Living in Theory

Navigating Chaos through Intuition and Science

Americans had a lot to process in the late 60s and early 70s: The assassinations of Martin Luther King and Robert Kennedy, the Vietnam War, the Kent State Massacre, and other shocking causes and symptoms of the hot, cold and culture wars. The publication of the *Pentagon Papers* by Daniel Ellsberg and the persecution of the My Lai massacre leader, William Calley, made an unpopular war all the more unpalatable and unsustainable. The cold war played out thousands of miles overhead, a mutual scorecard for communists and capitalists seeking cosmic distraction from the lurking specter of nuclear holocaust. Marxist, anti-imperialist revolutionaries set off a bomb in the U.S. Capitol building, revealing the radicalization of peace doves turned war hawks.

Even a seeming safe haven from sociological chaos, Boulder, Colorado, couldn't avoid the earth-shattering disruption that had become the norm. This shake-up was not violent, however, and the world it disrupted was that of Natural Science. At the 1971 meeting of the Geologic Society of America, two young paleontologists presented a paper that changed the way we think about evolution. Stephen J. Gould of Harvard and Niles Eldredge of the American Museum of Natural History argued that when two organisms branched off from their common ancestor, the rate of change happened relatively quickly, followed by periods of minimal change to the resulting species. This pattern they termed 'punctuated equilibrium,' (PE). Darwinian evolution up to that point was thought to be a slow accumulation and loss of traits over a long period of time, eventually resulting in distinctly different organisms, a transformation they coined 'phyletic gradualism.'

Introducing an idea that desecrates the standard model has a tendency to invite negative responses, and so it did with PE and so it has since Copernican heliocentrism birthed modern science in the 16th century. After shaking off the original sin of disruption, however, the best theories stand up under the worst scrutiny and settle out as the new ideal, reigning unchallenged until new revolutionary ideas replace them in more cataclysmic reimaginings of what actually happens in the physical universe. The journey of PE as a theory—disruptive insight to scientific canon—is a meta microcosm of the evolutionary pattern it champions.

For some of us, such intuitions legitimize new ideas more effectively than those mysteries gatekept and interpreted by learned intermediaries, such as the fossil record, say, or Periodic Table or Webb Telescope. Though finding alignments between theory and experience is hardly a rigorous approach to truth-seeking, they suggest a common movement in the right direction. For instance, in 1978, ecologist Joseph Connell, after studying the effects of ocean waves on barnacles, developed the Intermediate Disturbance Hypothesis (IDH), which posits that peak biodiversity, and thus ecosystem health, results from environmental disruption that happens not rarely nor frequently, but somewhere in between. The idea agrees nicely, doesn't it, with 'All things in moderation' and the lesson of Goldilocks' misadventures?

Such a happy marriage between value-driven intuition and the patterns and processes of the natural world can be found in sociological discovery as well as evolutionary theory. Take the effects of housing conditions on drug addiction, for example, as Canadian psychologist Bruce Alexander was curious and clever enough to address in 1978 by creating Rat Park, a rodent utopia. While other unfortunate study subjects were doomed to live isolated in featureless metal laboratory cages, Park residents had more than enough room and resources to play, eat, mate, sleep and raise a family. Alexander and his team supplied both groups with regular and morphine-laced water. Caged rats reliably chose the latter, and would often drink lethal volumes. Community rats almost always chose pure water, and no overdoses resulted from infrequently indulging the party life. While reinforcing the essential role of healthy social connections in recovery from and prevention of addiction, the divergent behaviors also manifest ancient wisdom that 'Boredom is the root of all evil.'

The Christian Bible, one of two tributaries feeding the river of Western Civilization (the other being *demos kratia*, or *people power*, a form of government first practiced in ancient Athens), is a symbolic source reference for synching metaphor with what actually happens. In 1953, James Watson and Francis Crick—regrettably without a nod to the overlooked and underappreciated Rosalind Franklin—unraveled DNA's double-helix structure, with phosphate groups and nucleotides forming the rails and rungs of a long, strong ladder serving as life's tissue-building template. To make more information available in limited space, DNA folds into secondary, tertiary and quaternary structures; these last are commonly known as chromosomes. Microchips, also featuring maximum data on minimal real estate, govern the networks of our world body like DNA administers to those of our organic bodies. An actual Jacob's Ladder connects humankind to the heavens, giving us the godlike ability to cure diseases, resurrect extinct species and seamlessly integrate technology with human physiology.

Back to PE, and the idea of paroxysmal spats and giggles preceded and followed by long periods of stasis. Thanksgiving dinner, a two-hour feast, is predicated on weeks of planning and days of prep followed by tryptophanic lethargy. The wedding day, a singular six-hour festival of love, culminates months of logistical antagonism and results in, ideally, decades of unvarying happiness and monogamy. Graduation, new job, new residence, annual conference, having children—all reinforce PE's premise.

Today, like our predecessors from 50 years ago, we are undergoing rapid change in a short time. According to PE, we are in the midst of a violent shift in sociological speciation. And this time of chaos will be followed by extended calm. Perhaps, however, we are in the vortex of anti-PE, or punctuated punctuation, where perpetual, sensational disruption has rendered species divergence infinite and ongoing. But whether a predictor of future peace or just another victim of tech addiction, the theory of PE provides a template for living in a time of great change: short breaks to emote, explore and play, with long periods to produce, learn and collaborate.

If we have learned anything from the most famous of theories, Einstein's model of gravity, it is that everything is relative. This includes people. Selfishness, corruption and condescension

demand rebuke: ‘It’s not all about you.’ By embracing the idea that everyone is different for different reasons, however, we will always be guided by curiosity and willingness to ‘Walk a mile in another’s shoes.’