03

Tehanu: Interspecies Money as a Layer of Planetary Infrastructure

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Figure 1. Illustration by Tehanu team.

Tehanu turns financial infrastructure into a meeting point between species, using digital identity and AI inference to let mountain gorillas signal their needs in economic form. Its method—assigning value through verifiable, nonhuman-led action—speaks to the larger questions of value and the rights of nature that are explored in "Whales and the Ecology of Value" and "Reimagining Biodiversity Governance."

We share Earth with 8.7 million other species, most of them older and more stable in evolutionary terms than we are.[1] These species now face a sixth mass extinction. Since 1970, wild animal populations have halved. We have a planetary economy in which non-humans play no part, except in the sum of their processed body parts. For the foreseeable future, this economy will be dominated by money: tokens ventured to produce more tokens, or exchanged to satisfy human needs and wants. What place, then, for other species in such a system? Is it only humans and their machines, now and forever, who get to indicate their interests with money? Or can other species also participate in the economy, directly, in order to improve their survival chances?

I invented the idea of Interspecies Money to explore this question. In a remote part of South Sudan, I watched an old mahogany tree cut down for charcoal. Its living value—in itself, as a host to birds, bats, small animals, insects, microbes, fungi, and as a carbon sink—was likely several hundred thousand dollars. Its dead value, in sacks of charcoal sold at the local market, was perhaps a thousandth of that. I wondered what might happen if the tree could make small payments to the community in return for its protection? Would it still be standing? Then I considered a wild animal—a giraffe, say, or a pangolin. Could they also pay for services they needed? In short, what if mobile money did not stop at the village in Africa, India, Indonesia, China, or elsewhere, but continued on into the bush?

The Brookings Institution invited me to develop this idea in a paper in 2022. With co-founders, I raised seed funding and led a team of AI engineers, blockchain developers, economists, biologists, and conservationists to build a functioning prototype. With modest six-figure support, including funding

Figure 2. A young mountain gorilla infant from the Kwitonda family group in Volcanoes Nationlal Park, Rwanda.

from Rwanda's Ministry of Finance, we created Tehanu,[2] the first system to make payments across the species divide. Tehanu's success will depend on human liberality and planetary-scale computing. Even so, the pilot has already revealed principles that could allow other species to participate directly in the economy.

A broader movement working to secure agency for other species is gaining ground. Alongside established animal rights groups and scientists, it now includes artists, AI researchers working to decode animal communication, and lawyers pursuing legal personhood for non-humans and natural objects such as rivers, by extending existing family and trust law.

The pilot took place between 2023 and 2025 on the jungle slopes of the Volcanoes National Park, with a group of mountain gorillas. Rwanda was chosen for its ecological suitability, its ambition to pioneer new technologies, and its desire to earn income from biodiversity. The park is home to around a third of the world's remaining mountain gorillas—some 350 individuals. Gorillas were selected because they are among the most studied and closely monitored wild animals on Earth. Their charisma, as the Tom Cruise of the animal world, was also expected to help promote Interspecies Money on behalf of less celebrated, but equally important species, such as bats.

The pilot began with the creation of persistent digital identities for the gorillas. These were established using AI pattern recognition trained on each animal's unique nose-print, akin to a human fingerprint.[3] This formed the basis of a "Know Your Gorilla" (KYG) protocol, mirroring the financial industry's "Know Your Client" (KYC) standard. Each identity was linked to a wallet on the Tehanu platform and connected to Rwanda's main telecom provider. This enabled accounts associated with individual gorillas to issue small payments to rangers and community members for completing tasks inferred by the AI to support their welfare.

AI models drew on the full corpus of human knowledge about the mountain gorilla and interpreted new field data generated for Tehanu to infer simple gorilla needs. A separate, blind evaluation track involving primatologists, rangers, trackers, and other experts showed that the AI was already performing at a human expert level. It is plausible that, before 2030, inference systems will surpass humans in discerning the interests of many species. In this case, AI-inferred interests were translated into verifiable tasks such as removing poacher's snares, visual confirmation of individuals and groups, conducting genetic monitoring, collecting faecal samples, keeping dogs out of the forest, or making space for the gorillas when they strayed into farmland.

One of the more powerful signals from our AI-inference concerned digestion—an issue not headlined by the human experts. It suggested that gorillas might benefit from more frequent veterinary interventions to ease cramping and infection linked to eating large quantities of raw bamboo. This kind of insight illustrates how AI could increasingly mediate, and perhaps even translate, between humans and non-humans, serving at minimum as an automatic correction to human bias.

Rangers and community members were paid for verified tasks, each linked to a specific gorilla identity and requiring proof of execution. This created a closed trust loop: identity, evidence, reward. Payments were modest and made in local currency via mobile money, but they established a basic economic interface between non-humans and the human economy. While the gorillas could not yet consent in any moral or legal sense, the system operated on the premise that increasingly accurate AI inference of species interests would support more

aligned and responsive human actions over time.

While the Tehanu architecture is basic, it works. Money can be sent. A digital proof can be uploaded to confirm each task. A natural objection arises: is it right to involve other species in an economy that has already caused them so much harm? Some locals reacted with contempt to the notion that a gorilla might hold a wallet—though many more were curious and accepting. Our view is that verifiable exchange gives non-humans a measure of leverage in systems that affect their survival.

Interspecies Money reframes value as recognition of a species' continued existence and the ecological services it provides. It proposes a planetary-scale layer of digital infrastructure. Tehanu delivers this infrastructure. It assigns other species persistent digital identities ("Know Your Species", or KYS), wallets, and AI inferred interests, linked to a payment platform extending the gig economy built on verifiable tasks.[4]

This is technically and financially feasible. For example, among many species in direct competition with humans, fewer than 700,000 great apes remain in the wild today, down from more than 3 million a century ago. Perhaps 200,000 could plausibly benefit from Interspecies Money. Even if each ape directed a $1,000 a year to local human agents, the computational and financial demands and the cost would be negligible compared with human digital identity and payments systems. India, for instance, has issued 1.4 billion digital identities and handles several trillion dollars in micropayments a year through its UPI platform. A year's worth of great ape payments would amount to just 0.0065% of UPI's annual volume. Yet, because these flows would be precisely targeted and locally grounded, they could introduce a new category of economic agent to planetary governance.

If the engineering and the AI inference hold, the next question is where the money comes from. Like much of nature finance, Interspecies Money faces a cold-start problem. Even as central banks, quants, reinsurers, and the wider public acknowledge extinction risk and the multi-trillion dollar value of ecological services, none has yet triggered initial flows. In the near term, the first species supported by Tehanu will likely be funded through traditional impact bonds. One such example: a $40 million bond over seven years to support the straw-coloured fruit bat, whose nightly seed dispersal sustains the Congo rainforest. Payments would go to local human agents protecting roosts and collecting verifiable data. Bonds could serve as collateral or price feed for more complex instruments such as tokenised assets, such as a real ape club to replace the Bored Ape Yacht Club, whose market cap peaked at $28 billion, or a species-linked digital currency held or spent by non-humans.[5] Over time, the balance sheet of a species in a given ecosystem could come to reflect its ecological contribution across decades.

We do not suggest that Interspecies Money is, or should be, universal. But it could improve cohabitation between humans and nonhumans, especially on contested frontlines, including in the tropics. As part of planetary governance, it offers a way to direct significant financial flows into species and ecosystems with precision, transparency, and low cost. It may also support triage after what are likely to be increasingly frequent man-made disasters, such as wildfires and war, and advance other efforts to grant agency to non-humans as part of a new pact for Earth.

This is a multi-generational journey, to be undertaken with care and joy. It should be tested across a range of financial instruments, beginning with impact bonds and extending to secondary markets in which AI agents operate alongside humans. At a minimum, several hundred million dollars should move through the Tehanu platform in the coming years. At that scale, with peer-reviewed science, open critique, and participation across diverse species, ecosystems, and communities, it will be possible to assess whether Interspecies Money is sensible, ethical, and scalable. If so, non-human species could, for the first time, represent and advance their own interests. If not, it will confirm that only humans and their machines can hold and spend money. In that case, the obligation to care for those who cannot will grow even stronger.

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1 Excluding bacteria, archaea, and viruses. See: Camilo Mora, Derek P. Tittensor, Sina Adl, Alastair G. B. Simpson, and Boris Worm, "How Many Species Are There on Earth and in the Ocean?" *PLoS Biology 9*, no. 8 (2011): e1001127.

2 The project is named for a small girl in Ursula K. Le Guin's *Earthsea* cycle, who becomes a conduit to deeper, older forces connecting humans with non-humans.

3 Achieving 93% accuracy on portrait images and 75% on camera trap images, well above human baseline.

4 An extension of the rapidly growing worldwide gig economy, already exceeding 20 billion tasks a year.

5 The unit of account was first posited in the original Brookings paper as the *Life Mark*—after the *Deutsche Mark* in West Germany—to be issued by a consortium of central banks, crypto treasuries, or a new planetary foundation.