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President	Lawrence W. Reed
Editor	Max Borders
Managing Editor	Michael Nolan

Columnists

Charles BairdBurton W. Folsom, Jr.Doug BandowDavid R. HendersonTom BellJeffrey TuckerDonald J. BoudreauxWalter E.WilliamsStephen DaviesStephen Davies

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Freedom and Flow

The tree is a symbol of life across cultures. In Buddhism the tree of life is the universe itself. "It is rooted in the supporting darkness," writes Joseph Campbell, "the golden sun bird perches on its peak; a spring, the inexhaustible well, bubbles at its foot."

The tree is more than symbolic. From trees we get oxygen, which we take into our bodies from one moment to the next. Our lungs, too, have trunks and branches. Our vascular systems carry oxygen to cells. Like the trees, we are alive. And when we exhale we return the favor. Everything that lives flows.

But as human beings, we are more than just alive. We are seekers and strivers. We too need to flow. So we develop human flow systems—economies, societies, and communities. And in a way these also live and die. It turns out that flow—quite literally—is the essence of life.

Our human flow systems evolve just like vascular systems. These systems, teeming with seekers and strivers, function neither according to "fairness" nor according to the plans of elites. They function according to flow. And flow systems are nature's design, with each of us on a kind of heroic quest within a current of others on similar journeys.

How does the hero's quest culminate? Campbell writes:

The effect of the successful adventure of the hero is the unlocking and release again of the flow of life into the body of the world. The miracle of this flow may be represented in physical terms as a circulation of food substance, dynamically as a streaming of energy, or spiritually as a manifestation of grace.

Toward what exactly are we flowing?

There are billions of answers to this question, perhaps, but each seeker and striver is not just an errant atom on a search for something elusive. We're in this together. We are creatures of community. Notwithstanding the misguided statism of so-called "communitarians," freedom is essential for community. And community, like economy and the rule of law, provides the channels of human flow.

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If we're always on that quest, fulfillment has to be found on the way, too. We're not just flowing *toward* something, but we're also always in the *process* of flowing—that is, becoming, doing, and being.

Mihaly Csikszentmihalyi articulated one of the keys to an individual's happiness, which he calls "flow." Csikszentmihalyi says "a good life consists of more than simply the totality of enjoyable experiences. It must also have a meaningful pattern, a trajectory of growth that results in the development of increasing emotional, cognitive, and social complexity."

And the individual's state of flow, according to Csikszentmihalyi, is

a sense that one's skills are adequate to cope with the challenges at hand in a goal directed, rule bound action system that provides clear clues as to how one is performing. Concentration is so intense that there is no attention left over to think about anything irrelevant or to worry about problems. Self-consciousness disappears, and the sense of time becomes distorted. An activity that produces such experiences is so gratifying that people are willing to do it for its own sake, with little concern for what they will get out of it, even when it is difficult or dangerous.

It's possible for free people to both live to work and work to live without always dreading Monday.

So what's the first step on our quest? I can't resist one more quote from Csikszentmihalyi: "To know oneself is the first step toward making flow a part of one's entire life. But just as there is no free lunch in the material economy, nothing comes free in the psychic one."

With an understanding of flow—both in the sense of the world around us and in the sense of the self *right now*—we will come to see that freedom and flow are two aspects of the same beautiful tree. From the rigidness of iron to the endless variation in markets, says **Zachary Caceres**, we are part of a universe of wholes greater than the sums of their parts.

A clenched fist is effective for coercing, restraining, and penalizing others. But it cannot create, **Gary Galles** explains.

Cultures evolve in a process of entrepreneurial discovery. State interference, says **Mike Reid**, often has tragic results.

Bitcoin is a revolutionary example of entrepreneurial awareness solving the problems caused by the State. **Jeffrey Tucker** is cashing in.

Do we in fact have the right to be left alone? The philosopher and the lawyer may have different answers to that question. But in day-to-day affairs, says **Karl Borden**, the lawyer's answer determines our practical independence.

A favorite bourbon reminds **Lenore Ealy** of the vast realm of human activity that does not always fit neatly into economic analysis.

In order to tell if a transition to democracy is a good option for any country, says **Brad Taylor**, we first need an unbiased understanding of democracy that takes note of its possible failures.

Wendy McElroy explains why bad laws, and not potential employers, should be the focus of equalopportunity lawsuits.

Our columnists have been in the flow this month. Sarah Skwire explores how poetry explains the interplay between rules and experiment; Lawrence Reed recalls a Treasury secretary we should treasure; Sandy Ikeda says the freedom to attain spectacular successes requires some tolerance for failure; Andrew Heaton doesn't think everyone should be forced to pay artists so they can quit their day jobs; and Michael Nolan explains that the movie *Flight* prescribes something considerably more questionable than a little hair of the dog.

John Galt at the Treasury Department

LAWRENCE W. REED



arch 24 marked the 158th anniversary of the birth of one of the best of the 76 men who have held the office of Secretary of the Treasury of the United States. His name was Andrew Mellon. He deserves to be remembered.

I must admit up front that I have a fondness for Mellon for a personal reason. Like me, he was of Scots-Irish ancestry and grew up in Western Pennsylvania (he in Pittsburgh, I in Beaver Falls). But in my mind, what he stood for is what stands out.

From 1921 to 1932, Andrew William Mellon served Presidents Harding, Coolidge, and Hoover as Treasury secretary. His business prowess before that was legendary. With an uncanny ability to pick cutting-edge technologies and the right entrepreneurs to bet on, Mellon built a financial and industrial empire in steel, oil, shipbuilding, coal, coke, banking, and aluminum.

One of the giant firms he helped found was the Aluminum Company of America, or Alcoa. Mellon was already one of the three wealthiest men in America when Harding tapped him for the \$12,000-a-year federal job at the age of 65. By the 1920s, he was the third-highest income-tax payer in the nation, behind only John D. Rockefeller and Henry Ford.

Arguably, Mellon's greatest contribution to America was not the vast wealth he created or the vast wealth he gave away, but rather the vast wealth his fiscal policies allowed millions of other Americans to produce. Mellon's riches did not insulate him from the real world; rather, they reinforced in his mind just how the real world works.

When Mellon came to Washington, the federal income tax hadn't yet celebrated its tenth birthday, but the false prophets who had scoffed that it could ever get as high as 10 percent had already been shamed by events. The top marginal income tax bracket was 73 percent by 1921. Mellon noticed that confiscatory rates were putting scarce capital to flight as investors sought refuge abroad or in tax havens at home. In later years he would often point to John D. Rockefeller's brother William, who had \$44 million in tax-exempt bonds and only \$7 million in Standard Oil when he died in 1923.

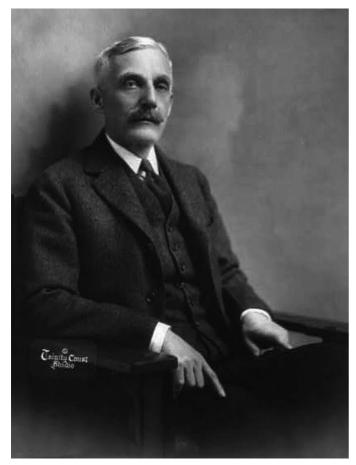
Mellon's view of the deleterious effect of high tax rates was formed early in life. His grandfather left Ulster to escape a crushing tax burden, and Andrew's father made sure his son understood that. In America the Mellon family practiced thrift and entrepreneurship.

Mellon was always a thoughtful fellow. If he didn't have the facts, he didn't jump to conclusions. He took his time, did his homework, and paid attention to detail. But once he made up his mind, he knew what he had to do and didn't vacillate. What he lacked in oratorical skills, he more than made up for in intellect, in long hours of study, and in a quiet thoughtfulness that contemporaries recognized as admirable.

Arguing that taxes had to be slashed "to attract the large fortunes back into productive enterprise," Mellon as Treasury secretary noted that "more revenue may often be obtained by lower rates." Henry Ford, he pointed out, made more money by reducing the price of his cars from \$3,000 to \$380 and increasing his sales than he would have earned by keeping the price and profit per car high. He relentlessly pressed Congress to do the right thing, and by 1929, when it passed his sixth tax cut of the decade, the top rate had been lowered two-thirds, from 73 percent to 24 percent. Those in the lowest income bracket (earning under \$4,000 annually) saw their rates fall by an even greater percentage—from 4 percent to 0.5 percent.

Mellon also worked to repeal the federal estate tax, but secured just half the loaf; Congress cut it from 40 to 20 percent. At his urging, the gift tax was abolished. So many exemptions were introduced or raised that between 1921 and 1929, the number of Americans who paid federal income taxes fell by one million. Barely 2 percent paid any federal income tax at all by the end of the decade. Soak-the-rich class warriors cried foul and painted dire pictures of a hemorrhaging Treasury. But as Burton W. Folsom points out in *The Myth of the Robber Barons*, "the result for Mellon in government revenue was a startling triumph: the personal income tax receipts for 1929 were over \$1 billion, in contrast to the \$719 million raised in 1921, when tax rates were so much higher." The economy grew by 59 percent in that period, America was awash in new inventions, and American wages became the envy of the world.

Mellon had to deal with class-warfare agitators who despised his policies at the Treasury. During the debate over the 1926 tax cuts, Senator George Norris of Nebraska charged that if the administration had its way, Mellon himself would reap "a larger personal reduction [in taxes] than the aggregate of practically all the taxpayers in the state of Nebraska." Norris never mentioned the other side of the coin: Mellon was paying more in taxes than all the people of Nebraska combined.



Andrew Mellon/Wikipedia

An even bigger thorn in Mellon's side was a fellow Republican, Senator James Couzens of Michigan. Couzens was a charlatan and a maverick who fought the taxcutting, penny-pinching ways of the Harding and Coolidge administrations at almost every turn. He conducted witch-hunting investigations in an attempt to embarrass Coolidge and Mellon. He publicly charged that the Treasury Department was secretly giving refunds to rich, politically favored businessmen. (However, the senator was embarrassed when it became evident that the refunds were the results of clerical errors and Supreme Court decisions.)

Neither Norris nor Couzens, nor other congressional enemies, made much of a dent in the Treasury secretary's program in the 1920s. Until President Hoover in 1930 began reversing his policies by jacking up tax rates, the great majority of what Mellon wanted he got, and very little of what he opposed ever passed.

To his further credit, Mellon exerted his influence to constrain the spending side of government. In 1928, total expenditures were actually a shade lower than they had been in 1923. Mellon slashed expenses and, according to Folsom, he eliminated an average of one Treasury staffer per day for every single day during the 1920s.

As Mellon's fiscal policies at the Treasury Department unleashed an explosion of productivity, investment, and innovation, the good times were being undermined down the street by unsustainable monetary policies at the Federal Reserve System. Artificially low interest rates, caused by the Fed's inflation of money and credit from 1924 through 1928, added a dangerous froth to an otherwise healthy economy. When the Fed burst the bubble by raising interest rates starting in 1929, the boom gave way to the bust, made worse for a decade by the tax and regulatory policies of two administrations.

Some poorly worded advice he offered President Herbert Hoover landed Mellon in hot water, especially with the general public and the major media. Shortly after the onset of the Depression, he urged the President to pursue policies that would "liquidate labor, liquidate stocks, liquidate farmers, liquidate real estate...it will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up from less competent people." He could have said it better, but he was essentially right: The sooner the economy could slough off the excesses of the cheap money boom, the sooner it could recover. When the Harding administration had done just that in 1921, a sharp depression was over in a matter of months.

Finding himself unpopular within the interventionist Hoover administration, Mellon resigned his position as Treasury secretary in 1932 and then served one year as U.S. ambassador to Great Britain.

In the mid-1930s, the Roosevelt administration went after Mellon with a frightening vengeance. The Justice Department empaneled a grand jury to look into his personal income taxes, but after intense investigation, it couldn't even secure an indictment. Then at FDR's direction, the government pursued a two-year civil action beginning in 1935. Known as the "Mellon Tax Trial," it eventually exonerated Mellon of all charges. At the time, former IRS Commissioner David Blair blasted the whole affair as "unwarranted abuse by high officials of the government."

Philanthropy was a big part of Andrew Mellon's life. It's ironic, in fact, that he gave away more of his own money than most likely any of his redistributionist political opponents ever gave of themselves. He donated more than \$43 million to the University of Pittsburgh alone and millions more for the support of art and research. In 1937, he gifted his substantial art collection, along with another \$10 million for construction, to establish the National Gallery of Art on the National Mall in Washington, D.C.

Mellon's generosity stands in stark contrast to Franklin Roosevelt's insatiable money-grabbing. FDR had accomplished relatively little in his private life and received a monthly allowance from his mother for most of his presidency.

To score political points, FDR attacked rich people like Mellon for their "greed." But the Tower of Greed was the White House itself, where the President was pushing for tax rates in excess of 90 percent. While Mellon was creating wealth and giving much of it away, the child-of-privilege Roosevelt was either stifling or swiping it, and squandering much of it for boondoggles, political patronage, and programs that generations later would yield destructive dependency and debt.

Andrew Mellon was John Galt from *Atlas Shrugged* in every sense but one: Though he endured shameless abuse

for his success, he never disappeared to a hideaway in the Colorado Rockies. But you couldn't have blamed him if he had, along with other productive Americans who were vilified by Roosevelt and his henchmen.

H. L. Mencken was spot-on when he wrote that the President was surrounded by "an astonishing rabble of impudent nobodies," "a gang of half-educated pedagogues, nonconstitutional lawyers, starry-eyed uplifters and other such sorry wizards." The New Deal, Mencken opined, was a "political racket," a "series of stupendous bogus miracles," with its "constant appeals to class envy and hatred," treating government as "a milchcow with 125 million teats" and marked by "frequent repudiations of categorical pledges." And, I might add, it didn't cure the Great Depression; it prolonged it. (Note to FDR apologists: Before you send me bumper stickers and one-liners about what a savior FDR was, read this first: tinyurl.com/d457mme.)

Mellon died in 1937 at the age of 82. In 1955, to commemorate the 100th anniversary of his birth, the federal post office honored the vindicated Mellon by placing his image on the three-cent postage stamp.

What a contrast Mellon is to the most recent appointee to the Secretary of the Treasury job, Jacob Lew, on virtually every front. Mellon proved himself in the private sector before he ever took a government position. Lew's experience in the private sector is pitifully minimal. Mellon wanted to unleash American enterprise with lower tax rates. Lew wants to shackle it with higher rates. Mellon's signature on U.S. currency and elsewhere was readable and elegant. Lew's autograph generated controversy when he was appointed because it's nothing more than a series of sloppy squiggles you would expect from a three-year-old with a crayon.

Statist historians are prone to ignore or besmirch the achievements of Mellon (after all, he was one of those "rich" guys) or even wrongfully declare that his policies set the stage for the Great Depression. They should be ashamed of themselves. Andrew Mellon is worthy of so much more than his critics will ever be.

Lawrence ("Larry") Reed (lreed@fee.org) became president of FEE in 2008. Prior to that, he was a founder and president for twenty years of the Mackinac Center for Public Policy in Midland, Michigan. He also taught economics full-time and chaired the Department of Economics at Northwood University in Michigan from 1977 to 1984.

Spontaneous Order: Awakening the Sacred

ZACHARY CACERES

arl Sagan devoted his career to bridging science and spirituality. He was searching for "a God that would be worthy of the revelations of science," according to Ann Druyan. Economist F. A. Hayek spent his life arguing and uncovering that we live in a world rich with order created by human action, but not by deliberate human design. Hayek taught us reverence for spontaneous order.

As scientists begin to unlock the principles that order complex systems like ecosystems and economies, they are revealing the power of spontaneous order. But might they also be rediscovering the sacred?

How Science Buried the Sacred

The twentieth century was not kind to a sacred view of the universe. As great scientists searched deeper into physics, they did not find God—they found particles. Some searched for divine creation as the source of our lives, but found the trial-and-error of evolution instead. We looked inside our brains for signs of an eternal soul, but found an elaborate, wet computer.

In a world where everything can be reduced to physics, the argument goes, there's not much room for the sacred. Particles don't have morals or a transcendent purpose, and since we're ultimately just elaborate jumbles of particles, neither do we.

This view, scientific reductionism, traces as far back as the Ancient Greeks. But as science advanced in the nineteenth and twentieth centuries, the extreme practical effectiveness of reductionism only further entrenched a worldview without the sacred. Mathematician Pierre-Simon Laplace wrote, "Life's most important questions are, for the most part, nothing but probability problems." Modern scientists set off in search of fundamental laws that could govern everything.

Everything, believe reductionists—from dinosaurs to the War of 1812—can be reduced to its constituent parts. Physics grew magnificently on this idea. Even as scientists like Niels Bohr pioneered quantum mechanics, which argued that the universe operated through probabilities rather than rigid, deterministic laws, reductionism persisted mostly unscathed.

"The more we know of the cosmos, the more meaningless it appears," wrote physicist and Nobel Laureate Steven Weinberg in his 1994 book *Dreams of a Final Theory*.

Weinberg argued that to understand "big" phenomena we always peer downward: we travel from large objects like societies to groups, to individual people, to organs, to cells, to chemistry, to physics. Finally we might arrive at a set of ultimate laws that explain everything—Weinberg's dream of a "final theory." Causality points upward, from parts to the whole. Everything thus reduces.

Emergence

Theoretical biologist Stuart Kauffman, in the vanguard of complexity sciences at the Santa Fe Institute, disagrees. In his book *Reinventing the Sacred*, Kauffman argues that we can find a new sense of the spiritual in the behavior of complex systems like the biosphere and the economy. These systems, Kauffman says, *cannot* be reduced. Their complexity is beyond Weinberg's final theory.

If this is true, the natural world that we discovered with modern science—perhaps without a Creator God but full of purposeless particles—need not leave us stranded in a world without meaning. The "ceaseless creativity" of complex systems, writes Kauffman, "is so stunning, so overwhelming, so worthy of awe, gratitude, and respect, that it is God enough for many of us. God, a fully natural God, is the very creativity in the universe."

The emergent complexity of the world, sprouting as it does from law-like forces, is *sacred* for Kauffman. The economy is no different. It is order without design.

More Is Different

In a 1972 article titled "More is Different," Nobel Laureate physicist Philip Anderson argued against reductionism in physics. If we think of causality as an arrow, it does not just point upward from particles, thought Anderson. As the size and complexity of something increase, "entirely new properties appear" that cannot "be understood in terms of a simple extrapolation of the properties of a few particles." Things are not just the sum of their parts. *More is different*.

Robert Laughlin, another Nobel Laureate, agrees. He argues it makes no sense to speak of the temperature

of a single gas particle, for example—only of a collection of them. Similarly, a single iron atom is not "rigid"—only the whole iron bar is. Yes, a rigid iron bar is *composed* of individual particles, but rigidity can

WE CAN FIND A new sense of the spiritual in the behavior of complex systems like the biosphere and the economy.

only emerge from the whole entity. Though these collective properties are emergent, few would deny that they are real.

Leo Kadanoff showed that important ideas in fluid mechanics can be derived from strange, mathematical "toy worlds" following simple laws. (Imagine beads on a lattice.) If these ideas so fundamental to our understanding of the universe can "run" on multiple platforms—one being the world of quantum mechanics, the other a toy world—how can we say that physics logically reduces to the one and not the other?

Rather, there appear to be laws of organization that are not reducible, but govern the behavior of overall systems. We can find them in many places where complexity reigns, including within our own bodies.

Meet Your Heart

Consider your heart. What's its function? Well, hearts pump blood. But they also race when you're nervous and make thumping sounds. So the *function* of the heart is only one of many *features* of the heart.

Darwin and most other scientists would agree the heart evolved over time. But Kauffman asks us to imagine that we could deduce the human heart from particle physics. We would discover all of its properties: its redness, its shape, thumping sounds, *and* the blood pumping. But our understanding of the heart would still be incomplete. We would have no way to know which of these properties is the heart's *function*. All the heart's features are equally deduced from physics, but the evolutionary fitness of the heart requires us to think at a higher level of description. The heart came to be because of its role in a higher-order process—biological evolution, not just physics.

> To understand the function of the heart, we must look to the entire lifecycle and environment of the organism with the heart. In Kauffman's terms, we must look for the laws that govern the higher-order system

(biology), even though the system ultimately depends on lower-order physics.

But it's not just our understanding that operates at this higher level. The existence of hearts, as systems, has changed the course of evolution and modified the biosphere. The heart—*the whole*—has caused a ripple of changes in everything around it, *including in its component parts*, such as molecules and proteins. Yes, the heart and "emergent wholes" (like organs in general) are dependent on their components. But they also create new constraints and feedbacks for their component parts because of their special (holistic) forms. In other words, the evolved form and function of the heart is what gives it its force in the world. And that form and function is *emergent*.

Hearts, Holes, and Wholes

To Kauffman, this is a glaring hole in the reductionist worldview. Suddenly Weinberg's arrow, which seemed to point upward from the particles to the organ, now points downward and outward too. It's actually more like a circle: the component parts cause and constrain the whole, and the form of the whole causes and constrains the component parts. It's no longer just evolution, but *co-evolution*. Emergent wholes have causal powers all their own: The parts depend on the whole just as the whole depends on its parts.

"Of course," writes Kauffman, "the heart is made of

particles and not some mystical stuff... But the heart works by virtue of its *evolved structure and the organization of its process*" (emphasis in original). It's greater than the sum of its parts. And it participates in the creation of something even greater (for example, creatures with brains large and complex enough to think about their places in the universe).

For Kauffman, the *whole* of the heart is an expression of the biological creativity of the universe. Lower layers of complexity give rise to newer wholes. A new layer of

complexity such as the human heart allows for even higher layers of complexity to emerge. Without hearts, no animals. Without animals, no humans. Without humans, no economy, no law, and no culture. Creation begets still more creation. Each emergent whole creates new spaces for emergence. And these new

spaces create still newer spaces for even more complex arrangements to arise. In this principle of complexity, Kauffman spies something sacred.

From Hearts to Economies

How far does this principle reach? To Kauffman, legal systems and markets are like ecosystems, and firms or organizations are like organisms within them. Like the heart or the biosphere, they self-organize over time and are assembled from smaller pieces. Economies too emerge.

To understand how humans create new forms of order using technology and resources, Kauffman asks us to imagine a simple box of Lego blocks. Can we state all the functions and ways we can arrange and combine the box of Legos? No, because new combinations of Legos create the possibility of still-newer combinations.

We could build a Lego crane to haul Legos to our new building site for a Lego house. We could then put the house on Lego wheels and make an RV. Or build a Lego crane to lift smaller Lego cranes to the Lego RV repair shop.

There is no way to define the possible functions of a box of Legos, since the function largely depends on the context and what has already been created. With each change, new combinations and possibilities appear that can disrupt previous functions. New forms become the pieces for still newer combinations and forms.

The economy works this way too. Think of all the possible uses of a simple screwdriver: open a can of paint, defend oneself in an assault, use as a paperweight, open

coconuts on a desert island, etc. The number of uses explodes exponentially as you include any new object that could be combined with a screwdriver (like an electric motor to make a drill). And, of course, the new form's properties would depend, in some sense, upon the environment in which it's

used. For example, it would not be a drill in 1800, because electric motors co-evolved with the advent of electrical grids. Electrical grids created the possibility of the electric drill.

In markets, humans search through these endless networks of possibility, combining and recombining resources and technologies with never-ending freshness in ever-changing contexts. (This is similar to what science writer Matt Ridley calls "ideas having sex.")

"How can we possibly pre-state all possible uses [for an object] in all possible environments," asks Kauffman, when "these novel functionalities are invented by the human mind" in the process of creation?

Markets: A Sacred Force

TO SACRALIZE,

after all, is to venerate the sources

of creativity that are beyond any

one mere human's own powers

of creation. For Kauffman, it is the

natural creativity of the universe.

The human economy is massively more complex than a box of Legos. The "econosphere," as Kauffman calls it, roils with novelty and creativity, just like the biosphere. Markets are the collective expression of our creative work, and they are more than the sum of individuals that compose them. We do not fully understand them, and we cannot predict them. We never will, because things will always suddenly appear and change the course of their evolution. But in their creativity, Kauffman believes we can rediscover the sacred. To sacralize, after all, is to venerate the sources of creativity that are beyond any one mere human's own powers of creation. For many in the past this was an all-powerful Creator God. For Kauffman, it is the natural creativity of the universe.

To say markets exhibit something sacred is not "market fundamentalism." Many times, markets are just as fragile as ecosystems, and certainly can be just as messy and inefficient. But this is what gives them their beauty. Evolution, co-evolution and emergence push us toward novelty.

Markets are merely one expression of the ceaseless creativity of the universe, as: Particles become atoms; atoms become molecules; molecules become organisms; organisms become simple life; simple life becomes thoughtful humans; humans become societies and economies.

It's not clean. But participating in markets—building the novel together—extends the creativity of the universe ever upward. Every new idea, every entrepreneurial dare, every revolution, every corporate merger, every new film or poem, every missile strike: Each act of creation or destruction molds the possibilities for our future in an endless flux. Each level of complexity, from molecule to multinational, buzzes with creative evolution. New forms bloom and flower, and they irreparably alter the future of the universe. Like the heart, each level is composed of its lower parts, but *transcends* them in constraining and co-creating future evolution. We, too, can become vessels of the universe's creativity by participating in the extended social order of human civilization.

"If we reinvent the sacred to mean the wonder of the creativity in the universe, biosphere, human history, and culture, are we not inevitably invited to honor all of life and the planet that sustains it?" asks Kauffman. Compelled, certainly not. "Is" still does not imply "ought." But we *are* invited.

"The wholly liberating creativity in the universe we share and partially cocreate can invite you," he writes, "for that creativity is a vast *freedom* we have not known, since Newton, that we shared with the cosmos, the biosphere, and human life."

Sacredness Enough

If we recognize the creativity of the universe, do we have an ironclad ethical system? No. Do we find absolute, inviolable moral truth in spontaneous order? No. But we can rediscover a sense of wonder at the universe and a deep connectedness with all things. We can find our role as expressions of the universe's creativity and as co-creators of our shared future. All humans are equally vessels, and so we are all responsible for the world we create.

Hayek showed how, together, we create our social world. The full effects of our combined actions cannot be understood in their totality. But our creation grows from the fundamental creativity in the biosphere, and the universe as a whole. We are thus surrounded by ordered complexity beyond comprehension. This may be sacredness enough.

Zachary Caceres (z.caceres@nyu.edu) is CIO of the Free Cities Institute and editor of Radical Social Entrepreneurs.

INTERVIEW

Freedom Is Good for Design: An Interview with Adrian Bejan

Adrian Bejan is a professor of mechanical engineering at Duke University. So why on earth are we talking to him? Bejan is the first person to articulate what could be one of the most important ideas since Darwin's theory of evolution. He calls it the Constructal Law. It goes like this:

For a finite-size system to persist in time (to live), it must evolve in such a way that it provides easier access to the imposed currents that flow through it.

All this may sound highfalutin. But the idea is this: Systems survive when things flow better over time—all kinds of systems. In fact, this is what "life" is: flowing and changing (morphing) freely to flow/move more easily. From natural systems to human systems, when things flow better, we start to notice patterns in nature that are products of good flow. And if Adrian Bejan is right, this is one of the most important—and underappreciated—aspects of our world. Combine the insights of Hayek, the mathematics of Mandelbrot, and the biology of Darwin and you get something that might transform the way you see the world.

ALL SCIENCE HAS

been about this design in nature,

and the growing deluge of

observations of this phenomenon

is calling us to summarize it—

that is, to compress and simplify

under a single law of physics.

That law is the Constructal Law.

The Freeman: Welcome, Professor Bejan.

Adrian Bejan: Thank you for introducing the Constructal Law to your readers.

The Freeman: Why should anyone care about the Constructal Law?

Adrian Bejan: "Should"? Everyone does it already.

Every human instinctively and intentionally seeks to understand and use the surroundings, to make life easier for himself or herself and for those connected to him or her. We perceive the surroundings as patterns in space (images) and in time (rhythms, sounds). Beliefs, knowledge, religion, and science came from this primordial urge.

Science, for example,

began with geometry and mechanics, the science of figures, static or moving. All science has been about this design in nature, and the growing deluge of observations of this phenomenon is calling us to summarize it—that is, to compress and simplify under a single law of physics. That law is the Constructal Law. And this is why everybody benefits by knowing the law—the law of design evolution, the law that predicts the future of all flowing designs, including ours.

The Freeman: You have studied a staggering array of phenomena with this way of thinking. What kinds of things have you successfully been able to predict and explain using the constructal approach?

Adrian Bejan: Along with many colleagues worldwide, I showed that the Constructal Law predicts and unifies all animate and inanimate flow designs and evolution, for example: river basins and deltas, lungs, vegetation (roots, canopies, leaves, forests), snowflakes, streets and avenues (urban traffic), the earth's climate, all animal locomotion

(swimming, running, flying), why the bigger live longer, the wheel, the human preference for the "golden proportion," the rigidity of the hierarchy of universities, the evolution of speed sports ("faster" calls for "bigger," over time), and the equivalence between wealth (GDP) and movement on the world map (fuel consumption). *The Freeman*: Some people see comparisons between constructal phenomena and fractals. But fractals are mathematical descriptions, or perhaps abstractions. What's different about your work, and what makes it the stuff of science?

Adrian Bejan: Fractal algorithms are descriptive. One picks the algorithm that leads to a "drawing" that resembles a natural image. (People rarely show you the multitude of algorithms that lead to drawings that look like nothing.)

The Constructal Law is predictive: It teaches us how to discover the drawing and how to predict the evolution—the morphing—of the natural design over time.

China, are hosting the 8th International Constructal Law Conference.

The Freeman: You have said, "Freedom is good for design." At first blush, this would seem contradictory. Our readers are interested in emergent order. What do you mean by "design," and what are the implications for society?

Adrian Bejan: It is not contradictory at all—the opposite (design without freedom) is nonsense, because one cannot have design in nature (live, morphing to flow more easily over time) without freedom to change.

The water flow through a straight steel pipe is not a live

Description is empiricism and it is common—that is, diverse and abundant. But prediction involves theory, as well, and it is more rare because it unifies these abundant phenomena. Science needs both: the many small and the few large, the diversity and the unifying pattern. Both are delivered by the Constructal Law.

The Freeman: What do your biggest skeptics have to say? And how do you respond to them?

Adrian Bejan: There are no "big" skeptics. All the prominent authors of design in nature who have



courtesy Adrian Bejan

commented on the Constructal Law in print have been extremely supportive: see the comments cited on the cover and inside the book I wrote with J. Peder Zane, *Design in Nature*, both editions, hardcover and paperback.

The reality is that the Constructal Law drives a growing research movement in science. If you search "constructal" on Google Scholar today, you find 2,160 titles of scholarly articles and books, this after only 15 years of Constructal Law thinking. This research movement is global. On October 14 and 15 this year, colleagues in Nanjing, system because it does not have the freedom to morph, to improve its flowing in an evolutionary manner. The steel pipe drawing is dead. The water flowing through the river channel, and through the marsh, is a living flow system. It has design, evolution, and persists in the future. In one word, it has "life," just like all the other designs with freedom—from animal evolution to technological evolution and, obviously, societal evolution.

The Freeman: This sounds a bit like something Friedrich Hayek would have said.

A RIGID FLOW system (dammed river, rigid society) is not natural and is destined to be replaced by one that is free to morph. This is why freedom is good for design.

Adrian Bejan: Put another way, a rigid flow system (dammed river, rigid society) is not natural and is destined to be replaced by one that is free to morph, because the future points toward configurations with greater and greater flow access. This is why freedom is good for design.

The Freeman: You have discovered an important relationship using constructal thinking: the relationship between energy and the wealth of nations. Can you help us understand this in layman's terms?

Adrian Bejan: Look, everything that moves does so because it is being pushed or pulled. Nothing is moving by itself. The river water is pushed by the earth heat engine, which drives the climate (winds, oceans, and so on), the animal is moved by the work derived from food, and we are pushed by our engines—by the work derived from fuel. All this work is destroyed (dissipated), and the visible phenomenon is movement with evolving design.

With the Constructal Law, we had predicted that our movement on the globe should be hierarchical, with few large and many small (as in the mass traffic of airways), and that it should be increasing over time, to spread more, to bathe the world map more.

The Freeman: With a few major arteries and many minor streets and roads, for example.

Adrian Bejan: Exactly. Then we discovered that the big channels (the few large) in this global basin of human flow are the inhabitants of the affluent countries. So, because more flow means more fuel spent, we made an x-y plot with all the countries, showing (x) the annual fuel consumed, versus (y) the annual wealth—i.e., the gross domestic product (GDP). We found that the intangible "wealth" is proportional to the fuel spent, which means that wealth is movement, and wealth is physics.

The Constructal Law governs not only the hierarchical, vascular designs—i.e., few large and many small movers but the future design, which consists of more movement over time and greater wealth and fuel consumption for every group on earth. This is why every group is racing upward on the line indicating the proportionality between energy use and wealth.

The urge to have wealth is a manifestation of the Constructal Law. It is the urge to have more movement, fewer obstacles, and more freedom.

The Freeman: Thank you, Professor.



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The Clenched Fist and the General Welfare

GARY M. GALLES

Editor's Note: This article is adapted from the chapter "The Love of Liberty and the Limitation of Government" in Gary Galles's new book The Apostle of Peace: The Radical Mind of Leonard Read (*Laissez-Faire Books, 2013*).

I f we asked what we want government to do to advance the general welfare, the answer boils down to determining what advantages accrue from organizing people and resources via government power as opposed to allowing them to organize voluntarily. Of course, government has no resources it has not first taken from citizens. Because such organization creates no additional resources, the State can only advance the general welfare—that is, benefit any given person (not one group at another's expense)—by making more efficient use of existing resources.

So where does government have a comparative advantage over other organizations?

Because almost all citizens' arrangements must be voluntary, government's only comparative advantage comes in the use of coercion. Then the question becomes, When does government's ability to coerce improve the well-being of any given citizen? To unpack this question a little more, try asking people whether they would be better off if others told them how to dress, what to eat, where to live, what employment to choose, how long to work at that employment, and so on. Almost invariably, when they are the ones for whom things are being chosen, the answer to such questions is generally "no." Of course, if they are to be the ones choosing for others, their answers often change.

Leonard Read asked us to think about this question in terms of a symbol:

Let's symbolize this physical force by the clenched fist. Find out what the fist can and cannot do and you will know what government should and should not do... Why is the analogy to a clenched fist helpful?

When you make a fist, what can you do more effectively than before? Not much. With your hands in fists, you can't type your magnum opus, perform your award-winning music, paint your Mona Lisa, manufacture something, or shake hands, among many other things. But making fists can allow you to more effectively enforce your decisions on those who would choose differently—that is, to more effectively coerce others.

What can the fist do? It can inhibit, restrain, prohibit, and penalize. What—in all good conscience—should be restrained and penalized? The answer is to be found in the moral codes: fraud, violence, misrepresentations, stealing,

predations, killing—that is, all destructive activities.

What can the fist, this physical force, not do? It cannot create.

We all gain from the government's fist when used to restrain destructive acts. That expands our ability to cooperate peacefully with one another. But that fist does not create the ideas and innovations that make possible the advancements in the quantity and quality of goods and services available for others. So as government expands beyond restraining destructive acts, it increasingly contracts its citizens' sphere of creative action. Fewer useful new ideas will be imagined and implemented.

Our creative and cooperative endeavors, on which citizens' general welfare is built, are reduced. And liberty—not just a means to that valuable end, but an extremely valuable end in itself—is reduced, as well.

When government grows beyond its one comparative advantage of limiting destructive behavior, both our liberty and our jointly productive activities suffer. So why don't those adverse consequences suffice to eliminate the problem? Because the more the payoff of controlling government's fist grows for those who control it, the more the government expands beyond its legitimate role. The winners can impose more and more of their decisions on others. That, in turn, attracts power fetishists—those who wish to control others—to the political arena. As government does worse by its citizens, it intensifies the efforts that cause the worst to rise to the top, as Friedrich Hayek described in *The Road to Serfdom*.

The one-sided liberty by which some expand their ability to dictate to others is inconsistent with our shared, inalienable right to equal liberty (and justice) for all. It is merely domination, enforced by government coercion. And that domination expands along with government.

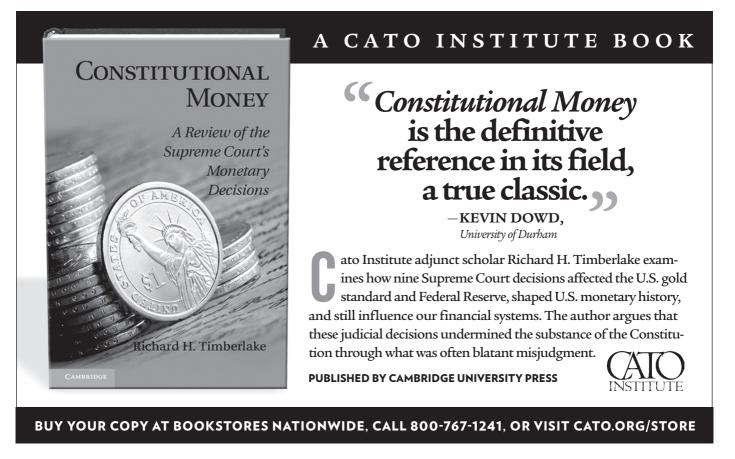
That is why, despite the Obama administration's recent political stagecraft surrounding the sequester,

not everything Washington does is "essential." Indeed, most of its actions are indefensible when it comes to the general welfare. Any just reform will require restricting government—that is, moving the State back to its sole defensible role as defender against destructive actions, as Leonard Read suggests.

In other words, it requires extending the Golden Rule to government as well as its citizens:

Do not do unto others [even via government] that which you would not have them do unto you... expect not from others that which you will not happily, graciously, intelligently accord to them! This is how the lovers of liberty may experience what they love. There is no other way.

Gary Galles (gary.galles@pepperdine.edu) is a professor of economics at Pepperdine University.



Culture in a Cage

MIKE REID

Recently, three children from a little-known forest tribe in India approached a nearby village and asked to join their school. The teachers, however, were forbidden by law from admitting the kids.

This is because the Indian government prohibits regular folk from interacting with those children, or any members of the Jarawa tribe of the Andaman Islands. The State regards those people as a "unique pristine society" who are "not physically, socially, and culturally prepared" to deal with the modern world.

Therefore, Jarawa children who might like to learn writing or mathematics must be sent back into their designated area of the jungle—for their own good.

This Indian policy represents one side of a two-headed cultural catastrophe now facing all humanity.

The problem in both cases is the government attempt to control our cultures—our children, our educations, our minds.

Around 40,000 years ago, humans developed what we might call full-blown "culture"—a system of learned behaviors covering all aspects of life. They had art, religion, language, and rapid technological change. All over the world, our ancestors invented specialized artifacts for every environment: weapons, boats, needles, blades, hammers, awls, drills, and hooks.



Aboriginal students at a Canadian school designed to strip them of their native culture.

For all the millennia since, human beings in every society have been in a constant state of cultural flux. We are perpetually tinkering with our own inherited tools and techniques, and we are forever trying out new ideas from our neighbors.

The vast body of human knowledge we have thus built up is not the creation of any all-powerful overseer. Indeed, Friedrich Hayek demonstrated that the most important of our social inventions, like language and money, cannot be the results of any "human design" at all. Instead, "cultural evolution" is "a process in which the individual plays a part that he can never fully understand."

The Box of Traditions

Many people wrongly see each "culture"—be it Ukrainian or Chinese or Jarawa—as a box full of precious traditions, like a fragile set of fine china. You get the box from your parents and your job is to preserve your box just the way it is—without breaking anything—until you can pass it on to your kids.

But in fact, tradition forms only one of two sides to culture. The other side is adaptation.

Your culture helps you adapt to your natural, social, and technological environment.

Culture is not a box of heirlooms to keep on the shelf. It's a set of mental and social tools we use every day to answer even our most basic questions:

How do I get food?

How do I treat other people and their property?

How do I approach the divine?

How do I deal with my sexual urges? Who is responsible for the kids that result?

And how do I help my kids answer these questions for themselves?

Traditions are the tried and trusted answers to such questions. And traditions also provide an important force of social and psychological stability—they help you to make sense of who you are and how you relate to others.

But when the ancient ways don't work anymore, or when new ideas appear to work better, we humans waste no time in adopting the new ones. Now, what happens if you try to force people to maintain their ancient traditions? Those Jarawa kids are forbidden to go to the schools, and everyone but approved government experts (like anthropologists) is forbidden to visit them.

The Indian state is forcing those children to make do with their parents' adaptations—forcing them not to learn to read or write or do math.

Through such a program, you can ensure that a whole generation will be incapable of keeping up with the adaptation of the rest of the species. You ensure that they will indeed not be "culturally prepared" for the challenges of the modern world. In short, you can ensure their poverty and marginalization. WEARE PERPETUALLY tinkering with our own inherited tools and techniques, and we are forever trying out new ideas from our neighbors. The vast body of human knowledge we have thus built up is not the creation of any all-powerful overseer.

And of course, that will only provide the justification for another round of government intervention. I predict remedial-education programs for Jarawas by the year 2030.

When governments wield the power to decide whether or not you are "culturally prepared" to update your toolbox, they are not saving you from cultural annihilation. Instead, they are pushing you into cultural stagnation.

Bulldozing Cultures

Forcing kids to stay out of school is only one side of the global cultural catastrophe. The other side, the side that most of the world is presently stuck with, is in the habit of forcing kids into school.

What happens if you use schools to force children to abandon their ancient traditions? What happens, in the extreme, if you dragoon them into those schools for the explicit purpose of annihilating their culture?

Well, it turns out, you can undercut the social and psychological fabric of those children's lives. And once again, you get mass poverty and marginalization.

Oh, and an epidemic of suicide.

In Canada from the late nineteenth to the mid-twentieth century, because the government believed the numerous aboriginal peoples under its new dominion were not "culturally prepared" to survive in the modern world, the State rounded up the aboriginal kids into compulsory,

residential schools. Here, the children would be "civilized."

While in school, these kids were treated to lessons on the holy glory of the British government and the sinful savagery of their own pagan parents. The 1896 standard curriculum mandated songs containing "the highest moral and patriotic maxims," and the children learned, as one former pupil put it, that "if you stay Indian, you'll end up in Hell."

The kids were also

forbidden to speak their native tongues for all eight or ten months of the school year (even while on the playground or in the dormitories), so they sometimes returned home in the summer to discover they could no longer understand the words of their own elders.

The resulting cultural dislocation, family disorder, and psychological trauma cannot be measured.

But one part of the legacy of this attempt at massive social bulldozing is a grim empirical fact that has been studied again and again: sky-high aboriginal suicide rates.

Michael Chandler and Christopher Lalonde's study in one Canadian province found that aboriginal youths killed themselves about four times as often as non-aboriginals the same age.

More importantly, the researchers discovered that suicide rates varied enormously between aboriginal communities.

Groups that had the least local autonomy in education, language, and government had the worst suicide rates more than five times the Canadian average.

In such communities, children had essentially no

resources with which to learn the culture of their forefathers rather than the grayed-out version of Western culture being taught in the government schools.

Meanwhile, groups that had taken back more of their cultural autonomy from the feds—by fighting for self-governance, locally controlled schools, and native-language programs had progressively fewer suicides.

Indeed, on the extreme end, there were no suicides at all.

When people were more able to make decisions about

their own children's access to tradition and adaptation, their children were more likely to develop the will to live.

Are You "Culturally Prepared"?

These State programs of cultural control are not limited to dark-skinned peoples in exotic locales.

Guided by Protestant Progressives in the nineteenth century, North American governments developed compulsory education in order to pull kids away from the church-run Catholic schools. They also largely succeeded in turning the wild hordes of swarthy ethnic immigrants flooding American shores into a continent full of homogenous pro-government jingoists. (That's how the Irish and the Ukrainians and the Italians all got mashed together into the "white America" that now worries about the next wave of immigrants.)

And the culture wars go on today. The mandate in public schools now seems to be that teachers must avoid any serious exploration of Western civilization, religion, and philosophy. Instead, they must focus on "social studies," which amounts largely to cursory surveys of the funny hats worn by distant peoples and prolonged forays into the cold swamp of political correctness.

Those exotic peoples, by the way, have "fascinating traditions" (to be preserved), while Westerners have "cultural biases" (to be demolished).

But whether the Ministry of Culture has decided your traditions belong in a museum or a landfill, the key thing to remember is that the government experts know best.

WHEN GOVERNMENTS wield the power to decide whether or not you are "culturally prepared" to update your toolbox, they are not saving you from cultural annihilation. Instead, they are pushing you into cultural stagnation. They are wise enough to make decisions for all about how our children should think and learn and adapt. They are wise enough to know that Jarawa children ought to stay in the jungle, wise enough to know that Inuit children should be dragged into residential schools, and wise enough to know that your children and mine should learn from cultural relativists

instead of stoics or saints (or any other heroes of your heritage).

A Vision of Free Humanity

In the absence of massive State programs to push kids into or out of schools, cultures develop through a process of entrepreneurial discovery.

First, an especially adventurous or desperate person tries something new and risky, like traveling to a neighboring village and asking to go to school with their kids.

Then, other people sit back and watch (or jealously heckle) the entrepreneur, until it becomes clear whether or not he's got something that works.

If he does, everybody jumps on the bandwagon.

If not, everybody laughs at the idiot and warns the next group of kids against repeating his mistakes.

Through this simple process, we humans have been updating and preserving our cultures for 40,000 years entirely without government cultural-intervention programs. Now, after 200 years of State-mandated cultural catastrophes, it's time to regain our educational autonomy and return to our entrepreneurial roots.

Mike Reid (mikereid@invisibleorder.com) is primus inter pares at Invisible Order, a libertarian editorial-solutions company. He also teaches anthropology at the University of Winnipeg.

Bitcoin for Beginners

JEFFREY A.TUCKER



Inderstanding Bitcoin requires that we understand the limits of our ability to imagine the future that the market can create for us.

Thirty years ago, for example, if someone had said that electronic text—digits flying through the air

and landing in personalized inboxes owned by us all that we check at will at any time of the day or night—would eventually displace first-class mail, you might have said it was impossible.

After all, not even the Jetsons had email. Elroy brought notes home from his teacher on pieces of paper. Still, email has largely displaced first-class mail, just as texting, social networking, private messaging, and even digital vmail via voice-over-Internet are replacing the traditional telephone.

It turns out that the future is really hard to imagine, especially when entrepreneurs specialize in surprising us with innovations. The markets are always outsmarting even the most wild-eyed dreamers, and they are certainly smarter than the intellectual who keeps saying: such and such cannot happen.

It's the same today. What if I suggested that digital money could eventually come to replace government paper money? Heaven knows we need a replacement. central planners, politicians, and monetary bureaucrats. This system is not very modern when we consider a world in which the market is driving innovations in other aspects of our daily lives.

Maybe it was just a matter of time. The practicality is impossible to deny: Gamers needed tokens they could trade. Digital real estate needed to be bought and sold. Money was also becoming more and more notional, with wire transfers, bank computer systems, and card networks serving to move "money" around. The whole world was gradually migrating to the digital sphere, but conventional money was attached to the ground, to vaults owned or controlled by governments.

The geeks went to work on it in the 1990s and developed a number of prototypes—Ecash, bit gold, RPOW, b-money—but they all faltered for the same reason: Their supply could not be limited and no one could figure out how to make them impossible to doubleand triple-spend. Normally, reproducibility is a wonderful thing. You can send me an image and still keep it. You can send me a song and not lose control of yours. The Internet made possible infinite copying, which is a great thing for media and texts and—with 3-D printing—even objects. But reproducibility is not a feature that benefits a medium of exchange.

Solving Problems a Byte at a Time

Money started in modern times as gold and silver, and it was controlled by its owners and users. Then the politicians got hold of it—a controlling interest in half of every transaction—and look what they did. Today money is rooted in nothing at all and its value is subject to the whims of

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C L E A R L

government paper was failing.

A digital alternative had to exist.

But what gave Bitcoin its value?

After all, a currency is useless unless it is scarce and its replication is carefully controlled. Think of the gold standard. There is a fixed amount of gold in the world, and it enters into economic life only through hard work and real expenditure. Gold has to be mined. All gold is interchangeable with all other gold, but when I own an ounce, you can't own it at the same time. How can such a system be replicated in the digital sphere? How can you assign titles to a fungible digital good and make sure that these titles are absolutely sticky to the property in question?

Follow the Money

Finally it happened. In 2008, a person going by "Satoshi Nakamoto" created Bitcoin. He wasn't the first to solve the problem of double spending. A currency called e-gold did that, but the flaw was that there was a central

entity in charge that users had to trust. Bitcoin removed this central point of failure, enabling miners themselves constantly to validate the transaction record. He had each user download the full ledger of all existing Bitcoins so that each could be checked for its title and not used more than once at the same time. With his system, every coin had an owner, and the system could not be gamed.

Further, Nakamoto built in a system of mining that attempts to replicate the experience of the gold standard. The math equations you have to solve get harder over time. The early creators had it easy, just like the early miners of gold could pan it out of the river, though later they had to dig into the mountain. Nakamoto put a limit on the number of coins that can be mined (21 million by 2140). (A new coin is currently mined every 20 seconds or so, and a transaction occurs every second.)

He made his code completely open-source and available to all so that it could be trusted. And the payment system used the most advanced form of encryption, with public keys visible to all and a scrambling system that makes its connection to the private key impossible to discover.

No one would be in charge of the system; everyone would be in charge of the system. This is what it means to be open source, and it's the same dynamic that has made Wordpress a powerhouse in the software community. There would be no need for an Audit Bitcoin movement. Trust, anonymity, speed, strict property rights, and the possibility that applications could be built on top of the infrastructure made it perfect.

Bitcoin went live on November 1, 2008. To really appreciate why this matters, consider the times. The entire political and financial establishment was in full-scale panic meltdown. The real estate markets had collapsed, pulling down the balance sheets of the major banks. The investment banks were unloading mortgage-backed securities at an unprecedented pace. Boats delivering goods

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couldn't leave shore because they could find no backers for their insurance bonds. For a moment, it seemed like the world was ending. The Republicans held the White House, but the unthinkable still happened: Government

and the central banks decided to attempt a full-scale rescue of the whole system, spending and creating trillions in new paper tickets to fill bank vaults.

Clearly government paper was failing. A digital alternative had to exist. But what gave Bitcoin its value? There were several factors. It was not fixed to any existing currency, so it could float according to human valuation. It was made from real stuff: the very 1s and 0s that were driving forward the global market economy. And while 1s and 0s can be reproduced unto infinity, the new coins could not, thanks to a system in which the coin and its public key were strictly controlled and the ledger updated for every transaction. Its soundness could be checked constantly through instantaneous conversion to other currencies as well as to goods and services. The model seemed impenetrable, the first digital currency that really addressed all the problems that had doomed previous attempts.

A Bitcoin of One's Own

Let's fast-forward in time to March 2013. I had become the proud owner of my first Bitcoin. My wallet lived on my smartphone. Only three years ago, some wonderful applications had already developed around the currency unit. Although I'm a bit techy, I'm not a rocket scientist and

THE PURSUIT OF HAPPINESS

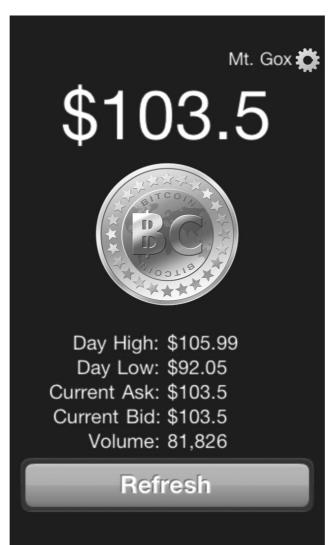
I'm quite certain that I would have been out of my league. But this is how digital institutions develop to become ever more user friendly. At the same event at which I became a Bitcoin owner, I also used a Bitcoin ATM. I put in the green stuff, held my digital wallet up to the scanner, and then I felt the buzz on my smartphone. Physical became digital. Beautiful.

But still I wondered what exactly I could do with these things. That's when the consumer world of Bitcoin products appeared before me. We aren't just talking about the Silk Road—a website that became notorious for enabling the easy, anonymous buying and selling of drugs. There are Bitcoin stores everywhere. And there are services in which you can buy from any website with a Bitcoin interface.

There was growing talk of Bitcoin futures markets. Some companies were rumored to be going public with Bitcoins, and thereby bypassing the whole of the Securities and Exchange Commission. The implications are mind-blowing.

Sacred Pliers

Still, I'm a tactile kind of guy. I need to experience things. So I went to one of these sites. I bought the first product I saw (why, I do not know). It was a pair of pliers for crimping electric cables. I put in my shipping address and up came a note that said it was time to pay. This was the moment I had been waiting for. A QR code-that funny square design that looks like a 3-D bar code—popped up onscreen. I held up my "wallet" and scanned. In less than 2 seconds, the deed was done. It was easier than Amazon's one-click ordering system. My heart raced. I jumped out of



my chair and did a quick song and dance around the room. Somehow I had seen it thoroughly for the first time: this is the future.

The pliers arrived two days later, and even though I have no use for them, I still treasure them.

Bitcoin had already taken off when the surprising Cyprus crisis hit in a big way. The government was talking about seizing bank deposits as a way of bailing out the whole system. During this period, Bitcoin essentially doubled in value. Press reports said that people were pulling out government currency and converting it, not only in Cyprus but also in Spain and Italy and elsewhere. The price of Bitcoin in terms of dollars soared. Another way to put this is that the price of goods and services in terms of Bitcoin

> was going down. Yes, this is the much-dreaded system that mainstream economists decry as "deflation." The famed Keynesian Paul Krugman has even gone so far as to say that the worst thing about Bitcoin is that people hoard them instead of spending them, thereby replicating the feature of the gold standard that he hates the most! He might as well have given a ringing endorsement, as far as I'm concerned.

Obsession and Resentment

My own experience with Bitcoin during this time intensified. I began to call friends on Skype and scan their QR codes and trade currencies. I began to rope other people into the obsession based on my experience: you have to own to believe. After one full day of buying, selling, and using Bitcoins, I had the strange experience of resenting that I had to pay a cab fare in plain old U.S. dollars. How do you obtain Bitcoins? This process can be a bit tricky. You can go to localbitcoins.com and find a local person to meet you to trade cash for Bitcoins. Usually, this exchange takes place at high premiums of anywhere from 10 percent to 50 percent depending on how competitive the local market is. It is understandable why people are reluctant to do this, no matter how safe it is. There is just something that seems sketchy about meeting a stranger in an all-night cafe to do some unusual digital currency exchange.

A more conventional route is to go to one of many online sellers and link up your bank account and buy. This process can take a few days. And then when you set out to transfer the funds, you might be surprised at the limits in the market that exist these days. Sites are rationing Bitcoin selling based on availability, just given the high demand. It could be 10 days or more to go from non-owner to real owner. But once you have them, you are off to the races. Sending and receiving money has never been easier.

Doubts?

As of this writing, a Bitcoin is trading for \$88.249 [editors' note: The price later peaked above \$250 before falling back to around \$120 at press time]. Just three years ago, it hovered at \$0.14. Many people look at the current market and think, surely this is a speculative bubble. That could be true, but it might not be. People are exchanging an unstable, fiat paper for something with a real title that cannot be duplicated. Everyone knows precisely how many Bitcoins exist at any time. Anyone can observe the transactions taking place in real time. A Bitcoin's price can go up and down, and that's fine, but there is no real speculation going on here that is endogenous to the Bitcoin market itself.

Is it a pyramid scheme? The defining mark of a pyramid scheme is that more than one person has an equal claim on the same money or good. This is physically impossible with Bitcoin. The way the program is set up, it is a strict property rights regime with no exceptions. In fact, in early March, there was a brief hiccup in the system when some new coins were approved by one group of developers but not approved by another. A "fork" appeared in the system. The price began to fall. Developers worked fast to resolve the dispute and eventually the system—and the price—returned to normal. This is the advantage of the open-source system.

But what about the vague sense some people have that a handful of coders cannot, on their own, cause a new currency to come in existence? Well, if you look back at what Austrian monetary theorist Carl Menger says, he points out that a similar process is precisely how gold became money. Every new currency is not at first used by everyone. It is at first used only "by the most discerning and most capable economizing individuals." Their successful behaviors are then emulated by others. In other words, the emergence of money involves entrepreneurship—that is, being alert to opportunities to discover and provide something new.

Leviathan Leers

But what about a government crackdown? No doubt that attempt will be made. Already, government agencies are expressing some degree of annoyance at what could be. But governments haven't been able to control the cash economy. It would be infinitely more difficult to control a virtual currency with no central bank, with encryption, and with millions of users per day. Controlling that would be unthinkable.

There was a time when the idea that ebooks would replace physical books was an absurd notion. When I first took a look at the early generation of ereaders, I laughed and scoffed. Now I find myself looking for a home for my physical books and loading up on ebooks by the hundreds. Such is the way markets surprise us. Technology without central planners makes dreams come true.

It's possible that Bitcoin will flop. Maybe it is just the first generation. Maybe thousands of people will lose their shirts in this first go-round. But is the digitization of money coming? Absolutely. Will there always be skeptics out there? Absolutely. But in this case, they are not in charge. Markets will do what they do, building the future whether we approve or understand it fully or not. The future will not be stopped.

Jeffrey Tucker (tucker@lfb.org) is executive editor and publisher at Laissez Faire Books.

The Right to Be Left Alone

KARL BORDEN

The parking lot was not just full when my wife Sandra and I pulled in for dinner—its main arteries were clogged with emergency vehicles conspicuously flashing their lights and warning us that something of consequence was going on inside. Our wait for a table left us perched on two barstools, and we had gallery seats for the little drama that was unfolding 10 feet away.

An elderly gentleman and his female companion sat in a booth across the aisle from us. He was already surrounded by a police officer, the restaurant manager, and three emergency personnel. One of the EMTs was holding an IV bag aloft and, incongruously, the manager had just placed on the table in front of the customer a steak fresh off the grill but encased in a white Styrofoam take-home container, complete with plastic fork and knife.

My drink arrived, and I asked the barkeep what was going on. "Oh," he said, "The old man mentioned to the waitress that he had recently had open-heart surgery and that he wasn't feeling too well, so we called 911 for him."

There was just one problem. The old man didn't seem to want them there.

We could see him pick up his plastic knife and fork and try to start his dinner—an effort constrained by the IV tubing the EMTs had apparently convinced him he must have. He tried explaining his condition (or lack thereof), but the EMTs were insistent that an examination must take place.

Stethoscopes, sphygnomometers, and other diagnostic instruments were being placed on his body while he tried in vain to cut his steak with the flimsy plastic knife. We heard him say, again and again, "I'm fine. I just want to eat my dinner, please."

The scene played out over the next half hour or so with the medical team even wheeling a stretcher into the restaurant to remove the man to an ambulance. Finally, in exasperation, we saw the police officer consult with one of the paramedics, and the man was presented with a metal clipboard and a form to sign. "Here," he was told, "You have to sign this refusing our treatment." Another argument. No recourse. The man signed and the team finally removed themselves. The steak remained in its Styrofoam shell, cold by now, and restaurant personnel



Giuseppe Parisi/Shutterstock

offered no replacement-or even metal cutlery.

I looked at the man with sympathy.

+ * *

Little did I know that within three weeks I'd be in the same position. Though I had just run a several-day gauntlet of passing four kidney stones (a problem that has plagued me for 13 years), I had to fly to West Palm Beach for a critical business meeting.

Sandra, a family nurse practitioner, was in Chicago visiting our son. I called to let her know I'd be going to the meeting. She knows me well enough to know I would not be stopped, so she gave me instructions on how to load up from the family meds cabinet.

Halfway through the rocky flight, a fifth stone started dropping. I knew from experience the pain cycle would last another two hours or so, but the nausea and the bumpy ride worked me over. My fellow passengers were sympathetic, but there was nothing they could do. I was the last one left on the plane when we landed,

Left Alone: Some Lingering Questions

The Old Man in the Restaurant

In the case of the old man in the restaurant:

- What rights did he give up the moment he allowed them to start an IV?
- Was that tacit consent for further treatment?
- Did he then become responsible for any invoices that might be presented for medical services, including the entire 911 service call?
- Should the restaurant manager have called 911 under the circumstances at all?
- Did the old man have to sign the waiver to get them to leave?
- Did it make a difference that he hadn't called them or asked for their help himself?
- Did it make a difference that he was in a private business establishment?
- Did it matter that he was in a very public setting with other customers being potentially impacted by witnessing someone with a heart attack, or that they were inconvenienced by the 911 personnel themselves?

continuing my dry heaves on a now-empty stomach, in kidney-stone agony. My critical meeting was three hours away.

The flight attendants were also sympathetic, but had a plane to turn around and get back in the air. I asked if I could be assisted to the airport aid station to lie down and rest for a bit. "I'm sorry, sir. This airport has no such facility. We can call 911 if you like."

"No," I replied with my head between my legs. "I just need to rest, please. Is there somewhere I can just be alone and not bother anyone?"

I had Sandra on a surprisingly loud speakerphone by this point. She asked them to find me a wheelchair and someplace quiet—and I was wheeled to a remote corner of baggage claim.

I sat there with my head between my knees, gazing at my ankles, bothering nobody and being bothered by no one, for 45 minutes. The cycle was working as it usually does, with the pain gradually receding, though my stomach settled only gradually. God bless Sandra and lithium batteries: she coached me through the whole thing.

And then they came. I remember five voices: the manager, the cop, EMT1, EMT2, and the security guy. Our dramatis personae also included "the citizen" (yours truly) and Sandra, over the mobile speakerphone.

SECURITY (gruffly): Hey, buddy— whatcha doin' there? What's your name?

CITIZEN (sotto voce, head down): I had some stomach problems on the plane. They're gradually getting better. I just need to be left alone a little longer.

SECURITY: Can't do that, bud. We've got 911 here and they're gonna hafta look you over.

CITIZEN (politely): No. I just need to be left alone, please.

SECURITY: Gotta have your name, bud. What flight did you come in on? What's your name?

CITIZEN (politely): Unless I have broken some law by sitting here in this wheelchair, I think I don't have to provide you with anything. I just want to be left alone.

EMT1: Let's just have a look at you a moment. Raise your head for me? (to EMT2): Get a line going.

CITIZEN: Please, I just want to be left alone. I do not want you to start an IV.

EMT1: Sorry, we're here now and have to look you over and get you to some medical help.

SANDRA: Gentlemen ...

CITIZEN: Please, I just need to be left alone. This really is my problem.

MANAGER: Like hell it is. It's damn well my problem if you die in my airport.

COP (aside to Manager): We'll handle this, sir.

EMT1: Okay, I'm just going to examine him here. But we've got to start an IV.

CITIZEN (head still down): No, I just want to be left alone. You do not have my permission to touch me or to treat me in any way.

EMT1 (less polite now): This isn't a choice, sir—we're here and have to examine you. We'll decide whether you need to be taken in for treatment.

SANDRA: Gentlemen—May I speak to someone there, please?

CITIZEN: I really don't need any help—I just need to be left alone for a little longer.

EMT1: That's what we're here to determine. Sir, I must examine you. There really is no choice.

SANDRA: Gentlemen, please ...

CITIZEN: No, you do not have my permission. Please just leave me alone. It's getting better.

SANDRA: Hon, hand the phone to one of these guys so I can talk with them.

(phone handed up to someone who takes it)

SANDRA: Gentlemen, I am this man's medical provider. He is sick to his stomach, but that is all. There is nothing life-threatening going on.

EMT2: Ma'am, we have to determine whether he is disoriented. (To Citizen): Sir, what's your name? You need to give us your name.

SANDRA: If you want to determine whether he is rational or disoriented, why not ask him something he's willing to answer? Ask him, "Who is the President of the United States?" or "What day is it?"

EMT2: Okay, buddy—Who is President of the United States?

CITIZEN: (Thinking fuzzily, Oh hell—who's President?) Uh—George W. . . . no, no. Obama.

EMT2: Okay, what day is it?

CITIZEN: (furiously trying to remember) It's ... uh ...

the 23rd. Uh. Uh. Saturday.

EMT1: That doesn't mean anything. We've still got to examine him and make a determination.

CITIZEN (head still bowed): The last time I looked, this was still the United States of America and we still have a Constitution. I want to be left alone. Please just leave me alone.

(perhaps 10 seconds of silence)

COP (quietly to someone): Actually . . . I think he may be right about that.

EMT1 (fumbling with some papers): Well, he's gonna have to sign a waiver for me, then. I've gotta have his name and a signature on this release form.

COP: Right.

CITIZEN (politely): I didn't ask for help. I didn't call you. I am a private citizen who has broken no law. I am in a public space. I am refusing your assistance. And I will not sign anything. Please just leave me alone.

SANDRA (phone back in Citizen's hands now): Gentlemen, this situation is under control. Please do as my patient and I ask.

EMT1: No. We have to have this form signed.

COP (low, to EMT): Just write down "assistance refused" and sign it yourself. I'll countersign it.

(rustle of papers being handled)

EMT2 (leaning over and placing his hand gently on the Citizen's shoulder): Buddy—is there anything we can do to help you anyway? Anything at all?

SANDRA: Yes. Do you have any saltine crackers or plain bread? That would help him settle his stomach.

EMT1: No. Haven't got anything like that.

EMT2 (receding): Hold on. There's a vending machine over there a ways. (Returning.) There are some animal crackers in there. Would those do?

SANDRA: Yes. Nice and bland.

CITIZEN: Please reach in my left pocket and you'll find some money. I would appreciate the crackers.

(EMT2 does so, purchases the crackers, and places the change in the Citizen's shirt pocket. EMT1 packs up gear. Exit noises; the Citizen is alone again.)

+ * *

The above scene actually took close to half an hour to play out. It took about another 20 minutes until I could raise my head. The kidney stone pain was now a dull ache, and my stomach was no longer heaving. I got up shakily and made my way to the bathroom. I drank some fresh water. I washed my face. Then I made my way to the rental car counter. I made my meeting about 90 minutes later.

The parallels between the old man in the restaurant

Left Alone: Some Lingering Questions

In the Airplane / At the Airport

In my circumstances:

- Did I have the right to get on the plane in the first place without alerting airline personnel to my recent medical condition?
- What obligations and rights did the airline personnel have under those circumstances?
- Did my rights change when I exited the plane into the airport, and again when I was moved from the secure area of the facility and left in the non-secure baggage area, in a location outside the view of other members of the public?
- Would it have mattered if I had wheeled myself out into the street or onto a shuttle bus?
- Was the airport manager right that the problem was also his in a public facility such as an airport?
- Did the EMT have a right to start the IV even over my refusal?
- Could they have employed police force to move me to a medical facility against my will?
- Did it matter that a licensed medical practitioner was providing me direct advice at the time?
- Did they have probable cause to check my briefcase for ID, subsequently finding prescription drugs not issued in my name but provided by a medical professional with a DEA license to prescribe?
- Did I have to provide my name and other identifying information to either the cops or the EMTs?
- Did the EMT err in finally backing down about the treatment refusal form?
- Was I right in referencing any Constitutional rights to privacy?

and my experience on the plane and in the airport are pretty obvious. It is tempting to conclude simply, "Well, of course we should have the right to be left alone if that's our choice!" But is it really that simple?

Certainly the legal issues involved are anything but simple.

Most of us in a modern society don't have any real desire to be Jedediah Smith or Robinson Crusoe. But at least some of us, some of the time, would like to be free to work out our problems on our own. Sometimes we really do know more about what is better for us than do strangers who are unfamiliar with our history and circumstances.

But surely we also owe our fellow citizens the courtesy of not imposing our problems on them (even if it's only that I expect my condition might arouse concern among my fellow passengers, for example). And we owe ourselves the recognition that we may not always be capable of making rational decisions on our own behalf. My right to swing my arm extends to where your nose begins; but just where my arm ends and your nose begins is sometimes difficult to determine.

In the final analysis, do we, in fact, have the right to be left alone? The philosopher and the lawyer may have subtly or starkly different answers to that question. But in the real world of day-to-day affairs, the lawyer's answer determines our practical ability to demand independence. That is, it's the lawyer's answer that matters in the short term. The sorting out of conflicting rights and obligations is at the heart of what a democratic society is all about, and I know that my own libertarian tendencies leave me with a strong preference for self-reliance and a willingness to err on the side of independence-even when being left alone to solve my own problems may not be an optimal choice. But it is probably safe to say that the trajectory of both majority opinion and public policy in the United States today leaves an individual with such philosophies to fight some lonely battles with an increasingly insistent "helping" State.

Karl Borden (borden@unk.edu) is Professor of Financial Economics at the University of Nebraska/Kearney and CEO of A&B Enterprises, a chain of homes for the developmentally disabled.

Exit, Voice, and Bourbon

LENORE EALY

bsorbed in turning 50 years old last December, I missed the news of the death of A. O. Hirschman, whose accomplishment of 97 years of life should make me feel quite young still.

Hirschman was perhaps best known for his 1970 book *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States.* In that book, Hirschman proposed that loyalty is an important but underexamined quality in market and social relationships. Loyalty, he thought, can slow decline not only by discouraging

precipitous "exit" but also by making "voice" more creative and effective. Loyalty may thus be an important catalytic for what Dierdre McCloskey calls "sweet talk," or that form of persuasive conversation that marks its participants out as willing co-participants in a civil socioeconomic order.

Maker's Markup

Reflecting on Hirschman's legacy, it seems ironic that I have been of late engaged in my own contest of exit, voice, and loyalty in regard to my preferred bourbon, Maker's Mark.

Last year, inexplicably, the price for a 1.75 liter bottle of this particular distillation of Kentucky sunshine though perhaps the corn may come from Iowa these days—increased by \$5 per bottle. That's about 14 percent. Not understanding the price spike, and finding it inconveniently consistent across all local liquor stores, I decided to have a taste testing for my birthday. I wanted to look for a bourbon with a similar palate, but that sold at a lower price. A few (perhaps several) sips, shots, and glasses later, it seemed that nothing really came close. (Rebel Yell turned out to be not a bad substitute in a pinch. At only about \$19 for the large bottle, it's a deal to consider.)

Having at least begun to contemplate exit by exploring

my options, I was not yet ready to jump ship: I stuck with loyalty.

More Bourbon, Less Parsimony

PERHAPS HEREIN

is a dilemma of the modern

interventionist quest for social

justice. There are some things

that must be spoken of but

not preached or compelled,

values to which people must

be invited and attracted.

A few weeks later, there came the announcement that Maker's Mark was going to water down its bourbon slightly to try to keep up with growing demand (seemingly from the rising popularity of bourbon in overseas markets). A brouhaha erupted. Voice, voice, voice—even from those who have probably never had a sip of the amber fireball.

> Add the media storm to the outcry from loyal fans and ambassadors (seriously, this bourbon has ambassadors!), and Maker's Mark cried *mea culpa*, then reversed its decision.

> In the midst of all this, I confess I was a free-rider on the voices of others. Perhaps I was still contemplating at some level an exit, but perhaps I had gone more

deeply into my loyalty. To sort all this out, I found some assistance in another work of Hirschman, namely the lovely essay "Against Parsimony." The article appeared in his *Rival Views of Market Society* and challenged economists to look more deeply at the way human preferences are formed and expressed.

And this may shed some light on my decision to begin with a taste test:

A taste is almost defined as a preference about which you do not argue—*de gustibus non est disputandum*. A taste about which you argue, with others or yourself, ceases ipso facto being a taste—it turns into a value.

In an argument that should be studied rather than merely quoted, Hirschman was asking whether economics can take account of the vast realm of human activity that is non-instrumental. "From their earliest origins," Hirschman wrote, "men and women appear to have allocated time to undertakings whose success is simply unpredictable: the pursuit of truth, beauty, justice, liberty, community, friendship, love, salvation, and so on."

Striving

This is the domain less of work than of what Hirschman called "striving—a term that precisely intimates the lack of a reliable relation between effort and result." Others have called this "expressive" or "affective" activity, but whatever we call it, Hirschman called on us to contemplate the tensions not only between the passions and the interests, but also between self-interest and the civic spirit.

And here he began to open up a path to contemplating civil society in the framework of economics:

Love, benevolence, and civic spirit neither are scarce factors in fixed supply nor do they act like skills and abilities that improve and expand more or less indefinitely with practice. Rather, they exhibit a complex, composite behavior: they atrophy when not adequately practiced and appealed to by the ruling socioeconomic regime, yet will once again make themselves scarce when preached and relied on to excess.

Perhaps herein is a dilemma of the modern interventionist quest for social justice. The more we require charity in the form of welfare transfers, for example, the less it is charitable. There are some things that cannot be established as instrumental ends of public bureaucracies and welfare states. These are things that must be spoken of but not preached or compelled, values to which people must be invited and attracted. Such things must be recognized as part of the domain of striving, a domain of activity that may enrich us beyond calculation, but in which the riches we enjoy can neither be piled up in the Lockean coins of Smaug, nor "equitably" distributed to all for all time.

The domain of striving is one in which success is recognized less as profit than as blessing, something in which we have had a hand, but which has also been bestowed upon us as if by an invisible hand. Certainly Hirschman



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was onto something in telling us that the economics we have settled for has been far too parsimonious.

A Lesson Distilled

So, what does this all have to do with my bourbon?

Well, it inspires me to continued loyalty—even if with a muted voice and retained right of exit. But moreso it elevates my thoughts beyond parsimony, to see in that sip of well-crafted and adequately proofed bourbon a noninstrumental world of valued connections to my Southern heritage, to the virtues and the sins of my fathers, to the good earth from which the corn sprouts, to the flowing branch of crisp water, and to the ingenuity of man in discovering the arts of distillation.

It's rather as Walker Percy put it: *Bourbon does for me what the piece of cake did for Proust.*

When confronted with the gravity of cultural decline, the options of exit and voice invite us to contemplate how deep our loyalties run and why. This is a process that may be assisted by simply rocking on the porch with a drink in hand. In honor of Hirschman, I lift a toast. **FEE**

Lenore T. Ealy is the executive director of The Philanthropic Enterprise, an interdisciplinary research institute exploring how philanthropy and voluntary social cooperation promote human flourishing. She is the founding editor of Conversations on Philanthropy: Emerging Questions in Liberality and Social Thought and holds a Ph.D. in history from Johns Hopkins University.

On Brakes and Mistakes

SANDY IKEDA

Here's an observation from a recent column ooin *The Economist* magazine on "The Transience of Power":

In 1980 a corporation in the top fifth of its industry had only a 10% chance of falling out of that tier in five years. Eighteen years later that chance had risen to 25%.

Competition makes it hard to stay at the top even as it offers a way off the bottom. Data on income mobility also support the idea. And despite occasional downturns (some quite large, as we well know), per-capita gross domestic product in the United States keeps rising steadily over time. These two phenomena, economic growth and

A SMART, CREATIVE, ambitious, and committed person is likely to make mistakes. And so a culture that lauds spectacular success also needs to at least tolerate spectacular failure.

competitive shaking out, are of course connected.

Different Ways of Thinking About Economic Growth

Economists in the mainstream (neoclassical) tradition are trained to think of growth mainly as raising the rate of producing existing products. For example, a higher rate of saving allows firms to employ more and more capital and labor, generating ever-higher rates of output. It reminds me of the Steve Martin movie, *The Jerk*, in which a man who is born in a run-down shack eventually strikes it rich and builds himself a much bigger house that is just a scaled-up version of the old shack.

But economist Paul Romer, for one, has said,

If economic growth could be achieved only by doing more and more of the same kind of cooking, we would eventually run out of raw materials and suffer from unacceptable levels of pollution and nuisance. Human history teaches us, however, that economic growth springs from better recipes, not just from more cooking.

So growth through innovation, technical advance, and making new products is more important than just using more inputs to do more of the same thing.

> The late Harvard economist Joseph Schumpeter came even closer to the truth when he famously described competitive innovation as a "gale of creative destruction"—building up and tearing down—with creation staying just ahead of destruction.

> But standard economic theory has had trouble

incorporating the kind of economic growth driven by game-changing innovators such as Apple, Facebook, and McDonalds. Mathematically modeling ignorance and error, ambition and resourcefulness, and creativity and commitment has so far been too challenging for the mainstream.

What's the Source of Economic Growth?

Achieving economic growth through innovation means someone is taking chances, sometimes big chances, to break new ground. As Schumpeter put it, what it takes is finding "the new consumers' goods, the new methods of production or transportation, the new markets, the new forms of industrial organization." Although talented people are behind this process, we sometimes put too much stress on bold "captains of industry" such as Steve Jobs, Mark Zuckerberg, and Ray Kroc. The personalities of the players are important—but so are the rules of the game.

Imagine if cars had no brakes. How slowly and

cautiously we would have to drive! Clearly, brakes on cars enable us to drive faster and safer. How? Well, brakes give us the freedom to make a lot of mistakes—entering a turn too fast or taking our

eyes off the road for too long—without causing disaster. We can take more chances with brakes than without them. (Of course, good brakes can also seduce us into driving recklessly, but that's a story for another day.) Similarly, economic development of the Schumpeterian variety presupposes lots of experimentation, and that in turn means making plenty of mistakes.

Markets Mean Mistakes

Now imagine a world in which people looked down on innovators. That's hard to do in our time, but as Deirdre McClosky argues in her 2010 book, *Bourgeois Dignity: Why Economists Can't Explain the Modern World*, it wasn't that long ago when most people disdained innovators who challenged established ways of thinking and doing. The result was cultural and economic stagnation. Making an innovator a figure of dignity worthy of respect, which she says began to take hold about 400 years ago, has sparked unprecedented economic development and prosperity.

But a smart, creative, ambitious, and committed person is likely to make mistakes. And so a culture that lauds spectacular success also needs to at least tolerate spectacular failure. You can't have trial without error or profit without loss.

Let me be clear. I'm not saying that people in an innovative society should champion failure. I'm saying

YOU CAN'T HAVE trial without error or profit without loss. they must expect potential innovators to make a lot of mistakes and so have not only the right institutions in place (private property, contract, and so on) but also the right psychological

mindset-which is something static societies can't do.

Change, Uncertainty, and Tolerance

If you think you already know everything, anyone who thinks differently must be wrong. So why tolerate them?

One of the great differences between the modern world and the various dark ages mankind has gone through is how rapidly our lives change today. There's immeasurably more uncertainty in the era of creative destruction than in times dominated by the "tried and true." But the more we realize how much uncertainty there is about what we think we know, the more we ought to be willing to admit that we may be wrong and the other guy may, at least sometimes, be right. And so if we see someone succeed or fail, we think, "That could have been me!" In a sense, an advancing society welcomes mistakes as much as it embraces triumphs, just as a fast car needs brakes as much as it needs an engine.

That's not just fancy talk. The evidence—prosperity—is all around us.

Sandy Ikeda (sanford.ikeda@purchase.edu) is an associate professor of economics at Purchase College, SUNY, and the author of The Dynamics of the Mixed Economy: Toward a Theory of Interventionism.

Defining Democracy Through Thick and Thin

BRAD TAYLOR

Experts routinely tout democratization as the key to promoting freedom and prosperity in underdeveloped nations. They argue that making leaders accountable to their citizens would promote good governance and remove the institutional barriers to economic development. Adherents of this position cite a large number of empirical studies, which show that democratic countries tend to perform better than autocracies across a variety of well-being indicators.

Development agencies and scholars therefore give democratization high priority relative to other antipoverty programs. But these same experts completely disregard alternative governance models, such as radical

decentralization. Thus, it seems everybody knows democracy is the best way to promote robust economic development, so the challenge is in finding the best way to promote democracy.

Biasing Democracy

The way scholars define and measure democracy, however, includes a bias. This bias prevents a fair evaluation of the alternatives. That is, if we want to know whether promoting democracy in failed or authoritarian states is a good idea, we need to treat democracy as a set of institutional inputs analytically distinct from the effects of those institutions. Even critics offering a minimalist definition of democracy include outcomes in their definitions.

Both therefore stack the deck in democracy's favor. Let me explain.

Under some definitions, democracy requires not only certain mechanisms for collective decision-making, but

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also liberal policy outcomes in various areas. While some conceptions of democracy are even more restrictive, the broadest commonly accepted definition in contemporary political science has four criteria:

- free and fair elections;
- close to universal adult suffrage;
- freedom of speech, association, and press; and
- elected officials not unduly influenced by unelected groups such as the military or religious leaders.

If any one of these conditions is routinely violated, the country is deemed undemocratic, or at least less democratic than countries that do meet the criteria.



Political Systems: Inputs, Dynamics, and Outputs

Broadly speaking, political systems can be defined at one or more of three levels: (1) institutional inputs, (2) political dynamics, or (3) policy outcomes. At the first level, we have the basic rules of the political game such as the electoral system and constitution. At the second, we have the interaction of political players within those rules—how voters vote and how parties and candidates compete with one another. At the third level, we have the policy decisions that emerge from this interaction.

"Thick" definitions of democracy reference all three levels: A democracy needs particular institutional inputs as well as certain patterns of electoral competition and policy outcomes. Minimalists insist the third level has

no place in the definition of democracy, because it is an output. Such minimalists fail to recognize, however, that their own second-level definition is also an output rather than an input. The degree of competition in an electoral system cannot be

directly controlled. Rather, it emerges from the interaction of politicians, voters, and special interests given the rules defined at the first level.

When we define democracy in terms of competition we make an implicit assumption that democracies are necessarily competitive. Since political competition is an intermediate goal of democracy, the minimalist conception of democracy picks out democracies that are at least moderately successful in a particular way.

More on Thick and Thin Conceptions

The Economist Intelligence Unit's Democracy Index uses such a "thick" conception, which contains categories not only for the functioning of the electoral system but also for civil liberties and effective governance. A definition like this clearly allows us to say very little about the desirability of democratic institutions as a set of inputs. Countries with relatively little corruption and repression are likely to perform well on a number of other dimensions, but such a lack might have nothing to do with democracy's institutional machinery.

Recognizing this problem, many political scientists have

followed Joseph Schumpeter in defining democracy as a system in which collective decisions are made through a competitive struggle for votes. In Adam Przeworski's words, a democracy is "a system in which parties lose elections." Countries are deemed democratic if and only if there are somewhat competitive elections. Nominally democratic countries with rigged or otherwise uncompetitive elections are excluded, but there is no requirement of a free press or an autonomous legislature.

The widely used Polity IV database of regime type takes such a minimalist approach, considering only "key qualities of executive recruitment, constraints on executive authority, and political competition." Here, there is no automatic assumption that democracies respect

civil liberties or operate effectively.

While a minimalist or "thin"—definition of democracy is far better than the alternative, it does not go far enough in defining democracy in terms of inputs rather than outputs.

A competitive electoral system is not an institutional input, but one possible intermediate effect of democratic institutions. The mistake here is not quite as obvious as defining democracy in terms of policy outcomes, but it is hugely important for the practice of so-called "comparative institutional analysis." In other words, if we're going to compare sets of institutions in terms of their ability to improve overall peace and well-being, shouldn't we exclude output biases altogether?

Beyond Democracy?

THE WAY SCHOLARS

define and measure democracy

includes a bias. This bias prevents a

fair evaluation of the alternatives.

Consider what this means for comparative institutional analysis.

We want to know whether some failed state would be "better off" embracing democracy, autocracy, or anarchy. We look around at the performance of democracies as conventionally defined and see that they perform well on a variety of economic and social measures. The problem is that our very definition of democracy excludes many of democracy's failures. It is not uncommon, for example, for a country with democratic institutions to become dominated by a minority faction able to prevent meaningful competition while retaining the institutions of democracy.

Venezuela has had democratic institutions since 1958. The Chavez regime limited political competition through force and fraud, making the country less democratic by conventional standards. Such was reflected in a decline

in Venezuela's Polity score, for example, as Chavez took power and Venezuela eventually shifted out of the democratic category altogether. Venezuela is no doubt a failed democracy when judged in terms of its political dynamics—the Fifth Republic and United Socialist parties had virtually no chance of losing their rigged elections—but this

WE WANT TO KNOW whether some failed state would be "better off" embracing democracy, autocracy, or anarchy. The problem is that our very definition of democracy excludes many of democracy's failures.

doesn't make the country any less of a democracy in terms of institutional inputs. Democratic institutions allowed Chavez to gain power and limit political competition. That this can happen is an important fact to consider when thinking about whether democracy is a good idea for other countries.

If we want a fair comparison among systems, we need to define political systems in terms of their institutional inputs and nothing more. Some anarchists might claim, for example, that Somalia is not really anarchic because tribal groups have gained some territorial power; and some communists might claim that the USSR was not really communist because its rulers were insufficiently committed to the communist vision. These arguments commit the "no true Scotsman" fallacy in that they arbitrarily narrow the definition of a term in order to preserve a hypothesis in the face of conflicting evidence.

The claim that Venezuela is not really democratic commits the same fallacy in a subtler way, which generally goes unnoticed. Democracy cannot reasonably be defined as a system with genuinely competitive elections any more than anarchy can reasonably be defined as a system in which there is no coercion, or autocracy as a system with a wise and benevolent despot. An institution defined by its goals is virtually guaranteed to be successful under such a construal. For democracy, the defining feature is an electoral system in which elected officials have the power to make laws and policies. Particular democracies will have additional rules designed to improve democratic performance, but these will always be formal rules with the potential to fail.

It seems unlikely that autocracy has a general advantage

over democracy in poor countries, but the process of democratic transition is itself costly and should only be undertaken if the expected benefits outweigh these costs. Moreover, the evidence from Somalia suggests that statelessness might sometimes be a viable alternative to democracy. As Benjamin Powell writes in a recent *Freeman* article,

Somalia's "imperfect anarchy seems to be doing better than the very imperfect state that preceded it and many of those states it shares a continent with."

Chris Coyne has called into question liberal democracy's viability in failing states on the grounds that this political form depends on a number of informal institutions that cannot be designed from on high. I think the confusion regarding democratization runs even deeper.

Scholars and state-builders do not simply neglect the possibility that democratic institutions will not stick; they work with a definition of democracy that allows the most complete failures of democracy to be blamed on autocracy. This confusion gives the impression that democracy would promote freedom and development if only we could make it stick. In reality, democratic institutions simply produce poor outcomes, which sometimes don't look particularly democratic. Recognition of this fact should force a re-evaluation of the humanitarian project of democratization and the desirability of institutional alternatives such as anarchy.

Brad Taylor (bradrtaylor@gmail.com) is a Ph.D. candidate in political science at the Australian National University, Canberra. He is a Public Choice theorist interested in the relationships between voice and exit as alternative means of controlling government. His work has been published in academic journals including Kyklos and Constitutional Political Economy.

EEOC to Employers: Hire Criminals or Be Sued

WENDY MCELROY

mployers often screen job candidates for criminal backgrounds. One reason: If an employee on the clock commits a crime or causes an accident due to drug use, the employer could be dragged through an expensive lawsuit by any victims. In tort law, "negligent hiring" is a cause of action by which the employer is held responsible for harms committed by an employee if the employer knew or should have known that the employee was dangerous. One of the best defenses against such a lawsuit is to demonstrate due diligence in hiring practices, including background checks.

Meanwhile, the Equal Employment Opportunity Commission (EEOC) is aggressively punishing employers who use criminal checks as hiring filters.

In January 2012, for example, Pepsi settled with the EEOC for \$3.13 million. An EEOC press release explained that "Pepsi applied a criminal background check policy that disproportionately excluded black applicants from permanent employment." The background check was deemed to be a violation of Title VII of the Civil Rights Act of 1964. Pepsi also agreed to offer jobs to blacks and amend its hiring practices.

The EEOC is applying the theory of "disparate impact." A standard definition of the term is the "adverse effect of a practice or standard that is neutral and non-discriminatory in its intention but, nonetheless, disproportionately affects individuals having a disability or belonging to a particular group based on their age, ethnicity, race, or sex." In short, a hiring practice that is racially neutral in its content, application, and intent is still legally discriminatory if it adversely affects one race more than another. The EEOC views criminal background checks as discrimination against blacks solely because of their racial impact.

The Why Behind the Impact

The EEOC began to focus on the disparate impact of criminal background checks in 1987 with a policy guide that stated, "It is the Commission's position that an employer's policy or practice of excluding individuals from employment on the basis of their conviction records has an adverse impact on Blacks and Hispanics in light of statistics showing that they are convicted at a rate disproportionately greater than their representation in the population."

But the key question has not been addressed: Why are blacks and Hispanics incarcerated at higher rates?

Black in Prison

The United States imprisons more people per capita than any other nation; it accounts for 5 percent of the global population and 25 percent of its prisoners. As of year-end 2011, the Bureau of Justice (BOJ) reported "about 1 in every 107 adults was incarcerated in prison" and "about 1 in every 50 adults... on probation or parole." In total, "1 in 34 adults" (6,977,700 people) are "under some form of correctional supervision." The total does not include people no longer under supervision who have a criminal record. The cumulative total represents a significant portion of those who are or will be seeking employment.

A prison record acts as a powerful barrier to being hired, especially in a tight job market in which employers can pick and choose. The prison experience also harms job prospects because it imprints antisocial attitudes that make it more difficult to function well in society.

According to the Bureau of National Statistics, the official unemployment rate for February 2013 fell to 7.7 percent; the unemployment rate for whites was 6.8 percent; for blacks, it was 13.8 percent.

The higher black unemployment rate is largely due to their higher rate of incarceration. According to the Population Research Bureau, in 2010 black men were incarcerated at a rate of 3,074 per 100,000; white men were incarcerated at 459 per 100,000.

Black Markets

The drug war deserves much of the blame. Drugs had been illegal for decades, but the all-out war against them exploded in the wake of the Vietnam War (American involvement 1961–1973), which introduced a new generation of young Americans to substances such as heroin. In a 2011 infographic on the drug war, the American Civil Liberties Union reported that the "US prison population rose by 700 percent from 1970–2005, a rate far outstripping that of general population growth."

The drug war is the cause.

Criminalizing nonviolent and victimless behavior has

made the prison population swell. In 2009, the civil libertarian organization Stop The Drug War reported Bureau of Justice Statistics data that indicated "in the federal prison population, drug offenders made up a whopping 51% of all prisoners, with public order offenders (mainly weapons and immigration violations) accounting for an additional 35%. Only about 10% of federal prisoners were doing

THERE IS A bitter irony to cases such as Pepsi's. The EEOC is posing as the cure to a problem that government itself created and seems determined to make worse. Government postures as a protector of justice and minorities when it is a great violator of both.

time for violent offenses." In other words, 90 percent of the federal prison population was "guilty" only of victimless crimes—that is, "wrong" behavior. Yet their employment future has been devastated. If the EEOC is truly concerned with the disparate impact of criminal background checks, then it should call for an end to the criminalization of drug use.

Other Factors

Other government programs are responsible for black unemployment as well, including the minimum wage and the welfare state. Economist Thomas Sowell wrote,

Liberals try to show their concern for the poor by raising the level of minimum wage laws. Yet they show no interest in hard evidence that minimum wage laws create disastrous levels of unemployment among young blacks in this country....

The black family survived centuries of slavery and

generations of Jim Crow, but it has disintegrated in the wake of the liberals' expansion of the welfare state. Most black children grew up in homes with two parents during all that time but most grow up with only one parent today.

These policies are intimately connected to higher incarceration rates. By encouraging welfare dependency,

especially for single mothers, the government constructs a vicious cycle of poverty. Meanwhile, minimum wage laws ensure that employers can afford to hire fewer workers. By forbidding black youth from working below minimum wage, the government leaves them few options beyond welfare or illegal activities, such as dealing drugs. The desire to escape the brutality of welfare-poverty also

prompts drug use. Then, both the dealing and the use lead to imprisonment. If the EEOC is truly concerned with the disparate impact of criminal background checks, it should also call for an end to the minimum wage and to welfare.

Conclusion

There is a bitter irony to cases such as Pepsi's. The EEOC is posing as the cure to a problem that government itself created and seems determined to make worse. Government postures as a protector of justice and minorities when it is a great violator of both. Then the responsibility for soaring black unemployment is shifted onto the shoulders of business, which could be the solution if unfettered. It isn't. Instead, employers are called "racist" for scrambling to avoid the ruinous lawsuits that result from an increasingly hostile set of laws. If criminal checks have a racial impact, then it is government that is responsible. **FEE**

Contributing editor Wendy McElroy (wendy@wendymcelroy.com) is an author and the editor of ifeminists.com.

Binding the Muse

SARAH SKWIRE

If by dull rhymes our English must be chained, And, like Andromeda, the Sonnet sweet Fettered, in spite of painéd loveliness; Let us find out, if we must be constrained, Sandals more interwoven and complete To fit the naked foot of poesy; Let us inspect the lyre, and weigh the stress Of every chord, and see what may be gained By ear industrious, and attention meet; Misers of sound and syllable, no less Than Midas of his coinage, let us be Jealous of dead leaves in the bay-wreath crown; So, if we may not let the Muse be free, She will be bound with garlands of her own.

— John Keats, "On the Sonnet," 1819

I n the poem above, John Keats tangles with the troubled relationship that poetry has long had with the idea of rules. The strictures of formal verse are an important part of the history and traditions of poetry and serve to convey a powerful music. But those same strictures can feel a lot like handcuffs from time to time. This means that there is a long tradition of poets like Pulitzer Prize winner Czeslaw Milosz arguing that formal verse disrupts the connection between the poem and its meaning: "Form cannot be first if you want to reach high artistic levels, since you are then bound by form, and that form is very often a betrayal of reality. It cannot grasp reality."

And there is an equally long tradition of poets on the other side of the argument. John Ciardi told the story of Robert Frost lecturing about "how he used slant rhyme, hendecasyllables, and other things like that. One lady, an appreciator of the arts, greatly agitated, stood up and said, 'Surely Mr. Frost, when you write your *bee-youu-teee-ful* poems, you don't think of these technical tricks,' with the last two words, 'technical tricks,' spat out distastefully. Frost stood back, thought a moment, and then in the microphone said, 'I revel in 'em!!'"

Because the sonnet is one of the more restrictive verse forms, it's a particularly good vehicle for Keats to use for thinking about poetic rules. I'm going to resist the temptation to go all English professor here and take the sonnet apart thoroughly. Instead, I'll simply note that while Keats adheres carefully to the rule that defines a sonnet as 14 lines of rhymed iambic pentameter, he plays some very clever games about the way he uses rhymes in the sonnet. Starting with his third line, he defies the rhyme schemes established by Petrarch and Shakespeare, making clear in the form of his verse what he wants to say with its content. He argues that, if the English sonnet



Melpomene and Polyhymnia, Palace of the Fine Arts, Mexico. Photo by Alberto Real

has to rhyme (and blank verse poets since Shakespeare and Milton had skillfully resisted the insistence that real poetry has to rhyme), it should not be forced to follow antiquated and restrictive rhyme schemes established hundreds of years earlier. These are "dead leaves in the bay leaf crown" that honors poets. A poet who is truly worthy of honor, he argues, will examine each stress and each rhyme to see which truly fits

the "naked foot" of the poem. Modern poetry and when Keats was writing, his poetry was defiantly, even shockingly modern should be flexible, and it should be self-aware.

But there is more going on here than some poetic inside baseball, nifty though that is. Those of us who are interested in the useful A SET OF RULES and laws that emerges from the community that needs them and uses them—that's a fairly good description of the rules that tell poets what makes a sonnet a sonnet.

distinction Hayek draws between *kosmos* and *taxis*—the grown order and the made order—are going to want to pay particular attention to Keats's final two lines.

So, if we may not let the Muse be free, She will be bound with garlands of her own.

If we must have poetic form, he argues, let it be a form that is dictated by the nature of the poem itself and by the poet who is creating it, and not by the dead hand of the past.

The rules that Keats wants for poetry are like the Law Merchant described by Paul Milgrom, Douglass North, and Barry Weingast in their paper "The Role of Institutions in the Revival of Trade." They point out, "At that time, without the benefit of state enforcement of contracts or an established body of commercial law, merchants evolved their own private code of laws (the Law Merchant) with disputes adjudicated by a judge who might be a local official or a private merchant." A set of rules and laws that emerges from the community that needs them and uses them in order to assess the practices of that community—that's a fairly good description of the rules that tell poets what makes a sonnet a sonnet. Milgrom, North, and Weingast also emphasize the complexity of these emergent rules. "The practice and evolution of the Law Merchant in medieval Europe was so rich and varied that no single model can hope to capture all the relevant variations and details." Again, one thinks of poetry, and the endless opportunities for creating something wholly new by using (or breaking) the rules in an innovative way. If the experiment is a

success, we get a whole new poetic form.

An equally useful parallel here is the distinction that Vernon Smith draws between constructivist rationality and ecological rationality in his book *Rationality in Economics*. He observes that constructivist rationality is "the deliberate design of rule systems to

achieve desirable performance." (A sonnet must be 14 lines of rhymed iambic pentameter. The rhymes must be put in certain acceptable patterns, preferably Shakespearean or Petrarchan.) Ecological rationality, however, is "emergent order in the form of the practices, norms, and evolving institutional rules governing actions by individuals" (What happens if I rhyme it like this instead?). It is the interplay between these two kinds of rationality where poetry happens. It is this interplay that allows for the creation of whimsically diabolical verse forms like the double dactyl-constructed intentionally to be challenging to compose and funny to read-and it is the feedback mechanism of the market of readers and writers that determines whether such experiments in poetry will live or die. As Smith notes, these concepts do not need to be in conflict. They can work together to create a tradition that remains a tradition but never loses its ability to change and to evolve.

That tradition is the poetic tradition, and it is the human tradition, and it is the tradition of freedom. **FEE**

Sarah Skwire (sskwire@libertyfund.org) is a fellow at Liberty Fund, Inc. She is a poet and author of the writing textbook Writing with a Thesis.

Professionally Clever

ANDREW HEATON

Ou may be alarmed to discover that sequestration affects not only our nation's battleships, but also its art galleries and strategic folk dancing troupes. As sequestration leads to the involuntary fiscal liposuction of our federal budget, the National Endowment for the Arts (NEA) will tighten its belt by \$7.3 million. That reduction will leave the NEA with an anemic \$139.7 million to distribute grants among creative people like me who, apparently, are unable to persuade people to pay them for their services.

The NEA doesn't bother with a model where people give their own money for things they actually enjoy. Instead, it gets a share of what the government takes from everyone else and forks it over to artists, dancers, opera singers, and writers who can't sell any books. Usually it has about \$150 million to dish out.

I'm a standup comedian. I've written novels for 10 years, and am only now getting something published (coming this summer). So I sympathize with other unknown creative geniuses eating cat food. We're doing what we love—wasn't the money supposed to follow? Why should we have to wait tables or convince rich people to marry us? Many artsy types fancy the notion that society has an obligation to support folks like me.

It's an intriguing thought: I do not wish to wait tables, but I'm okay with taxing waiters to support my novel writing so that I don't have to wait tables. Because said waiters, thus far, haven't wanted to buy my books voluntarily.

No doubt the NEA funds some real gems. It also supports some more questionable uses of tax dollars. The most controversial, you may recall, is *Piss Christ*, a photograph by Andres Serrano depicting a crucifix plopped into a jar of his own urine. Not surprisingly, this *objet d'art* offended many Christians (even otherwise laid-back Episcopalians). They felt Andres Serrano ought to finance the exhibit himself, or at least through patrons, rather than through public coffers. Personally, I'm not so much offended by his iconoclasm as curious as to why pickling religious artifacts in pee should be a federally funded activity. (And if it is, shouldn't the EPA handle it?)

A more elevated use of our money is awarding grants to opera companies or folk dancers. The problem the NEA must tackle is that only rich people like to go to operas, because operas are boring and rarely feature William Shatner or swimsuit models. Folk dancing, likewise, has a humbler consumer base as compared to Pixar movies and Cirque du Soleil. Limited patronage networks can only support a handful of companies, which can afford to hire only a handful of portly singers, spritely dancers, and so forth.

To solve the problem, we tax everyone to support forms of art most people do not actually want. This works out very well for rich people, because it means they do not have to pay as much to sit in a balcony while sleeping through a Wagner performance. It works out well for endowment recipients of all stripes, because they receive more goodies. Obtaining grants is always easier than appealing to people who like monster truck rallies.

You might enjoy folk art, or experimental photography, or musical theater. Hopefully you like standup comedy and science fiction novels as well, because someday I hope to earn a full-time living off of both.

Until I reach my goal of being professionally clever, I may well resort to jobs less grandiose than those envisioned in my high school graduation's commencement speech. But don't tax your waiter on my behalf. I really don't want to subsidize my career choices at his expense.

Andrew Heaton (andrew@mightyheaton.com) is a former congressional staffer, now working as a writer and standup comedian in New York City. More of his wit and insight can be found at his website, MightyHeaton.com

The Hair of the Dog

MICHAEL NOLAN

The plot of *Flight* revolves around a plane crash, but serves almost exclusively to convey its main character to redemption. Both vehicles—movie and plane—get more or less to where they're going, though neither one with as much precision as you'd like. And they both end with a thud only just softened by Denzel Washington.



Kamenetskiy Konstantin/Shutterstock.com

Washington's character, Whip Whitman, winds up in a state of grace and a federal penitentiary thanks to the intercession of a federal investigator presented as an agent of the gods, if not a god herself.

The movie's mostly very good. Borderline great. But it left me with a bad taste in my mouth, like director Robert Zemeckis served up one single-malt after another and then, right when he needed to cut us off, he snuck in a watered-down Jack Daniels. That's the problem I have with this film, really: Zemeckis ruins a fantastic piece of character development for the sake of a tidy ending. That he makes the State the agent of redemption just rubs salt in the wound rather than around the rim of a margarita, where it belongs.

Whitman is a man who puts the "functional" in "functional alcoholic." He also happens to be a fantastically

good pilot. He knows it, too, and it's why he can pull off a miraculous and audacious maneuver that, when the plane starts falling apart and diving earthward, allows most of the passengers to survive.

The flying—and the air traffic control chatter, and Denzel's persona in the cockpit—is ludicrous to actual pilots. That wouldn't matter so much, except for the other thing Zemeckis drives home right off the bat: Whip got on that plane drunk and coked up.

Writing in *The Daily Beast*, actual pilot Patrick Smith explains why this crosses the line from ludicrous to insulting. Smith's article is worth reading, but here's the punchline: "There's no Whip Whitaker in the cockpit. Why not? The rest of us wouldn't tolerate such a dangerous colleague in our midst." (tinyurl.com/cfpwgct)

That is, the people on the ground handle this problem for themselves, *on the ground*.

It's a crucial point given the way the rest of the movie plays out. Aside from making the meat of the movie seem kind of pointless, the ending presents the State as the only hope for saving us from a skyful of smashed flyboys—and, ultimately, from ourselves.

It's despicable that Whip flew that plane drunk. Of course. But the movie doesn't explain *why*. It's despicable because of what it does to *other people*. Drunken flying isn't the origin of the misfortune in this story, though.

The drinking doesn't even prevent Whip from pulling off a miracle. That heroic act doesn't change the fact that pilots shouldn't fly drunk and should be punished for doing so. But neither does his drunk flying have anything to do with most of what makes the story go. The airline's negligence causes the crash. Whip, despite his own negligence, keeps it from killing every single person on board.

This swirl of intentionality, negligence, buck-passing, and poor choices made under intense pressure sets up all kinds of moral ambiguity and dramatic tension. (It also brings to mind the concept of moral luck: tinyurl.com/ m5vzj7.) But then the ending happens. Moral ambiguity is safely swept away for us just as it's getting really interesting and it doesn't seem to matter much who wields the broom. As Smith-the-actual-pilot explains, the movie plays into irrational fears about flying that the occasional news story about a drunk pilot stirs in people. "It's tempting to jump to conclusions: for every pilot who's caught, there must be a dozen others out there getting away with it. Right?" asks Smith. "Well, quite frankly, no."

Everyone, Smith says, has a strong incentive to keep a drunk from flying. He says that *even the alcoholics* among the broader community of pilots take great pains to keep their problem away from the cockpit. That suggests that volition, even on the part of the alcoholics, plays a much bigger role than this movie, at least, would have you believe.

The night before the hearing, 10 days after Whip began drying out, his union rep and lawyer (Don Cheadle, so routinely sublime you keep forgetting you're watching art happen) check him into a suite a few floors up from where the hearing is due to take place. They've cleared the minibar of alcohol and posted a bouncer outside. Incidentally, this is Whip's second attempt to get clean. The first commenced as soon as he got out of the hospital and ended when he found out he might do time despite having just saved 96 lives.

In the hotel, the adjoining room has been cleaned (and its minibar thoroughly restocked). Somehow a window was left open and the connecting door unlatched. The breeze makes the door thump, calling to Whip as if the Sirens had sent out their song in Morse code. Whip fights with himself and very nearly makes the right call.

The next day, Whip's handlers find the room looking like Keith Moon just spent the night.

Whip, still drunk, has them call Harling Mays, his friend and drug dealer (John Goodman), who brings him some cocaine. Then Mays demands cash from the rep and lawyer, who pat their pockets, surprised at finding themselves in the midst of a drug deal at a time like this. Whip emerges from the bathroom a few minutes later looking more in control than either of them. In a brilliant touch, the elevator plays a muzak version of the Beatles'"With a Little Help from My Friends" ("I get by with a little help from my friends/Oh, I get high with a little help from my friends"). The whole thing winds up being hilarious, albeit a little darkly so. It looks like Whip's bested the fates for the second time. The movie should have stopped right there: ironic, symmetrical (it opens with Whip doing a line to clear his head before the flight), ambiguous, and leaving the audience with all sorts of things to argue about.

But instead we get the hearing.

Lead National Transportation Security Board (NTSB) investigator Ellen Block (played by Melissa Leo), spoken of throughout in whispers of dread, finally shows up like she just descended from Olympus. She confirms everything Whip's been saying and then immediately discards it. All that artful erosion of our confidence in Whip, which takes up the lion's share of the movie? Well, whatever.

Block uses the exoneration and praise like a velvetcovered cudgel on Whip's conscience. Maybe she *is* Whip's conscience. The investigators found two empty vodka bottles, and one of the victims—Katerina, Whip's companion in the opening scene—had an elevated blood alcohol content. Is Whip really going to tarnish her memory by pinning those two bottles on her?

What nobody explains is how, really, sneaking a drink would have tarnished Katerina's memory anyway. She made some poor choices drinking so much the night before. But she died because of a completely different choice, getting out of her seat while the plane was upside down to buckle in a child. What kind of moral peril is contained in those little travel-sized Smirnoffs that could ruin this act of self-sacrifice?

Whip declines to lie under oath. It seems like the right thing to do. It's certainly difficult. His fundamental character comes through. Then we cut to prison a little over a year later. He's clean. His son's coming by to reconcile. Everyone's happy.

Zemeckis reinforces the assumption that the powers that be in Washington resemble the Pantheon in ways beyond simply using their power to pursue personal agendas and petty revenges. As if, maybe, the real invisible hands are wielded from the Beltway and keep the very planes aloft.

This makes the uplift at the end of *Flight* ultimately ring hollow; it's as contrived and fanciful as whatever it was keeping that plane aloft when Whip turned it upside down.

Michael Nolan (mnolan@fee.org) is the managing editor of The Freeman.