

Lazarus Canary: Thigmomorphogenesis, World Knots, and Psi Chicks in the deep-dive work of Alan S. Tofighi

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It is the supreme law of Unreason. Whenever a large sample of chaotic elements are taken in hand and marshalled in the order of their magnitude, an unsuspected and most beautiful form of regularity proves to have been latent all along.

–Sir Francis Galton, *Natural Inheritance* (1889)

Thigmomorphogenesis (plant trauma) was conceived of by Cleve Backster, formerly CIA’s top interrogator and an expert polygrapher. As proof of concept, Backster’s students “murdered” a plant in front of another plant hooked up to a polygraph, triggering an off-the-charts “trauma” reaction in the observing plant. For *Advanced and Implied Psychological Stress Evaluation for Simulacraceae, leprechaun Aglaonema, and Human No.1*, an early work realized at California Institute of the Arts, Alan S. Tofighi (they/them) had a plant witness a routine crime while hooked to a polygraph, with a plastic plant as a control. Tofighi then polygraphed themselves and compared their “trauma reaction” to that of the plant.¹ This early work—with its carefully-structured enactment of historically accurate research predicated on dubious “science”—established a trajectory for Tofighi’s practice: the works are almost always realizations of ongoing investigations into anomalous, epistemologically marginal or dubious phenomena, related artifacts, and the subcultures and epistemic bubbles surrounding them, punctuated by strange subjective experiences, anecdotes, and obsessions.

In the context of the current epistemological crisis, Tofighi’s work walks a difficult if amusing line: what is the role of the deep diver in an empire in decline, in a world subject to increasing existential threat, while its most powerful actors and institutions either tell bald faced lies or fail to find their way to something resembling truth?

In the present work, *Predictive Programming: Process(ion) of Voids and Mental Remnants (2014-2022)*, Tofighi explores humanity’s persistent compulsion to forcibly extract order and meaning from randomness—and this process’ epistemic shadow: new methods for scamming, dissimulating, pulling the wool over eyes, and hiding one’s tracks. In this examination of the technology of prediction and psychic phenomena’s weird relationship to matter and electronics, Tofighi ties an investigation into epistemic cul de sacs—the PEAR lab, its milieu, and its discontents—to one of phenomena obscured by the limits of human perception. The resulting effect is as if Hans Haacke’s spiderweb charts revealing intentionally obscured real estate relationships² were combined with the more esoteric revelation of electromagnetic waves permeating the gallery in Robert Barry’s *Electromagnetic Energy Field* (1968), or the “psychic” phenomena evoked by Barry’s *Psychic Series* (1969).

¹ In the piece’s original conception, Tofighi proposed taking a job at a convenience store in hopes of being robbed in front of the plant, triggering an authentic Thigmomorphogenic response “in the wild.” This proposal, as well as a recreation of Tofighi’s adolescent arrest for faking a demonic possession, were shot down by institutional authorities.

² This refers to Hans Haacke’s seminal work of institutional critique, *Shapolsky et al Manhattan Real Estate Holdings, A Real Time Social System as of May 1, 1971*

Sentinel Species

Miners in the 19th century used songbirds to detect the presence of otherwise undetectable deadly gases in the underground shafts in which they were working. Thousands of asphyxiated canaries later, a portable iron lung the size of a small birdcage was designed to resuscitate the tiny creatures. The brainchild of John Scott Haldane—inventor of the “Black Veil” gas mask of WWI, and a diving apparatus to prevent “the bends”—the resuscitator was built by Siebe Gorman and Co. Ltd. in 1920. Haldane’s interest in the resuscitation of this sentinel species perhaps influenced his son J.B.S.’s entry into science, his elaboration of mathematical biology, and his narration of the 1940 Soviet film *Experiments in the Revival of Organisms*.

Notorious for images of Soviet scientists severing dogs’ heads from their bodies, attaching them to artificial circulatory systems, and, in at least one (faked?) case, reattaching living head to wagging dog body, the film featured remnant crypto-Biocosmists—post-Stalinist-purge descendants of the mystical Cosmist Nikolai Fedorov and his technoscientist heir Konstantin Tsiolkovsky, an early theorist and pioneer of spaceflight. The Cosmists’ concerns were both mystical and technological—per Fedorov’s radical interpretation of biblical prophecy, they pursued two eschatological imperatives: to conquer space and to revive the dead. These seemingly bizarre priorities filtered into mainstream scientific thought of the late 19th and early 20th centuries; the canaries, like the re-cephalized canine, were revived *deus ex machina* by a science they couldn’t comprehend, for reasons simultaneously mystical and technical, making a powerful impact on the technoscientific imaginary that continues, *sub rosa*, to this day. These few resurrected creatures were anomalies among the sentinel species (lab rats, bomb-sniffing dogs), mostly killed off wholesale in the name of scientific and human progress.

Beyond the Pseudorandom

Like the elder Haldane, Sir Francis Galton was a member of the Royal Society and a ferocious defender of Darwin and his heresy. Galton’s eugenics (he coined the term and, in many ways, begot the awful legacy of so-called “scientific racism”) and other fruit of the knotted Galton/Darwin family tree would influence the younger Haldane’s field of mathematical biology, his eugenicist beliefs, and his Fabian socialism—apparent contradictions notwithstanding. The Galton Board (or *quincunx*) physically demonstrates the principle of regression to mean under the law of large numbers: balls bounce off of descending rows of interleaved pegs, tumbling chaotically, and ultimately settling into a “normal distribution”—a bell-shaped curve at the bottom of the device. Galton conceived of the apparatus as a physical demonstration of order descended from chaos, as well as a model for population genetics (it was also, more prosaically, the prototype for an entire genre of kinetic arcade games from Pachinko to pinball). Haldane and his peer Julian Huxley—who coined the term *Transhumanism* in his 1957 essay of the same name—continued the legacy of the Russian Cosmists along the lines that Tsiolkovsky delineated, subtly infusing technoscientific development with cryptic, mystically-inflected Utopian Humanism.

Today the law of large numbers—engine of Galton’s *quincunx* and Haldane’s mathematical biology—is everywhere: from strong encryption and facial recognition to “big data,” the physics of crowds, weather systems, and nuclear reactions, the particle systems generating CG explosions in the latest Marvel blockbusters and the scintillating prism-hued alien flora and fauna quietly assimilating the Earth in *Annihilation* (2018). The operation of the law of large numbers suggests just this sort of doppelganger “sentinel species,” purring along beside us, just beneath perception, quietly remaking us.

The World Knot

“One of the most longstanding dilemmas in the history and philosophy of science is the so-called mind/body paradox, which Arthur Schopenhauer referred to as “the world knot.” The problem resides in the difficulty of establishing a scientific connection between mental and physical phenomena that can specify in any useful detail how these two complementary categories of human experience relate to one another.” —Robert Jahn and Brenda Dunne, *Consciousness and the Source of Reality: The PEAR Odyssey*

In the 1970s Rene Peoc'h conducted weird experiments with chicks bonded to a robot: at birth, the chicks were removed from their mother and paired with a mobile robot whose movements were electronically randomized. As more chicks bonded with the robot, its movements became less random and more focused on the location of the chicks. According to Peoc'h's findings, the Psi-chicks' love bond with their robot mother intervened—perhaps at a quantum level—with the electronics of the randomizer built into the robot.

In 1979, the engineer Robert Jahn founded the Princeton Engineering Anomalies Research Laboratory, predicated on Peoc'h's findings: “PEAR was conceived and implemented [...] for the primary purpose of determining the potential vulnerability of physical systems and technological processes involving random elements to the conscious or unconscious intentions of their human operators. Its ancillary goal was an attempt to comprehend the implications of any such anomalous interactions for a broader understanding of human consciousness and its role in the establishment of physical reality. “

The importance of anomaly to science is summarized by Jahn and co-author Brenda Dunne in *Consciousness and the Source of Reality*; according to this history/manifesto, they pursue: “the long-revered dialogue of sound empirical experimentation with astute theoretical modeling, first proposed in the 17th century by Sir Francis Bacon as the ‘scientific method,’ *with particular attention to the role of anomalies in motivating scientific investigations, and maintaining them on realistic and productive courses* (emphasis mine).”

The online Princeton Global Consciousness Project grew out of PEAR. Per the website:

“When human consciousness becomes coherent, the behavior of random systems may change. Random number generators (RNGs) based on quantum tunneling produce completely unpredictable sequences of zeroes and ones. But when a great event synchronizes the feelings of millions of people, our network of RNGs becomes subtly structured. We calculate one in a trillion odds that the effect is due to chance. The evidence suggests an emerging noosphere or the unifying field of consciousness described by sages in all cultures.”

In February 2022, Princeton pulled the plug on both projects. *The New York Times* reported: “Over almost three decades, a small laboratory at Princeton University managed to embarrass university administrators, outrage Nobel laureates, entice the support of philanthropists and make headlines around the world with its efforts to prove that thoughts can alter the course of events.” The short article ends with a quote from Robert Jahn: “If people don't believe us after all the results we've produced, then they never will.”

Degrade the Threads

Jeffrey Sconce, in *The Technical Delusion, Electronics, Power, Insanity*, speaks of early manifestations of television-related psychosis. A psychiatrist diagnoses a patient mimicking the actions depicted in TV

commercials using materials at hand (fishbowl water for shampoo) as suffering from “*command-automatism and echopraxia to television*.” Per Sconce, “this vaguely comical portrait of psychosis and television also confirmed a suspicion already ubiquitous at mid-century: *electronic media seek to control us, perhaps even to the point of commandeering the nervous system*.” He continues: “With the Information Age, electricity has become the nervous fluid of the entire planet [...] its historical conversion into global electronics describes a concurrent shift in the species from figurative to literal cyborgs.”

With this shift, classical epistemics’ “ways of knowing” began to drift—woozy quasi-philosophies and weird epistemes proliferated and were kind of fun. In the second decade of the new century, malignant epistemes born of the id-saturated chaos of the chans began to degrade the threads, filtering upward to higher realms of media until, in an apotheosis of “*command-automatism and echopraxia to television*” reality came unmoored for entire populations. The same forces of randomness that allowed for the revolution in technoscientific development caused people fed on steady streams of “nervous fluid” to collectively, epistemically, lose their shit—atrophying such formerly prized attributes as logic, culture, and interpersonal relationships, while increasingly bizarre, polarizing epistemes unraveled former “consensus reality.”

With this work, Alan S. Tofighi continues to examine the ways in which ideas—malignant or beneficent—interact, assimilating and transforming one another and their hosts, and the ways in which new ideas are adopted or rejected, immanentizing or de-immanentizing the looming Eschaton. The work has something of the Cosmist in it, but also a real sense of body-horror dredged up from what could be described as the *chthonic noosphere*. Where the Princeton Global Consciousness Project envisioned the noosphere as a transformative layer of enlightening information “unifying consciousness” as it encircled the outer atmosphere, Tofighi goes where the predominance of evidence leads: to the depths.