Jere Northrop

I was born in 1942 in Western New York State and have lived here for most of my life. In June, 1964 I received an AB in biology from Amherst College, and in January, 1969, a Ph.D. in biophysics from Syracuse University. This was followed by postdoctoral study at the University of California at Davis.

In 1970 I had the great good fortune to marry Lynn Benner, a brilliant artist, toy designer, and sculptor. She has a deep understanding of how the artistic process can combine with an aesthetic empathy to lead to a happy and successful life. Over the last 54 plus years this has emerged as the major philosophical influence for my work. In particular, it has served as a guide for how one can use art to rigorously extend science and technology beyond our current limits. You can see some of Lynn's work at https://www.lynnnorthrop.com I especially recommend the two videos on that site.

In 1970 I began a life long research exploration of the foundations of science and how this could lead to a new paradigm for understanding living systems. This has been based on the application of the Maximum Entropy Principle to complex biological and ecological phenomena. It has also been combined with a hands on involvement with large scale complex microbial systems in biological wastewater treatment for municipalities and industry, in manure and nutrient management systems for large animal agriculture, and in recirculating aquaculture systems.

In the early 1970s this work was continued at the Center for Theoretical Biology at the State University of New York at Buffalo, and was coupled with a series of entrepreneurial startups involving the use of complex microbial based systems for food production and ecological cleanup and restoration.

In the 1980s I worked as a chemist and process superintendent at a large advanced municipal wastewater treatment plant in Amherst, New York. While there I continued the theoretical development of process control and operational procedures for complex biological and ecological systems (including my first patent which dealt with biological phosphorus removal), and gained extensive experience in how these systems work in on line real time situations.

In September, 1989, I cofounded Bion Technologies with my brother, Jon Northrop, to implement this biotechnology for nutrient and manure management systems for large animal agriculture, and the food production and processing industries. The technology consisted of an integrated recycling system comprising a microbial growth bioreactor, solids separation and processing ecoreactors, and polishing wetlands. The process combined low oxygen nitrification – denitrification with microbial nutrient capture to virtually eliminate non carbon dioxide greenhouse gas emissions and odors. I invented and patented this technology and served as president of the company for its first ten years, subsequently staying on as Chief Technology Officer and Senior Technology Director for the next eight years. The company is still active see, https://bionenviro.com/

In 1999 I cofounded As It Is Inc. with Jon Ray Hamann. This company was formed to launch TrueThinker as a language-independent, subscriber based intelligent website that automated and facilitated the discovery, retrieval, and organization of information sought by users on the internet. This technology was based on the AutoGnomeTM, a self(auto)-knowing (gnome)

purposeful software system capable of autonomous inquiry, inference, and intuition in decision-making, that had been developed by the AutoGnomics Corporation. The technology comprised a system of mechanized semiosis based on Gene Pendergraft's specification of the semiotics of Charles Sanders Peirce.

In 2002 I posted a language website, http://www.ododu.com This comprises a constructed language that was created to be a useful tool for improving our ability to think. The premise was based on a strong interpretation of the Saphire Whorf hypothesis that was interpreted to mean that the language you use determines what you can think. As such its development was useful in the creation of environmental ecotechnologies and it has continued to be useful in this capacity. Ododu continues to evolve and has recently been instrumental in the generation of the Relational Symmetry Paradigm.

Bion was dependent on regulatory enforcement for widespread application of its technology so in 2008 I cofounded TimberFish LLC with Aaron Resnick. The driving concept here was that you need a strong and profitable economic driver that is not dependent on subsidies or regulatory action to achieve widespread application of environmentally sustainable technology.

The TimberFish Technology locally produces contaminant free seafood from the microbial decomposition of plant material in the presence of nutrients. Often the nutrients are obtained from waste streams from the food and beverage industry. The result of this process is the generation of food from sources that are not currently used for food production such as sustainably managed forests and the waste nutrients from the food and beverage industries. The process cleans up wastewater, produces renewable energy, and restores the microbial health of soils. It also incentivizes reforestation and deforestation avoidance and its widespread implementation could play a major role in reversing and mitigating Climate Change.

Once again I developed and patented this ecotechnology and continue to serve as a managing member of TimberFish.

Here is a photo history of my journey.