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AI, elephants and communication frontiers

Economist Don Ross talks about cracking the code of elephant language

BL PREMIUM

13 MARCH 2025 - 05:00

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A herd of elephants in Hwange National Park, Zimbabwe. Picture: REUTERS/PHILIMON BULAWAYO

Stepping into the lobby of the hotel where I'm meeting Prof Don Ross, co-author of *The Gambling Animal*, I'm apprehensive.

I'm not badly prepared, but it has taken me longer than expected to get about halfway through the book. I feel the need to apologise in advance, too, for my limited, residual grasp of certain theoretical concepts, having studied economics and statistics so long ago. "You're probably more in touch than most people," Ross smiles, putting me only marginally at ease.

Ross is the programme director for methodology at the Center for the Economic Analysis of Risk (CEAR). "I'm like the head theorist," he explains. CEAR is attached to Georgia State University but has affiliated units at University of Cape Town and Copenhagen Business School. He is a naturalised South African, having moved to Cape Town in 1997.

Ross fell into economics by chance. In the 1980s his PhD thesis was on AI, which at that stage involved the theoretical foundations of large language models. "The only place I could get the right math for that aspect of AI

was by doing my PhD coursework in economics. Then, when I graduated, I discovered that because at that time the [AI] theory had run so far ahead of the engineering, the only consulting I could do was for the military. So unless I wanted to be hanging around the military, I had to be an economist."

I steer the conversation from AI and economics to ethics because *The Gambling Animal* has a strong undercurrent of humankind's unthinking or deliberate, unethical behaviour towards other species — and our own kind. However, in what seems a contradiction, a short passage in the book takes cutting swipes at the principle of long-termism, philosopher William MacAskill's idea that the vast number of future people matter just as much as people alive today, so, morally, our actions and policies today must be designed for their best interests.

"I don't agree with him at all. Can't stand that [long-termism]," Ross responds, softly, then becoming animated. "Caring more about future people just because there will be more of them in the future, well, I care more about actual people, who are actually here, and the people who care about them," he says. "I think it's complete madness," he continues, then, smiling again, as if knowing where the conversation will lead: "I care more about actual living elephants than I do about future people."

Indeed, from here we spend a lot of time talking about elephants. "There's a policy point to our experiments with elephants," Ross clarifies, referring to CEAR's fieldwork in part of Limpopo's Bela Bela reserve, where researchers undertake cognition and risk-reward tests. "If we want sustainable populations, thousands of them are going to have to move. Now, how do you move thousands of elephants?"

Ross answers his own question by detailing the importance of communicating incentives to ensure the matriarchs lead herds by choice rather than human coercion, the nuances of keeping social structures intact during the process, and how technologies like drones can assist to guide — but never force — route choices. The complexities are immense; I slip into a half-reverie, reminded of my documentation of the relocation of a single elephant, from KwaZulu-Natal to the Eastern Cape, covered for Business Day in 2019.

The book includes some photographs of the six pachyderms in the field laboratory. We look over the images, one of which is accompanied by copy to the effect that these giant creatures are pioneers of knowledge. I ask Ross to expand.

My jaw drops at what he says next: "I think within three to five years we'll be in a position where some people could have a conversation with an elephant."

So we return to AI. Cracking the code of elephant language requires a critical mass of data, allied to deep learning systems. We are on the verge of having both. In Kenya's Amboseli National Park elephant researchers have been gathering data on the gamut of rumbles, trumpets and stamps of elephant communication for more than 50 years. AI, apart from its power and speed in discovering patterns — far beyond the human brain's capabilities — doesn't have our ontological biases. This is the key, Ross believes. "You let it learn. All it has to know is enough human language to be able to communicate back to us, which is minimal. Once we let it loose on elephant data, it will evolve. It will discover the elephant's ontology."

There are profound implications. Grasping how another species understand the world should lead to better-informed, empathic policies to protect and sustain them. But it's not that straightforward. How will they react to human intrusion into their very minds? Having spent much time with elephants, Ross' observation is that when addressed by their individual names, as is already happening using AI synthesisers, "they get very upset".

And he's concerned about human nature. "The moment we can converse with another species, we'll also start lying to them, because that's what we do, right?" he says. He's uncomfortable at the pace at which these new possibilities have opened up: "There hasn't been serious effort put into thinking about how we should approach those first conversations."

My next question is about whether he believes AI may be an existential threat for humans. “Well, the existential risk it raises is not zero. Is it high? We haven’t yet been able to model [the existential risk]. I prefer to focus on more immediate risks, involving risks that we *can* quantify and need policy responses to, now.” He’s referring to productivity, jobs and wealth creation impacts, and how AI’s gains are shared across society.

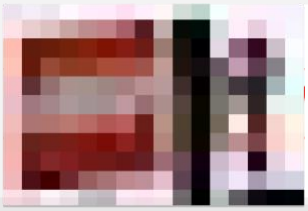
I rephrase, wondering whether he feels policies around AI are being properly assessed, and pursued diligently, by the right people? “Oh no, absolutely bloody not,” he replies. “All the most important decisions about AI are being made by people who have no incentive to give pause — tech billionaires and politicians. So, clearly, we are now going to have an AI arms race between America and China. The decisionmakers on either side of an arms race never pay attention to scientists, unless the scientists are telling them how they can go faster.”

Nor, I add, do they pay attention to ethicists or moral philosophers, to which he agrees.

In my fascination, I’ve run out of time to ask more direct questions about the book’s wider points. I mumble that our discussion seems far removed from the conventional premise of behavioural economics or any thread of economics theory. Ross corrects me. CEAR’s research “grant wasn’t to work on elephants; it was to work on risk”.

I connect the dots: knowing more about these intelligent, social beings allows us to compare their risk-related behaviours with ours, helping us to better understand why we act as we do — thereby, just perhaps, at this critical juncture in our evolutionary history, to help steer improved choices.

Leaving the hotel, I reflect that Ross is unlike any academic I’ve met before. I don’t know whether his organisation’s work, as yet, directs or successfully influences international or government policy at scale. But it should.



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