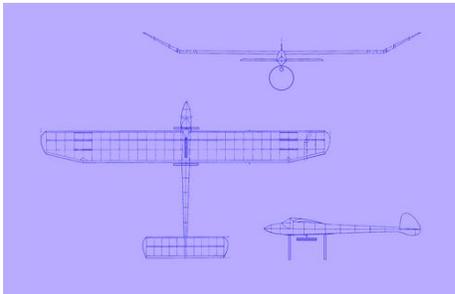


For Immediate Release

MONTREAL REVEALS GPS FOR BIRDS DISORIENTED BY CHANGING CLIMATE

Electromagnetic Navigational System Headlines Reciprocal Biomimicry Initiative Led By Jonathon Keats... Initiative Will Also Provide Urban Camo For Reptiles And Wind Energy For Trees

24 October 2019 – The migratory flyways of birds have evolved over eons, oriented to correspond with their biological needs. However their flyway maps are rapidly losing relevance as ecosystems are altered by human-induced climate change. Research on species ranging from mallards to cranes has shown that long-established breeding grounds are increasingly inadequate. To ensure that birds arrive at the right place at the right time, modern flocks require on-the-fly guidance directed by advance reconnaissance. The first such system will be exhibited at Visual Voice Gallery in Montreal this month.



"The basic idea is to provide flocks with escort drones that guide birds with strong electromagnetic fields," says experimental philosopher Jonathon Keats, who has adapted well-established human technologies to avian specifications. "We electrically override the birds' geomagnetic navigation system so that they fly farther west or east according to where ground cameras detect optimal habitats."

GPS for birds is one of many human innovations that Mr. Keats is retrofitting for the benefit of other species, especially organisms that have been adversely affected by human civilization. In addition to the drones, Visual Voice will showcase several of these technologies, including a wind energy harvesting system for plants and urban camouflage for reptiles.

"Over the past century, engineers have become increasingly interested in the innovations of other species, and adapting them to serve human needs," says Mr. Keats. "This process of so-called 'biomimicry' is now commonplace." Velcro is based on thistles, for example, and the beak of the kingfisher provides just the right curvature for the nose cones of aerodynamic bullet trains. "We plunder other organisms' intellectual property and use it to make the world better for us at their expense," Mr. Keats asserts. "I think it's high time for some reciprocal biomimicry."

The Reciprocal Biomimicry Initiative is the world's first and only program dedicated to systematically reviewing human technological capabilities on behalf of non-human entities. Under the direction of Mr. Keats, and encompassing research conducted at Bucknell University's Center for Sustainability & the Environment, research is aimed at identifying both opportunities and needs.

Some matches are relatively obvious, such as the application of urban camouflage to turtles. "As cities encroach on their habitats, turtles' natural camouflage no longer hides them from predators," Mr. Keats observes. Black-and-beige digital camouflage developed for urban warfare offers a readymade improvement, and can be wrapped over turtle shells like netting on an army helmet.



Mr. Keats's plan to provide trees with wind turbines is directed more toward the future, as cloud cover changes. "It's really about providing photosynthetic organisms with an alternative energy source," says Mr. Keats. "One of the most daunting challenges of climate change is uncertainty, so long-term survival is a matter of resilience." His wind farm will provide stable illumination regardless of atmospheric conditions.

The innovations on view at Visual Voice remain in early stages of development, according to gallery director Bettina Forget, but they already hold great potential in terms of human impact. "I am excited to showcase Jonathon Keats' though experiments at the gallery. They will certainly spark conversations with the general public about climate change and the Anthropocene. Jonathon's works emphasize our responsibilities to this planet with bright wit and humor," she says.

Mr. Keats concurs that a lot of work will be needed to transform his models and prototypes from conceptual provocations into global systems with worldwide ecological impact. "My drones are made out of balsa and I acquired my camo on eBay," he confesses. But he also holds out the possibility that these inventions may ultimately prove unnecessary.

"Technological advancement is one way of overriding previous technological excesses," he says. "We're quite good at it, and reciprocal biomimicry can certainly outfit other species with our preferred survival mechanism. An alternative would be to ask how other species avoid the evolutionary end-game of self-perpetuating technological acceleration. That's a form of biomimicry that might benefit all organisms."

The Reciprocal Biomimicry Initiative will be exhibited at Visual Voice Gallery from 26 October to 14 December 2019. For more information, see visualvoicegallery.com

ABOUT JONATHON KEATS

Acclaimed as a "poet of ideas" by The New Yorker and a "multimedia philosopher-prophet" by The Atlantic, Jonathon Keats is an artist, writer and experimental philosopher based in San Francisco and Northern Italy. His conceptually-driven interdisciplinary projects explore all aspects of society through science and technology. In recent years, he has installed a camera with a thousand-year-long exposure – documenting the long-term effects of climate change – at Arizona State University; opened a photosynthetic restaurant serving gourmet sunlight to plants at the Crocker Art Museum; exhibited extraterrestrial abstract artwork decoded from Arecibo Observatory radiotelescope data at the Judah L. Magnes Museum; applied quantum mechanics to banking – coaxing money into a quantum superposition to be shared by everyone – at Rockefeller Center; and attempted to genetically engineer God in collaboration with scientists at the UC Berkeley. Exhibited internationally, Keats's projects have been documented by PBS, Reuters, and the BBC World Service, garnering favorable attention in periodicals ranging from Science to Flash Art to The Economist. In recent years, he has lectured at institutions including UC Berkeley, Stanford University and the Los Angeles County Museum of Art (LACMA), which awarded him a 2015-16 Art + Technology Lab Grant. His latest book, *You Belong to the Universe: Buckminster Fuller and the Future* has recently been published by Oxford University Press, which also published his previous book, *Forged: Why Fakes Are the Great Art of Our Age*. He was recently the Black Mountain College Legacy Fellow at the University of North Carolina - Asheville, and is currently a Research Fellow at the Nevada Museum of Art's Center for Art + Environment, a Polar Lab Artist at the Anchorage Museum, and an Artist-in-Residence at both the Fraunhofer Institutes in Germany and UC Berkeley's Sagehen Creek Field Station in California. He is represented by Modernism Gallery in San Francisco. A monograph about his art is forthcoming from the Anchorage Museum and Hirmer Verlag.

ABOUT VISUAL VOICE GALLERY

Founded in 2007, Visual Voice Gallery presents contemporary art exhibitions that create a connection between art and science. It is the gallery's aim to disrupt the artificial separation between the arts and the sciences to stimulate curiosity, exploration, and conversation. Located in downtown Montreal, Canada, Visual Voice Gallery showcases research-based artworks from Canadian and international artists in a wide variety of media, including installation and video works, photography, painting, as well as performance-based and audio works. Visual Voice Gallery also offers lectures, workshops and residencies that dovetail with the gallery's programming, and collaborates with other art and science institutions to reach the widest possible audience.