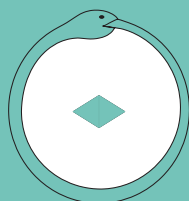
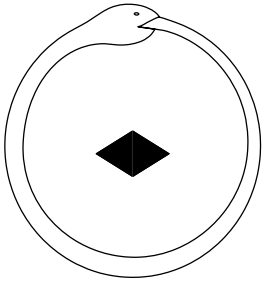


# THE FIRST SELVAGEM CYCLE

Jeremy Narby



notebooks  
SELVAGEM



## THE FIRST SELVAGEM CYCLE

Jeremy Narby

(Opening speech of [Selvagem 2019](#))

The first Selvagem cycle (2018) brought together researchers, thinkers and Indigenous representatives from seemingly distant cultures to present their perspectives on life. The cycle opened a dialogue between science and Indigenous knowledge.

The theatre at the Rio de Janeiro Botanical Garden was beautifully decorated with long intertwined cotton threads evoking mythological serpents and DNA molecules, and the event also featured celestial musical performances between speeches.

The Indigenous leader, environmentalist, and writer Ailton Krenak mediated the event with wisdom and style. All those present spoke in the light of his words and with an open heart. Krenak has the touch of an international diplomat, and his presence brought out the best in everyone. To start the discussions, he gave his opinion: “life is not something that surrounds us, but something of which we are part of”.

This set the stage for the first speaker, Sergio Besserman, president of the Rio de Janeiro Botanical Garden Research Institute. He began by stating that science does not know everything. He pointed out that dark matter makes up more than 90% of the universe and that science knows nothing about it. He then said that the human brain may never be able to understand all the complexities of the universe, because it cannot deal with the complexity of reality. And he questioned the words at our disposal. “*Ambiente*, environment, continue to mean ‘all around’, “he said. In the same sentence, he used the Brazilian word *ambiente* and the English word ‘environment’, and pointed out that both concepts continue to imply “what surrounds him”. Besserman said he agrees with Ailton Krenak: “life is not something around us; on the contrary, we are part of it, part of the biosphere”.

Selvagem had a good start. Here was the Botanical Garden's leading scientist discussing the limits of science and questioning the word "environment," and quoting Ailton Krenak to say that we are not separate, but part of life on Earth. Nice.

Next, the anthropologist Luis Eduardo Luna said that a Colombian shaman had changed his way of seeing the world. This fact led Luis to study anthropology, history and literature, but also science and biochemistry. He said that there were numerous ancient and successful Indigenous populations in the Americas when the Europeans arrived in the late 15th century and then began to destroy what they found. At the same time, the Europeans also began to deforest. Today, Europe has only 3% of the original forest. In a place like Finland, one may see trees, but they are all monocultures. Europeans deforested Europe, then they came to the Americas and continued the deforestation. Similarly, Europeans persecuted pagans in Europe, then they came to the Americas and began to persecute Indigenous peoples. Luna also commented on the recent scientific confirmation about the intelligence of non-humans. Science has come to recognize that plants make decisions and have memories and intelligence. Even microbes are intelligent. And that means the animists were right all along: plants and animals are like people. For Luna, animist thinking is a way out of the current ecological crisis. "We need to return to an animist way of seeing nature. Animism is not a philosophy – most philosophy in Europe is a dialogue or an argument. But animism is not a dialogue, it is a contact. And as soon as you have contact with plants or animals, you know they are intelligent. All you need is a cat. We are on an extraordinary planet and we need to work to defend all living species".

The third speaker was *Tōrãmũ Kēhíri*, an elder of the *Desana* people, who came from the Rio Negro to share his wisdom and talk about his book *Antes o mundo não existia* [There was no world before], which tells the story of how the world came to be according to *Desana* traditions. He said he had learned the story orally when he was young. Fortunately, Ailton reminded him to tell us. It goes like this: in the beginning, there was nothing but darkness, a bench, some tobacco and some coca. And a female character, the grandmother of the world. And

she thought about how to create the world. She sat on the white quartz bench, smoking tobacco and thinking. As she was thinking in her white quartz room, something began to rise, as if it were a sphere, and on top of the sphere a kind of spike appeared. The sphere, as it rose, enveloped the darkness, so that all the darkness remained within the sphere. The sphere was the world. There was yet no light. Having done this, she called the sphere **Umuko Wi** “*Maloca* [Hut] of the Universe”. First, she created the thunders and asked them to create humanity, but they failed. She smoked tobacco again and created the great-grandson of the world, made by smoke. The great-grandson of the world came down to the world in a great snake, a great snake-canoe, full of fish-people. The snake-canoe traveled underwater, spreading humanity, leaving people across the landscape of the world we are in today. This is how the world began. We were created by transformation. Human beings emerged from a cosmic serpent canoe.

**Tōrāmũ Kēhíri** said that if we wanted to know more about the story, we could read his book.

In echo of this, astrophysicist Gustavo Porto de Mello told the story of what he called the modern myth told by science. Everything started with the big bang – the universe emerged from nothing, 14 billion years ago when there was no DNA, no molecules, just a quantum soup, a great disorder, no atoms, no sun, no galaxies. Simple atoms formed, and in the end, they fused through gravity into stars; and in the nuclear explosions of the stars, carbon was produced – we are creatures made of carbon – and other more complicated atoms as well. So billions of years passed. And galaxies and planets were formed. And then matter became capable of self-organizing. The DNA code arose from auto-poiesis, self-construction, he said. We are a process coded in DNA that produces proteins, a snake that bites its own tail. Life is this process of self-organization. The universe does not stop, life on Earth evolves and will not always be possible on this planet.

And then Gustavo Porto mentioned the theory of panspermia, according to which comets from other solar systems carry self-organizing molecules and have fertilized worlds. He said he was convinced that the serpent and the DNA would survive and project themselves into the future.

I enjoyed both stories, the *Desana* version with the cosmic serpent canoe and the big bang with the DNA snake biting its own self-poetic tail. Somehow, the grandma who smoked the world into existence seemed easier to imagine. But the two stories seemed to point in the same direction. Selvagem has grouped cosmologies in real time. Live!

Next, Moses Piyãko, a respected shaman of the *Ashaninka* people, spoke about the traditions of his people. He said that the *Ashaninkas* had a great story that was passed down through the generations about the universe, but it did not carry numbers – not millions or billions of years. But the story would take hours to tell. Summing up a long history, because some things can only be described having the luxury of time, he said that every being in this world has a spirit, and that the Great Spirit has given humans a key: *ayahuasca*. And this allowed humans to understand that there were two worlds: the one in which we lived and the one in which there were essences and knowledge. He said that trees, birds and rivers knew things, and that modern civilization was destroying nature. He said that the *Ashaninka* people defend all those who live in the forest. “We don’t destroy anything,” he said, “on the contrary, we plant.” And he said that bringing together science and Indigenous knowledge was a battle, but for the good of humanity. “We need to unify our knowledge,” he said.

As an anthropologist who worked with Amazonian Indigenous peoples, I also had the opportunity to participate as a speaker. I agree with Moisés Piyãko: gathering science and Indigenous knowledge takes time. It is like learning two languages and becoming bilingual. And science has difficulty in dialoguing with other forms of knowledge, because it is conceived as a monopolio of valid knowledge. It is like a monolingual culture disinterested in bilingualism, or even against it. Even if individual scientists wish to establish a genuine dialogue with Indigenous peoples, it is generally institutionally difficult for them to do so. Then I mentioned the problem of the “helicopter science”, where scientists visit Indigenous communities, extract data and part, saying that their research is for “the good of science” and “for the good of us all”; but the Indigenous peoples can see that this serves mainly the interests of scientists, as well as the industries that support them. A real dialogue between

the two sides would require scientists to conduct participatory research with Indigenous communities, engaging the communities from the outset in the research issue and in the way they investigate, besides finding ways to compensate these people for their time and knowledge.

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On the second day of Selvagem, the speakers focused on plants and how plants make life on Earth possible.

Activist Alice Worcman spoke first. She works to promote urban biodiversity and permaculture, inspired by traditional practices. She said that she saw life on Earth as one big intelligent system, which humans are a part of; and that plants have intelligence, and Indigenous peoples know this; and when they grow plants, they work in favour of life and the regeneration of the planet's living system. But people who live in big cities tend not to value this. She asked the question: why is the system's regeneration not considered progress? She regretted that people who live in big cities, who have access to an abundance of resources, have little appreciation of where their food comes from, who produces the nourishment and what that production entails. The global food business, based on monoculture, values a small group of plants: 60% of the world's nourishment is based on just four plants, namely rice, wheat, maize and white potatoes. And this has led to a monoculture of the mind, she said, such that in a country like Brazil, where there are thousands of species of edible plants, there is now a longing for biodiversity. Why is there no Brazilian cherry<sup>1</sup> in local markets, even though the plant is resistant to pests, easy to grow and rich in antioxidants? Why don't people who eat three times a day value the work done by those who grow their food, or by peoples of the forest and the forest itself, who help regenerate the Earth's vast life system? Worcman had good questions. She concluded by saying that we need to change our attitude and move towards conservation and regeneration.

Ecology professor Fabio Scarano spoke next about the Gaia hypothesis, which considers life on Earth as a superorganism, of which each

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1. *Eugenia uniflora* L.

one of us is a part. In this view, the biosphere – the life layer that surrounds the planet, which is made up of the sum of all the interactions of all the organisms on Earth – can have the intelligence and regenerative capacities of each of its components. It has become clear that even the simplest organisms are intelligent and can regenerate. And when it comes to the biosphere's regenerating, he said, there are many useful plant species that can contribute. But people also have a role to play, with their thoughts, cultures, histories and technologies. He called this the noosphere and technosphere, which evolved from the biosphere itself and are now part of it. We can spread good ideas and talk to each other. Dialogue is essential to promote sustainability, he said. And ancestral knowledge and its appreciation of nature are a necessary part of the future. The future will be ancestral.

The artist Ernesto Neto, who worked under the motto 'Futuros ancestrais' [Ancestral Futures] and was present, smiled.

Gustavo Martinelli, head of research at Rio de Janeiro Botanical Garden, said that exploring different regions of Brazil opened his eyes. Learning about plants through books was one thing, he said, but exploring plants with people who live among them was another. During his travels, he learnt about the difference between knowledge and wisdom and between academic and traditional knowledge. In the academic world, people knew a little about a small piece, he said, but this made it difficult to exchange with other people. One year, Martinelli went on an expedition to Yanomami territory and had a profound exchange with Claudio, a Yanomami man. The two learnt a lot from each other and had a real exchange. Science and traditional knowledge can certainly learn from each other, he said, and this is essential for knowledge's and humanity's vitality. But there are differences between the two approaches; for example, science seeks universality, while traditional knowledge focuses on multiplicity and local features. And Martinelli said that Brazil had changed in recent years, the landscape itself had changed, with more pastures and fewer forests throughout the country. He said it was necessary to conserve plants and recognise them through science before they disappeared. And to save plant species, he said that it would be necessary to use both forms of knowledge, scientific and Indigenous.

On the afternoon of the second day, the speakers turned to the topic of Plant Teachers.

Selvagem will not be tamed and does not shy away from sensitive subjects.

Botanist Alexandre Quinet, from Rio de Janeiro Botanical Garden, spoke about what he learnt from **Huni Kuĩ** shaman Agostinho Ika Muru, a man he called a ‘forest scientist’, who knew how to observe plants and understand their beneficial properties. For the **Huni Kuĩ**, said Quinet, many plants have names associated with a medicine or a benefit for a person – for example, plants that help children grow and learn well. The **Huni Kuĩ** have plants that help people learn. And in the Indigenous pharmacopoeia, *ayahuasca* is the teacher of teachers. Many Indigenous peoples from the Amazon use this plant, which has names in several Indigenous languages. And all the groups that use it agree that a special preparation is needed, through diet, meditation and good thinking. He said that **Huni Kuĩ** people see *ayahuasca* as a universal school, which also involves dancing, or a festive moment for the body – a healing related to joy. *Ayahuasca* teaches people from different cultures to come together and recognise each other; and *ayahuasca* makes things move in the psyche and transforms the way people think about life; and this leads to a better understanding of ecology and nature. Quinet said that shamans act as mediators between people and plants, and that plants can provide advanced knowledge to people without formal education.

Anthropologist Els Lagrou pointed out that science not only has difficulty communicating with the knowledge of Indigenous peoples, but also with different parts of itself – from one discipline to another. And she reminded us that the anthropologist Claude Lévi-Stauss had long ago made it clear that science and Indigenous knowledge were parallel ways of acquiring knowledge, and that traditional knowledge, like science, depended on precise observation and the formulation and tests of hypotheses – in other words, the same mental operations. For Lagrou, reconciling science and Indigenous knowledge meant looking critically into the history of modernity’s philosophical project. She explained that separating human beings from nature was the basis of Western culture. She quoted the **Yanomami** shaman Davi Kopenawa calling westerners

‘commodity people’ who think in short terms. This coincides, Lagrou said, with the views of ecologist Gregory Bateson, who coined cybernetics and who denounced the short-term thinking of modern people. Indigenous forms of knowledge are interesting on their own, said Lagrou, and the aim is not to validate other forms of knowledge with our science, but to rethink more globally the conditions of knowledge production. She said that Indigenous ways of knowing ask other questions about the world. And that the *Huni Kuĩ* had revealed worlds to her about which she knew nothing about.

The last speaker was Pedro Luz, an anthropologist and ethnobotanist who contributed to the *Healing Book of the Huni Kuĩ*<sup>2</sup>. He said that when he examined medicinal plants in collaboration with the Indigenous peoples, they would say ‘this plant is good for such and such’ and then he would go to the laboratory and confirm it. He said that it was a problem for science that Indigenous plants were so effective, because sometimes the reason given for their effectiveness eluded scientific analysis. He gave the example of an Indigenous informant who indicated a plant was good for leprosy, based on its morphological aspect. This was known as the ‘doctrine of signatures’ and science found the idea problematic. But in the laboratory, he confirmed that the plant contained an oil that remains the only medicine for leprosy. Humans were pragmatic, he said, and if something worked, it worked. ‘Plant Teachers can reveal that another plant is a remedy’, he said, ‘and as Els Lagrou just said, that implies a different ontology’, which is to say a different understanding of reality’s nature. For Luz, it was possible to communicate with plant intelligences and learn from them. He pointed out that Western science was now studying plants such as ayahuasca and psilocybin as remedies for depression. But the future of these plants is not so much as Western medicines; more importantly, he said, they present a chance of communicating with other intelligences. ‘I’m talking about openness to the possibility of other intelligences’, he concluded.

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2. *Una Isi Kayawa: Livro da Cura do Povo Huni Kuĩ do rio Jordão* [*Una Isi Kayawa: Healing Book of the Huni Kuĩ of Jordão river*] (Dantes and Rio Botanical Garden, 2014).

I loved the first Selvagem cycle, because it allowed scientific and Indigenous voices to complement one another and, in this way, science and Indigenous knowledge were able to shed light on each other. The first Selvagem cycle was a fine blend of Indigenous knowledge, art, music, history, botany, anthropology, activism, ecology and astrophysics. The world needs more of this Selvagem spirit. It's a concept that you can export. I haven't seen anything like it in Paris, New York or London.

If you were to export Selvagem, you would have to ask Ailton Krenak to teach people from other countries on how to mediate between knowledge systems. That in itself would be useful. He is a diplomat between systems of knowledge, a notion formulated by the philosopher Bruno Latour, but incorporated by Ailton.

Several Selvagem speakers referred to life as one big totally interconnected system, of which humans are part of. It's true that the scientific community now recognises that life on Earth is made up of a crowd of organisms, including human beings, and that together we all form a mega entity of planetary size: the biosphere. This thin layer of life that surrounds the planet is self-regulating on many levels, but its scale is so vast that many people find it difficult to conceive. The biosphere is sort of a hyperobject: it remains out of reach because it's too big for individual organisms like us; we know it exists and that we are part of it, but we can't see it or touch it, just because we live inside it.

I would argue that the cosmic serpent described in Amazon stories about life provides an image with which they can visualise the biosphere. In various Indigenous representations, the Cosmic Serpent surrounds the world. What better image for the global life network based on DNA? It encircles the Earth, and DNA itself has a serpentine shape.

Visualising the biosphere by putting a serpentine personality in it, may not be to the taste of objective science, which generally seeks to evacuate the subjective and avoid personification. But the Indigenous approach to knowing the world is to personify it – to treat plants, animals and landscape parts as people. And there can be wisdom in this animistic approach. In the words of Luis Eduardo Luna, animism can be 'a way out of today's ecological crisis'.

It makes sense that the second Selvagem cycle centres on the biosphere. Getting contemporary humans to appreciate the biosphere is one of the key issues in the world today. So how can we help the world's citizens form an image of the biosphere? Perhaps, following the logic of an Ancestral Future, the Cosmic Serpent will allow people to visualise the biosphere in their minds and be able to understand it. In this case, I suggest we gather images of the Cosmic Serpent encircling the entire world and look for a biosphere logo – or an *imago mundi*, if you prefer, an image of the world. And, of course, there may be other ways of sharing biospheric knowledge. The discussion is now open.

In my opinion, the Indigenous technique of passing on knowledge through stories is hard to beat. I loved the story of *Tōrāmũ Kēhíri* about the grandmother who created the world. From now on, whenever I hear about the big bang, I will think of the grandmother smoking tobacco in the dark and thinking about creating the world. And I will think of the Cosmic Serpent canoe launching human-fishes across the landscape.

Selvagem 2019, please tell us stories and knowledge about the biosphere that shines a light around the world.

Jeremy Narby was born in 1959 in Montreal, Canada. He studied History at the University of Canterbury and obtained his PhD in Anthropology from Stanford University in the United States. He spent many years in the Peruvian Amazon, alongside the *Ashaninka* people. With the aim of contributing to the fight against devastation of all kinds, he catalogued the Indigenous use of forest resources. He has written many books dealing with Indigenous knowledge systems and the use of ayahuasca to gain knowledge. Among his works are *Plant Teachers: Ayahuasca, Tobacco, and the Pursuit of Knowledge*, a book published in Portuguese by Dantes (2022); *The Cosmic Serpent: DNA and the Origins of Knowledge*, also printed in Portuguese by Dantes (2019); *Shamans Through Time* (Penguin, 2004); and *Intelligence in Nature: An Inquiry into Knowledge* (Penguin, 2006).

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More information at [selvagemciclo.org.br/en/](http://selvagemciclo.org.br/en/)

All Selvagem activities and materials are shared free of charge. For those who wish to give something back, we invite you to financially support the Living Schools, a movement of support to five Indigenous projects of strengthening and transmission of their knowledge.

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