

# Technological Progress and Humanity: Essay 1, America's Emerald City

Progress, creative destruction and the scorched earth reality at the end of the economic world

By Bruce Cuthbertson

*I'm standing in Silicon Valley, symbolically ground zero for American innovation. As I look around at the machinery of progress, at the engine of innovation, I wonder, Where did all the humanists go?*

*American photographer and essayist Wright Morris said an American is a man who faces both the past and the future. "Nostalgia rules our hearts while a rhetoric of progress rules our words."*

*My consideration in this piece may be about trying to grapple with the two sides of my own America. One is the humanist and patriotic America of John Dewey and Ralph Waldo Emerson. The other is the America of tomorrow, the America of progress and innovation.*

## **The Mythos of Silicon Valley**

Silicon Valley is America's Emerald City. It's a utopia that's largely built on the perpetuating idea that innovation and technology can lead us to a better world, that technological progress means progress for humanity, that it will make our lives better individually and collectively.

This is a utopian myth.

It's a vision shared by millions. We've replaced our gods and our values with technology and a myth of inventing the future.

The vision invites us to create the future as innovators, as Mavericks, geniuses, visionaries, as latter-day idols of the American West. In this future, unbounded wealth and freedom are dangled within reach of our fingertips, but only the precious few who win the innovation lottery will ever realize those vast rewards. And for every billionaire lottery winner like Mark Zuckerberg or Jack Dorsey, there are tens of millions of hard-working people scraping to get by in marginally middleclass lives.

The myth of inventing the future isn't only about Silicon Valley. It's about the whole of America. It's about what we call "progress."

## **The Pursuit of Technological Progress**

There's a rationalization in Silicon Valley that technological innovation can lead us to a better world. It's self-deceptive.

The bigger problems (of income inequality; extreme poverty; declining lifespans; poor healthcare and ever-rising healthcare costs; the elderly increasingly dying alone and destitute; and our increasing loneliness) are only made worse by the steady march of individualistic capitalist innovation, technology and what economists call "creative destruction."

Creative destruction, which has been a buzzy Silicon Valley phrase for years, is the process of perpetual innovation and technological progress that invents new industry to replace old, installs new cohorts to replace aging but able workers, and articulates new belief paradigms to replace wisdom itself, which is dismissed with each expelled generation. As we become ever more removed from where we come from, we start to forget our history and in that, lose touch with our humanity.

American naturalist Loren Eiseley, in his book *The Firmament of Time*, wrote: "The western scientific achievement, great though it is, has not concerned itself enough with the creation of better human beings, nor with self-discipline. It is concentrated instead upon things and assumed the good life would follow. Therefore it hungers for infinity."

The promise of innovation; of our current form of capitalism; of technological progress; hasn't lifted humanity up.

### **More Connected Yet Lonelier**

Worse still is that as the world becomes more connected, we're becoming lonelier and more disconnected from each other. People feel ever isolated. Man spends his days and hours and minutes focused on the machines around him. In this external world of machines and technology, he forgets to live with his thoughts and to connect with himself; to that part of his being that bonds him with the rest of humanity. This man, as Eiseley observed, "has less time alone than any man before him." And in that, he is lonelier than any man ever, perhaps since man's predecessors began our technological journey when they first used stone tools 34,000 centuries years ago.

Ralph Waldo Emerson said man has a "sense of being which in calm hours rises," and this sense is "not diverse from things, from space, from light, from time, from man, but one with them, and proceeds obviously from the same source whence their life and being also proceed." As man stops spending time with his thoughts, perhaps he becomes disconnected from what unifies all of man, us to each other and us to the legacy of our existence; what binds our humanity together; what makes Plato's or Shakespeare's words or the teachings of the Buddha or Jesus feel timeless and fresh to our concerns, even today. And consequently, he suffers a new kind of loneliness that perhaps man has never known before, a loneliness of not knowing his own humanity.

We know there's more to our purpose than the pursuit of the external. But it remains elusive. Canadian poet and spiritualist Toko-pa Turner, in her book *Belonging: Remembering ourselves*

*home*, says we're orphans, each of us increasingly isolated from the world around us, from each other. "(We are) made orphans by a culture that, in its epitomizing of certain values, rejects others, forcing us to split off from those unwanted parts of ourselves. And this is perhaps the worst orphaning act of all, because it is an abandonment in which we are complicit."

We've looked outward to technology, to modern science for answers and have lost our internal compass, or rather, we've lost the ability (the human in us) to synchronize our internal and external worlds. We hope to be heroic to ourselves, to put our lives in context of meaning, to become the best version of ourselves. We'd like our journey to go somewhere relevant and make an impact. We want to be valued by society, by our peers. But we've lost our way.

And we've glommed onto the one myth in front of us, the myth of Silicon Valley, innovation and technology, the American myth of progress and inventing the future, hoping it can point the way, give us meaning. But it's a myth that exploits our sense of hope and preys on our fear and our individual survival instincts. At its core, this myth divides us, separates us, orphans us.

### **Innovation is Capitalism's Elixir**

We loosely associate innovation with creativity and human ingenuity in creating tools to solve the new or novel problems we face. We celebrate in those accomplishments; we're inspired by them. Our modern myths are woven around this concept of innovation.

Innovation and the industries of innovation are fueled by individual dreams, hope and ambition, of grit and perseverance and hard work, all values we share. Where once these values united us, gave us common purpose, they now divide us. They've been appropriated by individualistic capitalism. And we've been complicit in letting this happen.

Capitalism wasn't always this way. Following WWII, our country was guided by a fairer version of capitalism, which saw the creation and empowerment of a robust middle class and the rise of worker rights. There was a mentality that we were all in this together, united through a shared sense of existence. I won't lessen the moral problems that society faced in the post-war era, as blacks, minorities and women fought and died for civil rights and equality. It continues today and only made worse by the economic divide. But American capitalism at that time was driven by interests greater and broader than profit alone. As American philosopher Richard Rorty alluded, American pride transcended economic class. The outcomes of capitalism more or less worked for the majority of the country, even though *and perhaps because* profit and wealth *were not* the primary drivers in society.

### **The Reagan Experiment**

The thing about today's capitalism (which essentially started with the Reagan experiment in extreme laissez-faire economics and Milton Friedman's greed and selfish-based war cry against government and the humanity of a moral democratic capitalist system) is that it divides us.

We drifted these past 40 years and as things got worse, we let fear-based politics of "us versus them" divide us even more. The rise in tribalism and populism is just a means to put blame

somewhere else; to scapegoat our own inability to fix the circumstances we find ourselves in; to create an enemy out of our brother or sister, an enemy we can put a face on; and to deny that the system itself, the system we created and that we participate in, is failing, or that we've failed to steer our democracy toward more just and equitable outcomes. Reagan's capitalism won out and slowly transformed us from united to divided.

We've chosen *and continue to choose* not to blame the problems on unfettered capitalism, but to blame immigrants and minorities and elitists and the educated. We chose to blame China's factories and India's call centers. We chose to blame Washington. We chose to blame the poor and we chose to blame the rich. We chose to blame government, even a government that we undermine at every opportunity. But we've never looked inward at America's soul and at the disease that's destroying us.

The rhetoric of Reagan and Milton Friedman's capitalism wasn't just about isolationist laissez-faire economics, it was *and has always been* about undermining the public's trust in government institutions and by proximity, America's democratic systems. It was about speaking against the benefits of government and about not entrusting the government with providing protections and services to the people (the common good), such as health care, utility services, clean water, clean air, open spaces and insurance of all types, including a safety net for those who need it.

This rhetoric used terms like "welfare state" and "personal freedom" to chip away at the common good, in favor of separating us. The underlying motive was always to disrupt trust in our institutions and hinder government services, which would lead to fewer restrictions (regulations) on laissez-faire capitalism. The end result has provided the extremes in wealth disparity we see today, along with many other (environmental, social, economic) externalities that are getting harder to ignore.

### **Genesis and a Theory of Everything**

The genesis of innovation, selfish capitalism and Silicon Valley's techno utopia goes back to Joseph Schumpeter's theory of Creative Destruction and back further to the Enlightenment. It eventually finds its own modern identity with Reagan's experiment, which resulted in the successful entrenchment of laissez-faire capitalism throughout society.

It began when science started to chip away at the world as portrayed by mysticism and religious belief systems. Galileo probably made the first big dent, by looking beyond the known heavens at the greater universe. Francis Bacon, in the same era, gave us inductive reasoning, the ability to deduce facts from careful observation. With Bacon, observational conclusion (external) began to disrupt theological myth (internal).

It took a step forward in the next century with Isaac Newton in the Age of Reason, when he gave us the tools to break apart the universe with reductionist science, putting the modern world within reach. It progressed through Charles Darwin's evolutionary systems and our overly narrow and misguided interpretation of "survival of the fittest," Adam Smith's "Invisible hand" (the selfish interests of the business owner, not their benevolence, are what benefit society) and

John Locke's notion that property rights were natural rights, which became foundational to our current form of government *and* to capitalism.

These men of science and philosophy paved the way to modernity and benefited civilization in profound ways. From them, we've explored infinity without and within, to the edge of the universe and into the workings of the body and mind, and we've gotten a peek at the beginning of time. Technological progress has taken us through the industrial age to modernity. We've seen lifespans increase and we've become able to feed most of the world today. We've seen democratic society organize and sustain itself.

With the Enlightenment, science ultimately triumphed over religion, or rather, as theoretical biologist and complexity scientist Stuart Kauffman said, man found in science "a theory of everything." And in that theory, we thought we'd find objectivity, a perspective to see and know everything. But we perhaps forgot that we exist within the universe, not apart from it. And thus, we can never know the elusive objectivity that we seek, what we once sought to find in the Garden itself.

### **Pursuing the Infinite**

There was a sense among the early scientific trailblazers and explorers of Bacon and Galileo's time, perhaps it was in the zeitgeist, that by going out, exploring nature, pursuing the infinite, that the Garden or one of its four rivers might be stumbled upon in some far recess of the world. Even then, man sought to synchronize the external (observational) with the internal (mythological).

In the Age of Reason, through reductive materialism, we came to believe we could reduce the world to knowable parts (breaking it into smaller and smaller scientifically observable pieces), whereby we might glimpse the whole (and god's intentions) from the component and eventually understand the universe in its entirety.

In this, we replaced our own gods and started to believe that if we could uncover the secrets of the universe through reductive science, we might eventually be able to control nature (and ultimately conquer our gods). Perhaps we forgot, as Friedrich Nietzsche repeatedly tried to remind us, we're still *human, all too human*.

### **Creative Destruction: Technological Progress or the End of the Economic World?**

Following in the footsteps of Darwin and Smith, economist Joseph Schumpeter outlined a theory of innovation and creative destruction in his 1950 book, *Democracy, Capitalism and Socialism*. In basic terms, creative destruction is the cycle of life. New firms disrupt and replace aging firms, remaking those markets in the process. Then, they themselves mature and grow old, only to be disrupted and replaced by innovative new firms.

In Silicon Valley, creative destruction often evokes positivist mythologies about innovation creating new markets and ever-expanding opportunities and wealth possibility. The business section of the bookstore is filled with titles advising leaders on the practices of innovation,

disruption and discovery or creation of new markets. Like so many others, I've written on and have advised companies on these same practices.

Creative destruction recognizes that in order to create new industries, we have to destroy old ones.

Entrepreneurs argue that the jobs and new industries they create will more than make up for the losses of jobs and industries they might destroy in the process. But this isn't true over the long term.

The problem with creative destruction is that it's not sustainable. Even Shumpeter thought so.

Part of the process of creative destruction is that it doesn't merely replace old industry with new, it removes partners and participants from the capitalist structure. As people become displaced, they become unable to buy the goods and services provided by capitalism.

Further, as we shift more and more of our economy to technology jobs, the economy becomes more singular. And ultimately, as technology progresses, it will eliminate those jobs within technology itself. People's individual skills will not be able to keep pace with technological progress. Further, AI will slowly replace the engineers, developers and coders whose labor built Silicon Valley. This progression is nothing new. We've been witnessing this happen for a long time now. But the speed of change is increasing.

### **The Law of Innovation**

This process, what we might call the Law of Innovation (likely a cousin of Moore's Law), will continue to speed up. The rate of innovation (technological change) in an economic sense will increase the rate with which industries are disrupted, stressing both the labor force and the stability of our economic systems. We call it "progress," but its perpetual economic growth is not sustainable. Shumpeter likely sensed this.

As technology disrupts industries, its impact lessens the value of labor, not only in isolation but broadly across society. In the economic equation, technology has always served to displace labor and decrease labor costs, often by systematizing and speeding up processes. It used to be that society was able to absorb the disruptions of innovation because they were slower moving and dispersed. Further, the benefits often outweighed the negatives. Shifting economies could absorb workforces more easily.

As industries are disrupted at a quicker rate and technology plays a larger role in the economy, society's ability to adapt is decreasing. There's a cumulative impact on the workforce: The value of labor is perpetually diminished by ever-new technologies, which are shifting the balance of the economic equation. This may partly explain why we might experience low unemployment without corresponding wage increases.

It's unclear if an equilibrium can be reached, where technological progress will find a balancing point with human life and economic survival. This perhaps depends on how the human workforce might adapt itself in a singular-focused future and how technology might balance itself with labor. Possibly, the complexity that innovation adds to an integrated and systemic economy will slow down the pace of economic change by putting drag (economic friction) on the increasing momentum of innovation and progress.

In short, complexity is a negative externality to technological progress, which perhaps gives us more time to catch up and adapt. But that externality is largely paid for in the time we spend with our machines, and it's likely that technological progress will still outpace the labor force's ability to adapt fast enough.

Innovation, in its role as capitalism's elixir, is dismantling society and the values we once held dear. It's likely that the gains of progress won't be able to outpace the damage it leaves behind. This unrelenting pursuit of technological advancement and perpetual economic growth has a scorched earth effect.

### **The Promise of Tomorrow**

Even in 1960, Eiseley was prescient of the determinant of progress, "Never before in history has it been literally possible to have been born in one age and to die in another."

And we celebrate it. At a recent lunch, an acquaintance was talking about Walter Isaacson and his book on Leonardo Da Vinci. More than at any other time in history, he said, today's Silicon Valley feels like what Da Vinci's Florence must have felt like. I think he meant it's vibrant with possibility about the future, that the electricity in the air is reminiscent of Da Vinci's time. He's right. But perhaps not in the sense that in Florence, there was a coming together of philosophers, poets, artists to embrace the day; to discuss ideas in the pursuit of humanism.

Silicon Valley, for all its accomplishment and for what it represents, has mostly become an echo chamber of ideas on technology and the future, with a focus on money, wealth creation and technological progress above other values and interests, such as humanism, philosophy and the arts that might serve to reflect on our humanity.

We may say *and we may even believe* that our technological pursuits are in the name of humanism, but we're partly deceiving ourselves. That's our utopian ideal. The facts of the real world (declining lifespans; a shrinking middle class; increasing wealth disparity; increasing loneliness) suggest a different conclusion.

### **The Loss of Wisdom**

American philosopher John Dewey once said, "(A)t least we know that the earlier optimism which thought that the advance of natural science was to dispel superstition, ignorance, and oppression, by placing reason on the throne, was unjustified." We seem to have forgotten what Dewey claimed we all once knew. We still carry that unjustified optimism and belief in science

with us. Yes, science helped displace the gods of mysticism and religion in the Age of Reason, but it replaced those gods with itself atop the throne.

Perhaps the future to Dewey in 1930 is similar to our own future almost 90 years later. “Some superstitions have given way,” wrote Dewey in *Philosophy and Civilization* (1931), “but the mechanical devices due to science have made it possible to spread new kinds of error and delusion among a larger multitude.” One cannot but think of Dewey’s premonition toward the use of technological propaganda in his era but also what might await our own civilization and our current era.

In their 2004 book *Presence: Human purpose and the field of the future*, Peter Senge, Otto Scharmer, Joseph Jaworski and Betty Sue Flowers said that our growing dependency on technology and reductionist science reveals “a play of forces that create growing technological power and diminishing human development and wisdom.”

They go on, “The decline in integrative awareness and thinking has been replaced by a focus on business and making money as a default common aim.” This pursuit of money is really the pursuit of power.

Unfortunately, man seems intent on being seduced repeatedly by what technology can offer. We might strive for gains in medicine, but let’s not forget that individual man probably won’t end his pursuit of individual power any time soon. Science and technology or any other gods we might adopt along the way will likely continue to be used for those goals.

Thermonuclear war strategist Herman Kahn recognized that we aren’t able to adapt efficiently to technological progress. We don’t know how technological progress will affect the systems we operate in. He was mainly talking about technological progress of military weapons systems, but the concept carries over to any technological progress on the surrounding systems. “The problem of finding and correcting weaknesses is compounded by the rapid rate of technological advance, a rate that seems much faster than our cultural absorption rate.” He goes on to suggest that by the time we adapt to one technology, it’s moved one and we’re always lagging behind. At the macro level, our economic systems are constantly adapting to technological advances, but we may not see the consequences of those advances on humanity immediately. It’s also hard to see incremental changes in real time, adding to the problem. It’s only after larger shift occurs over years do we start to understand those impacts.

Senge et al point out that we have a desire for efficacy in solving our problems. We want quick fixes and silver bullets, which fragmented science and technology can offer, but we lack awareness of long-term side effects (externalities), such as the growing wealth divide, environmental damage, loss of community, loss of tradition, increased complexity of social and environmental challenges, and the loss of our humanist myths (myths about transitions, life purpose, self-discovery and self-growth).

## **Coming of Age**



Perhaps we're all trying to bridge the past with our future and synchronize the internal (mythological) with the external (observational), the two sides of man's existence, to find meaning and purpose in the world.

We struggle, or rather *we fail even to struggle*, to find a balance in this space between spirituality on one side (the internal), wherein we hope to align ourselves with the flow of the universe or with the edicts of our true self that provide meaning to existence, and on the other side (the external), with the scientific method and technological progress, which offers us a means (perhaps as a Siren's call) to invent the future and conquer understanding.

In our pursuit of the future, Eiseley said, "We have abandoned the past without realizing that without the past the pursued future has no meaning, that it leads, as (Wright) Morris has anticipated, to the world of artless, dehumanized man."

Our civilization is in need of new myths to bridge the future and the past, to help find a future beyond ever-perpetual economic growth and technological progress; a destination where we stop trying to conquer nature and instead try to live within it.

We can start to find or define these myths by looking inward and searching for our human purpose and our collective humanity. Perhaps we can learn to appreciate the wonders of what science and progress might offer while embracing our collective humanity and the notion that we all want the same things in life: to feel valued, to have a purpose, to connect with others and to leave the world a better place for our children.

If it's our fate to invent the future, then we might try to build it in the form of our humanity, that reflects the best of who we are as a people. Let's hope we don't forget what it means to be human.

Morris was right when he spoke about the American man facing both the past and the future, "What America must do is come of age."

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