillas? There is something that you can do to help gorillas just by being out there, buying coffee online. It may not yet be in the stores in the UK, but we have it online through Moneyrow Beans. And just by buying it, you're playing your part to save gorillas.

You could book a holiday with your family, come out to Bwindi, give a donation through our website, spread the word about what we're doing, come and volunteer, you know, come and conduct research with us. There's all the many ways that people who are living outside Uganda can help to protect gorillas. And in fact, I'm very excited that the Ugandans living in London who I've met and through reading the book *Walking with Gorillas*, they're very, very excited about coming back to Uganda and supporting the communities and helping the

gorillas. So anybody, wherever they are, whether you're in the diaspora, whether you've never been to Africa before, you can still play your part to protect gorillas and other wildlife.

The pandemic has shown us that we're all connected. You know, disease can cause can cross any continent in just a couple of hours and all of us get affected. But it's almost become like a global village. We can all help each other. We can all have a part to play to protect the wildlife.

One other thing we're doing actually right now is engaging school children to get them to come up with their own projects. It's called STEAM or STEM. STEM with an A—Science, Technology, Engineering, Math, but with A which is Art. And we're getting them to come up with their own projects to protect the wildlife. So they're coming up with recycling projects, picking up rubbish around the park, they're coming up with clean energy cook stoves, they're coming up with ways of having livestock so that they don't have to enter the park to poach, or their families or their parents or grandparents don't have to enter the park to poach. And they're becoming very aware. So it's just getting them to be the leaders in their community in conservation is something that I'm really excited about.

On top of also empowering women to really get engaged in conservation and realize their potential because it's very much a male-dominated field, and also Africans, you know, building local leadership in African climate research and conservation, because if people remain in conservation space, they'll make the right decisions for wildlife. So it's really important to just have that homegrown movement of people all over Africa sharing lessons across the continent so that we all learn how to protect our wildlife.

Noah: It was a pleasure to talk to Dr. Gladys and I found her journey and work really inspiring. I hope our conversation has helped to highlight that human and animal health is necessarily intertwined and only by recognising this and taking a more holistic view can we be more effectively caring for both animals and conservation.

I thought that the examples of the local community and their interactions with the gorillas was a potent example of how our own health and wellbeing go hand in hand with the health and wellbeing of the natural world. However, it's apparent that this is often neglected.

To explore this connection, in the next episode I speak with Kate Raworth, author of *Donut Economics* and self-described renegade economist. We discussed how traditional mainstream economic theory has often neglected the natural world and ignored the obvious fact that we are embedded within a wider web of life. I look forward to you joining me for the next episode and in the meantime, thank you for listening. I've been Noah, and this has been *Entanglements*.

Credits: Written, produced, presented and edited by me, Noah Rouse, on behalf of the Jesus College Intellectual Forum. Original music by Xanthe Evans.