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Sent: Saturday, August 31, 2024 4:11 PM
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Subject: Create Conditions Conducive to Life - Janine Benyus

Applying Nature's Wisdom to Human Problems with Janine Benyus - TGS 135

https://youtu.be/fB9LCjjd3hc?si=E9Cc6WRMWGIlwnLM

(Conversation recorded on June 25th, 2024)

Although artificial intelligence tends to dominate conversations about solving our most daunting global challenges, we may actually find some of the most potent ideas hiding in plain sight in the natural world around us.

In this episode, Nate is joined by Janine Benyus, who has spent decades advocating for biomimicry – a design principle that seeks to emulate nature's models, systems, and elements to solve complex human problems in ways that are sustainable and holistic.

What would our social and technological innovations look like if we started from the foundational requirement that they create conditions conducive to life? In what ways has biomimicry been inspiring projects for the last few decades, revolutionizing everything from energy production to food storage? How can we take biomimicry to a deeper level, changing the way we design and build to be attuned with local habitats and 'return the favor' to nature – helping foster cleaner and more resilient ecosystems?

About Janine Benyus:
Janine Benyus is a biologist, innovation consultant, and author of six books, including Biomimicry: Innovation Inspired by Nature, in which she popularized an emerging discipline that emulates nature's designs and processes to create a healthier, more sustainable planet.
In 1998, Janine co-founded Biomimicry 3.8, the world's leading nature-inspired innovation and training firm, bringing nature's sustainable designs to 250+ clients including General Electric, Google, Herman Miller, Levi's, and Microsoft.

In 2006, Janine co-founded The Biomimicry Institute, a non-profit that empowers people to create nature-inspired solutions for a healthy planet. The Biomimicry Institute runs annual Design Challenges, a Global Network of tens of thousands of educators and entrepreneurs, and AskNature.org, the award-winning bio-inspiration site for inventors.

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There's no business on a dead planet.

We need a paradigm shift.

Our education system needs to teach us how the biological and the ecological world of work. This is all through life learning so this needs to be in schools, at community centers and paid outreach. If we want to make sure that what we're doing succeeds then we need to have everybody educated. We need biology, ecology, biochemistry and biomimetic chemistry classes. That should be required reading for humanity.

Here are simple definitions for each of the terms:

1. **Biology**: The study of living things, including their structure, function, growth, and how they interact with their environment.

2. **Ecology**: The branch of biology that focuses on how living organisms interact with each other and their surroundings, including ecosystems and the relationships between plants, animals, and their habitats.

3. **Biochemistry**: The study of the chemical processes and substances that occur within living organisms, such as proteins, enzymes, and genetic material.

4. **Biomimetic Chemistry**: A field of science that looks at how nature solves problems and uses those ideas to develop new materials or technologies that mimic natural processes.

Biomimicry classes.
There is a 18-month course at Arizona State University, certified biomimicry professional class. We need to send people there and pay their tuition.

Biomimicry,
What would nature do here?

We have too much carbon dioxide in the atmosphere right now, but carbon dioxide is an ingredient in every recipe in the natural world. Every green plant you see is carbon dioxide, coral revees are made out of dissolved carbon dioxide, all the shells in the ocean are dissolved carbon dioxide. There about six biosynthetic pathways where you can take CO2 and turn it into stuff, what life does.

Industrial ecology is where you put companies together in a food web so you can co-locate them or you can just have them mapped in a municipality. You look around and you say 'who's by product could I use as my raw material locally? Whose waste product could I use to put into my greenhouses? I could collate a bunch of companies and they could all feed on each other like a food web, those are called industrial ecologies.

Mutualism Web. Cylicit, the quality or state of something that occurs or moves in cycles

We need decomposers, the things that take things apart and put into other kinds of processes.

We need a department that looks at the material flow and energy in our city.

What do we have here that we're currently shipping out of here, either to the landfill or to the atmosphere or to the water column? And how do we turn those pipes back around and actually design for value add economies in our county?

The people who make our world and create the policies do not have access to biological information. Imagine if every engineer in the world, the first class they took in school was, how does Nature pump?

Remember that you live on a competent planet and that you're a part of it, that our species is young but we are really really good at mimicking.

Begin to think about us as a species as much as you can, that mega tribe at larger species thinking. Remember, we are part of these grand cycles, the carbon cycle, and nitrogen cycle, the oxygen cycle, the water cycle and we've been monkey wrenching those cycles and you are a part of the generation that is going to start to put us back as beneficial participants using our brilliance, your brilliance. It's going to be continually trying to find an antidote to your despair. So if you feel despair remember the antidote to it is find systems that work and make that your standard and live your whole life trying to get closer to that standard.

Lifelong education - help people and enable people to fall in love with their places. And have everyone take that course. The course of how life works and they could compare before they ever design anything. They could compare how life, how the rest of life works with how we work with our industrial culture. Reconnect people with the natural world. It would increase their respect.