THE GENIUS OF THE BEAST

A RADICAL RE-VISION OF CAPITALISM

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PROLOGUE

1

DOES SOUL BELONG IN THIS MACHINE?

Why does capitalism need a radical re-vision?

The first decade of the twenty-first century gave the Western world one skull-cracking slap after another. The attacks of 9/11 and the downing of New York's World Trade Center, the slog in Iraq, the Great Crash of 2008, the implosion of major corporations like General Motors, Chrysler, Merrill Lynch, and Citibank, and the growth of China to superpower status—these were wake-up punches. They handed you and me—CEOs, researchers, artists, students, and thinkers—what may be our greatest opportunity and our greatest responsibility since the Great Depression and the Nazis threatened to topple the Western way of life in the 1930s.

Our civilization is under attack. But many of us don't want to defend it. Why? There's a void in our sense of meaning. We've been told that the "Western system" is one in which the rich stoke artificial needs to suck money, blood, and spirit from the rest of us.[1] We've been told that the barons of industry work overtime to turn us from sensitive humans into consumers—mindless buyers listlessly watching TV while growing obese on the artificial flavors, the chemical preservatives, and the cheap sugars of junk food. And some of that is true.

But the problem does not lie in the turbines of the Western way of

life—it does not lie in industrialism, capitalism, pluralism, free speech, or democracy. The problem lies in the lens through which we see.

Emotional flows have powered our past and will drive our future, too. But we've never had the perceptual lens to bring them into view. Capitalism works. It works for reasons that don't appear in the analyses of Marx or in the statistics of economists. It works clumsily, awkwardly, sometimes brilliantly, and sometimes savagely. *The Genius of the Beast: A Radical Re-Vision of Capitalism* attempts to show us why.

The Genius of the Beast seeks to reveal the deeper meaning beneath what we've been told is crass materialism. It probes the mystery of how our obsessive making and exchanging of goods and services upgrades the nature of our species, gives us new powers, and endows us with the equivalent of new arms, legs, eyes, and brains.

The Genius of the Beast probes an untold secret of the Western system—we're not mere digits in a numbers game. We're feeling people woven in emotional exchange.

What is the *beast*? It's *Western civilization.* A monster with a peculiar metabolism—capitalism. Capitalism is a word that has become, to many, a curse. But beneath the surface, capitalism and the Western system hide astonishing abilities.

The Genius of the Beast stares a blunt fact in the face. Many of today's corporations are creatively and morally asleep. But you and I can wake them in a most ironic way—through a strange but vital upgrade in the richness of our lives.

Every culture needs a creation myth, a vision of how it came to be. That creation myth defines a culture's values and its aspirations. *The Genius of the Beast* is an attempt to provide a radically new creation myth—a factual creation myth, a creation story based on history and science. *The Genius of the Beast* is an attempt to give you and me a radically new way to understand our society.

The Genius of the Beast is a quick soar through a jet stream of stories that tell the tale of the rise of a strange creature—Western civilization—and of its capitalist digestive machinery. *The Genius of the Beast* explores the startling flipside of familiar tales—the way stone tools remade our genes, the way Paleolithic rouge and beads upgraded our ability to think, the way we invented the city, the king who invented money, the secret wonders of Phoenician trade, and the

strange ways in which William Shakespeare, P. T. Barnum, J. D. Rockefeller, and the soap and cotton revolution upgraded humanity. Taken together, these episodes reveal an untold story of our origins, a new key to the quandaries of work and daily living, and a new view of our future in a world of instant change.

The Genius of the Beast is designed to give you pleasure. But if it succeeds in its mission, it will also give you something extra—a radically new way to see.

2

RAISING THE POOR AND THE OPPRESSED

Which Is the System That Does It Best?

Religions and ideologies promise to elevate the poor and the oppressed. But only the Western system delivers on that promise century after century. Here are four examples.

Barbara Annis, head of a CEO-coaching and corporate consulting firm headquartered in Canada, dropped by my Park Slope Brooklyn brownstone one evening for a meeting. A friend was sitting in who has started businesses in Azerbaijan, Hungary, Egypt, Jordan, Pakistan, and Haiti. The international entrepreneur leaned forward in the black reclining chair to my right and asked Annis a blunt question: "What do the CEOs you coach want the most from life?" The answer wasn't a doubling in stock value. It wasn't a leap in quarterly profits.

"What they really want," said Annis, "is to do something of value for society. They want to know that they've contributed to something bigger than themselves. Something with real meaning."

A few evenings later, I walked up the block to our neighborhood's major shopping street, Seventh Avenue, took a sharp right, went another few blocks, then barged into the Community Bookstore to ask its owner, Katherine, just how urgently a book is needed that radically morphs our perception of Western values, that turns our vision of capitalism on its head, and that shows us the moral imperatives

hidden in our society. Should I really set aside my next two books of scientific theory and focus on a book about the meaning of our work, the meaning of our lives, and the meaning of the way we live, the meaning of our society?

Standing behind the counter of her coffee and pastry bar, Katherine stopped and thought for a moment. The question had struck something deep in her. You could see it in the way she almost closed her eyes.

"A friend of mine had guests from Germany a few weeks ago," she said. "Before they left, the Germans said they envied her. She didn't understand why." Germany has a social welfare system that defies belief. The Germans get nearly two months of vacation a year. And the Germans live under a government that doesn't make war in Iraq, that doesn't drop cluster bombs on villages in Afghanistan, that doesn't encourage greenhouse gasses, and that doesn't pervert a country like Nigeria just for the sake of its oil. Said the bookstore owner, "My friend's guests told her she was lucky. 'You Americans,' they said, 'have the best way of life in the world.' My friend called me in confusion to ask how in the world that could possibly be. What—if anything—is good about our society? No matter where I am, no matter who I meet, that sort of question has been nagging everyone I see."

* * *

If given a choice between earthly goods and emotional nourishment, humans will tighten their belts and go for emotional meat. In more than ten thousand "suicide bomber factories" worldwide, in more than ten thousand Wahabi madrassas, children are being taught to make holy war. The West, they're told, has nothing left to give the world but immorality and decay.

The teachers in these madrassas peddle passion brilliantly. They feed the hunger for meaning with the junk food of emotion—violence and righteous fury.

But could the madrassa teachers be right? Do we in the Western system have nothing worth struggling for? Do we have nothing that's worthy of idealism and belief?

In the years since 9/11, a steady stream of intelligent, socially responsible friends have told me that American civilization is

expiring, and that it deserves to die. Ours, they say, is the most violent culture in the history of humanity. It has raped the planet and tortured its captives of war. If it does not collapse under its own weight, it should be executed for its crimes. These are people with influence. One, for example, runs international seminars for a high-prestige institute. Another is in the publishing world. (He's not, thank God, affiliated with the publisher of this book.)

But here's a basic fact of the Western way of life, hard as we may find it to conceive: Capitalism offers more things to believe in than any system that has ever come before. Nearly every faith, from Christianity and Buddhism to Islam and Marxism, promises to raise the poor and the oppressed. But only capitalism delivers what these ideologies and religions profess. Capitalism lifts the poor and helps them live their dreams.

The proof is in the mega-perks we tend to take for granted:

- In the mid-1700s, cotton clothes were a luxury import that only the super-rich could afford. The masses worked from day to day in stiff animal hair fabrics that housed insects and that scratched and tortured the skin. Changing into new clothes every few days or laundering them regularly was impossible. There was little sense in bathing if your shirt still carried last month's stench. In 1769, capitalism introduced the power loom and changed the very nature of the shirts upon our backs. By the twentieth century, capitalism had made a T-shirt of cotton—the fabric of kings—the norm for even the poorest sub-Saharan African.
- In the nineteenth century, capitalism gave us another new universal—soap. Statistics show that Westerners grew dramatically healthier and added decades to their lives beginning in roughly the 1840s, when the soap and cotton revolution kicked in.
- In the early 1800s, sending an urgent letter to a relative on a distant coast took months or weeks. Then capitalist enterprises built the telegraph system, allowing messages to be sent across continents and seas in a matter of hours. In the 1990s, a mesh of multinational corporations took another leap. They built the mobile phone system and made it second nature to ring Taipei from Tampa and Bangalore from Boston while you were walking down the street.

- In the mid-1840s, a trip from New York to California took more than half a year by either wagon or by sailing ship.[1] Your odds of dying on the way were roughly one in five. Then in 1869 there came a capitalist masterpiece, the transcontinental railway, which snipped the trip down to a week. In the twentieth century, capitalism went even farther. It gave the average citizen jet wings and slivered the New York–LA trip from roughly a hundred hours to just five.

The Western system accomplished in three hundred years what it would have taken evolution over three hundred million to achieve—it gave us the equivalent of new arms, legs, ears, eyes, and brains.

No other civilization in the history of this planet—not that of the Egyptians, the Romans, the Muslims, the pre-1970 Chinese, or the twentieth-century Marxist Russians—has ever come close to lifting the downtrodden in these ways. None has ever done so much to elevate, empower, and create a brand-new category of humanity, a brand-new niche of comfort and prosperity—a massive and productive middle class.

The middle class is an economic engine that even Karl Marx, in his *Communist Manifesto*, praised for creating "wonders far surpassing Egyptian pyramids, Roman aqueducts, and Gothic cathedrals." Yes, the same Karl Marx who hated the middle class. The same Karl Marx who turned the word for middle class into an epithet—*bourgeoisie*.[2]

But the middle class is something we usually don't notice—a sea of humans that the Western System has raised from the ranks of the downtrodden for generations, a sea of humans who have left their poverty behind them permanently.

How have the Western system and its sidekick, capitalism, pulled off deeds of this magnitude? How has the Western system worked wonders without knowing its own nature? And if capitalism is such a miracle worker, why does it need a radical upgrade?

3

THE MESSIANIC IMPERATIVE

Your work, your daily life, and the economy are a lot more than they seem to be.

The West does far more than it gets credit for, but that's nothing compared to what it can ultimately achieve. Yes, the capitalist system has performed its share of miracles and its share of atrocities. But every one of the dozens of corporations I've worked with uses only 10 percent of its brain. And most of us during the working day operate on less than half a brain as well.

Some of us ache to jolt our dozing brain cells into action. And we need to if we're going to keep producing new jobs while our old jobs slide away. Those old jobs are being outsourced to India, China, Mexico, Costa Rica, Poland, Russia, Hungary, the Philippines, and South Africa. The Western system is spreading and upgrading entire nations—Korea, Taiwan, Thailand, Singapore, India, and the really big one, China. That spread of the Western way of life is a testament to its power to change lives.

But to compete we need to bring our sleeping brains to full arousal. Which brings us to an irony: to energize the industrious and analytic potential of our minds, we need to find and engage our feelings. Sensing our own desires, irritations, and fantasies can help us understand the unexpressed emotions of our fellow human beings. Strange

as it sounds, understanding our emotions—our passions and our depressions—can help us give others what they need before they even know they want it. It can help us create entirely new human powers—new technologies, new services, and new industries. Emotion is one key to creating new jobs, to raising incomes, to goosing the gross domestic product, to extending the escalator of upward mobility, to giving us satisfaction, and to giving us new meaning in life.

But there's more to it than that. There is an implicit code by which we in the West live—a code that demands that we uplift each other, and that we do it globally. It's a thoroughly secular call to be messianic. It's an economic call, a call to save thy neighbor.

* * *

We desperately need a re-vision, a reperception, and a reinvention of the system that has given Western civilization its long-term strength and its recent weaknesses. We need to wake up capitalism to its mission.

There's a place where we make meaning. But it isn't just in charities or in volunteer activities. It's in our daily work.

Business, commerce, and exchange are at the heart of Western civilization. They're also at the center of our daily lives. We spend more time at work than at any other waking activity. When we meet strangers, we tell them who we are by naming our trade, our way of making a living. Capitalism is what we do each day. But capitalism is not at all what we think.

The goal of this book is to take both you and me on a deep dive and a high flight—an exploratory mission into a secret that's right under our noses—into a set of moral imperatives and heroic demands that are implicit in the Western way of life. An exploratory mission into the secrets of our hidden magic, into the secrets of our unseen gifts, and into the secrets of our utopian capacities.

On the way, we'll tunnel into a cluster of mysteries. Why we are saviors who must wake up to our powers. Why consumerism—that wretched sin—isn't what it seems. Why frivolity is a search strategy in disguise. Why salesmanship, cash flow, profits, and marketing hide a strangely messianic core. *The Genius of the Beast*'s upcoming glide through the history of Western civilization is a retelling that hints at the rich ore beneath the slopes and plains of our history's terrain.

The Genius of the Beast aims to lay bare the emotional substance in what we've mistakenly labeled with a dehumanized vocabulary, the language of clods, lumps, stones, and numbers—the language of "materialism," "commodification," "consumerism," "derivatives," "utility maximization," "quarterly profits," "products," "markets," and "supply and demand."

People are the ones who demand. We do it because we desire, we hanker, we hunger, we're eager, we're roused. Or we're deadened, we're hurt, we're unsatisfied, we need. Wanting is an emotional thing. Value is emotionality. So is price. And so is profit. Coin is massed attention. Cash is emotional need.

It's not the plastic or the silicon in what we make that counts. It's the passion! It's the emotional boost, the emotional solidity, the emotional satisfaction, the emotional soar, the emotional swiftness, the emotional whisper, and the emotional roar.

Hold on to your seats. We're about to turn the conventional story of the Western system on its head. We're about to zip from the prehuman era to today in a way that musty preconceptions have hidden from our view. We're about to use a tool kit of new concepts:

- the evolutionary search engine
- the birds and the bees of boom and crash
- the cycle of insecurity
- stored vision
- microempowerment
- tuned empathy
- the hells and the heavens created by your neurobiology seven times a day
- the hungers in the fissures of your brain
- novelty lust
- identity tools
- creative capitalism versus criminal capitalism
- and management by walking outside

Get ready for a very strange trip, a very strange trip, indeed. You're about to step through the looking glass of capital. You're about to view nearly everything you take for granted from one of the strangest points of view you've ever seen. You're about to reperceive the core of

history, business, creativity, and economics through the lens of emotions we don't normally comprehend, the hidden feelings driving you and me.

I

THE MYSTERY OF MANIC-DEPRESSIVE ECONOMIES

4

THE GREAT CRASH OF 2008

Why do economies collapse?

On December 6, 1974, the Dow Jones Industrial Average, the measure of the health of America's economy, was a sickly baby. It lay at a tiny 577 points. What's worse, it had just taken a huge spill and investors were in agony, terrified it might fall further. Thirty-three years later, on October 9, 2007, the Dow was a swaggering giant. It had rocketed to a level that few who experienced the financial hard knocks of the 1970s could have imagined. It scraped the sky at 14,164 points. If you'd invested $1,000 in 1974, your money would have grown to $24,547.66 by 2007, a stunning return on your savvy.

It was the equivalent of the sickly baby growing up to be fourteen stories tall.

What's more, many brokers and financial experts said that America would never have a major crash again. The new economy of iPhones and Google would soar, glide, and fly. Brokers at the prestigious investment house Morgan Stanley said that the Dow would soon reach 20,000. And modern economics, with its sophisticated fiscal and monetary tools, would stop any major dive before it could start.

The seers of perpetual boom were wrong. Very wrong. On October 9, 2007, the Dow Jones Industrial Average dropped a wal-

loping 320 points in eight hours. But that was just the beginning. For over a year, the Dow continued its sickening slide, plummeting by hundreds of points at a time. In the two months between September 15, 2008, and November 25, 2008, the world's companies lost a total of $16 trillion in stock market value.[1] That loss was the size of the gross domestic product of China, Japan, and England combined. It was the size of the total output of roughly 1.4 billion of the world's most productive humans working for a full year. No wonder the worried heads of twenty governments got together in Washington in November 2008 to stop the plunge.[2] No wonder the US government tried to end the economic dive with over $7.7 trillion of bailouts and rescue plans by the end of 2008. But the Great Crash of 2008 would not be stopped. The result? In just one month, October 2008, 533,000 Americans lost their jobs.[3] And two of America's three automaking companies, General Motors and Chrysler, two mainstays of America's growth in the twentieth century, were bleeding to death and showing off their wounds as they begged Congress for a $36 billion cash transfusion.

What in the world caused this massive slide?

Every economic crash wears a disguise. On the surface, it looks unique—like something that's never happened before. On the surface, it looks like it was caused by big mistakes. By villains. By presidents and their duffle-headed economic policies. By parasitic speculators. By con men and cheaters. And by greed. But do villains and greed really cause panics, collapses, recessions, and depressions? Or do we become obsessed with sin and skullduggery when crashes come because that's how we are built—to react to catastrophe with blame? Are greedy cheaters, swindlers, and con men with us in both good times and in bad? And does something in our biology make us focus on them when things go awry? More important, does something in our biology trigger booms and crashes? And if booms and crashes are built into the very fiber of our being, why have they survived? Why do they continue to corkscrew through every economy we know?

In a Darwinian world, only the fit live on. Only what works remains. To hang in there for hundreds or millions of years, a strategy has to contribute to success. Could it be that boom and crash contribute to the success of human beings? If that's true, what in the world do they achieve? Equally important, what can you and I do to

turn crashes into opportunities? Not just opportunities for ourselves. Opportunities for all of humanity.

The superficial story of the Great Credit Collapse of 2008 is a tale of overpaid executives milking the system. It's a story of modern bandits conning money out of you and me. It's a story of idealism starting a chain of events that led to ruin. And it's a story of good turned into accidental evil. Or that's the way it seems. But that is just the mask, just the disguise. The real cause of a crash is best explained by tales of bacteria and mice—our relatives on the tree of life. Bacteria and mice share a huge number of genes and internal machinery with you and me. They are relatives who, like us, go through boom and bust. And they do it without money. Why? Because the hidden roots of an economy go much deeper than they seem.

Like all economic crashes, the Great Credit Collapse of 2008 hid its real causes in an ocean of red herrings. Folks on the right think it was caused by one set of bad guys—people trying to do good. And folks on the left are sure the collapse was caused by the "greed is good" mentality of thieves in hand-tailored business suits: upscale robbers going for twenty-million-dollar paydays and for two-hundred-million-dollar golden parachutes.[4] But that, remember, is just the disguise. Under the surface, there was something far more primal going on.

Here's how the commentators on the right saw the origins of the greatest economic disaster since 1929. It was, they said, all the fault of the Left. Their story begins in 1994, when Congress gave the power to regulate mortgages to the Federal Reserve Bank. Idealistic political activists from community organizations like the Association of Community Organizations for Reform Now (ACORN) and the Neighborhood Assistance Corporation of America (NACA) put the screws on President Bill Clinton. The Federal Reserve Bank, the community organizers said, was protecting a nasty practice—*red-lining*, refusing mortgages to people in inner-city and low-income neighborhoods. So Clinton told his cabinet to wipe out this discrimination against minorities. The result was the invention of the NINJA loan, the No Income, No Job, No Assets loan.[5] In essence, Clinton was out to deliver on the motto of his 1992 campaign for president: "It's the economy, stupid."[6] Clinton's goal was messianic. It was to turn folks who had never before been able to own homes into homeowners. It was to make the working poor, the disenfranchised, and the folks nor-

mally forced to live in slums into property owners. Clinton's goal was to lift these oppressed masses into the middle class and to give them a stake in the stability of a vigorous, inventive America. His aim was to bring the disadvantaged into the circle of those who build equity with each monthly payment they make. But the NINJA approach meant loaning money to people with no savings, people who earned low paychecks, and some who earned no paychecks at all.

Clinton's dream was glorious. It was the latest upgrade of Franklin Delano Roosevelt's New Deal and of Lyndon Johnson's Great Society program. It was so compelling that Republican president George W. Bush continued the Clinton policy. He even expanded it.[7] But the NINJA strategy was also subtly diabolic. Why? It ignored the mandate of capitalism—be messianic. Save thy neighbor. But how can that be true? Clinton's plan was extremely messianic. It aimed to lift the poor to a stature they'd never known before. Right? Yes, but at someone else's expense. NINJA loans mugged Peter to pay Paul. They forced loan officers, mortgage brokers, and lenders to close their eyes to mortgage applications with phony income and asset claims. NINJA loans skipped the traditional process of careful scrutiny, the agonizing bureaucratic fact-checking of a borrower's ability to repay. NINJA loans took the money you'd deposited in your bank and that you'd set aside in your 401(k) accounts and gave it to people who couldn't give it back to you. Theft is not messianic. And this was theft from you and me, from investors big and small.

NINJA loans also had a downside for the family who received the loan. New forms of mortgages designed to meet the Clinton mandate tempted the poor with low initial payments. But they were mortgages with a wicked sting—they were *adjustable rate mortgages*. After thirty-six months of pampering you with pleasantly affordable interest rates, they underwent a Jekyll-and-Hyde transformation, slashing you with the vicious claws of far higher interest rates. One family in East Oakland across the bay from San Francisco, for example, paid a monthly $1,500 for their mortgage in 2005. They had that comfortably low rate for the first three years. Then came *mortgage resets*, and their interest rates swelled like tumors. The $1,500 payment soared to $6,000 a month.[8] The wallet shock was unbearable. Families like this were forced to rush to real estate brokers in the hopes of selling before their homes could be repossessed by

the bank. They were forced to sell their houses at a fraction of what they'd paid for them. If they could sell them at all. But bank foreclosure was the fate of a disturbingly high percentage of the NINJA loan recipients. By December 2008 one out of ten homeowners in America was in foreclosure or was late on mortgage payments. In California and Florida, entire neighborhoods took on the look of ghost towns seemingly overnight—with empty houses and for sale signs on what felt like nearly every lawn.

Why the extraordinarily high interest rates? Was it the greed of bankers and fat cats on Wall Street? Yes. But it was also your greed and mine. When we'd put our savings into money market accounts or mutual funds, we'd wanted the highest interest rates we could find. NINJA loans kicked in with these high rates after their first three years because the money they doled out was yours and mine, and we wanted to earn a nice return on what we socked away. If usury was involved, you and I were among the usurers.

NINJA loans, high-risk loans, liar loans—loans based on falsified income and asset statements—and subprime loans helped fuel a real estate boom. From 2001 to 2005, the prices of homes rose at a rate that would theoretically have doubled their value every seven years. The 73.8 million American families who owned their own houses looked richer and richer on paper every year.[9] And everyone wanted to get in on the real estate boom. Everyone wanted to crowd into the express elevator that whisked you up to instant wealth. Feature stories, get-rich-quick Internet schemers, and late-night infomercial hucksters told of cab drivers, hairdressers, and single moms applying for NINJA loans to buy property in their own neighborhoods and even houses in distant cities, convinced that the buildings would soon double in price. The craving to make money this way spread with astonishing speed. It even spread to England, where it seemed that nearly every member of the working class was buying flats, renting them out, and speculating over the dinner table or in the pub about which neighborhoods would rise the fastest. We had a bubble. And bubbles have a nasty habit. They burst.

5

WHO TOPPLED THE TITANS?

Thud, after thud, after thud. The tale of the falling banks.

By 2006, there was trouble in real estate. According to Florida congressional candidate Paul Rancatore, the NINJA "loan market" in 1995 "was nonexistent." By 2008 "it represented over 25% of all mortgages."[1] By the end of 2006, foreclosures had hit a record level. People were driven out of their homes by their inability to pay the pole-vaulting monthly charges, and the banks were taking mini-mansions and starter homes back and auctioning them at ridiculously low figures.

That's when the giants began to fall. Those giants were our key financial institutions, the vertebrae in the backbone of our economy, the girders of the economic infrastructure that allows you and me to whip out our credit card or our checkbook and to buy everything from this week's groceries to a new car. The first to go was a company that specialized in NINJA loans—New Century Financial. In the early 2000s, New Century Financial was a probe on the bold new frontier of high-risk mortgages, NINJA mortgages—mortgages known widely as subprime because they were below the lowest level of credit worthiness normally considered acceptable in the investment business. But on April 2, 2007, New Century went into Chapter Eleven—

bankruptcy—and fired more than half its staff.[2] The fall was shocking. Most of us had never seen a major financial institution go under before. But financial collapses of this kind were about to become the order of the day.

In July 2007 the fifth-largest bank on Wall Street, Bear Stearns, made an announcement that hit the headlines like a sledge hammer. Two of its hedge funds had imploded. If you or your mutual funds had money invested in these Bear Stearns ventures, your hard-earned cash had just done a disappearing act. Eight months later, on March 17, 2008, Bear Stearns went completely under. J. P. Morgan, the $2.3 trillion financial services firm,[3] saved the day by scarfing up the Bear Stearns wreckage at a sub-bargain basement price—buying an $18-billion company for $240 million. That's the equivalent of buying a three-hundred-dollar mini-laptop for four dollars. But there was worse to come.

When America twitched, France and England showed signs of cerebral palsy. On August 9, 2007, French investment bank BNP Paribas informed investors that two of its funds had become will-o'-the-wisps thanks to a "complete evaporation of liquidity." The cost of credit jumped, and heavy-duty anxiety hit the financial community worldwide.

A quiet process of emergency rescue—of government bailout—began. The European Central Bank pumped a humongous 203.7 billion Euros into the banking sector. That's enough money to buy every man, woman, and child in Manchester, England, three houses.

Once upon a time, a single billion was nearly inconceivable. In 1861, just before the Civil War, the entire federal budget of the United States was a mere $67 million. At that rate, one measly billion would have sustained the entire government of the United States for close to fifteen years.

But in 2008, the billions were about to pile up like pennies. On February 20, 2007, the G7 leaders—the leaders of the seven biggest industrial nations in the world—came out with a projection of losses from mortgages and from the investment vehicles that had been built to raise money for NINJA loans. The figure was shocking—four hundred billion dollars—enough to fund America's space program for more than twenty-three years. But that projection was way, way too low. In August 2007 a German bank that had plunged big time into

American NINJA mortgages—Sachsen Landesbank—showed signs of collapse and was saved by a merger with one of its biggest rivals, Landesbank Baden-Wuerttemberg.[4] In September 2007 the British bank Northern Rock imploded. It went secretly to the Bank of England for emergency funding. When the BBC leaked the news of Northern Rock's trouble, worried depositors rushed to the bank to grab their cash. Those panicked depositors pulled a billion pounds out of Northern Rock before the government saved the day by assuring depositors that if Northern Rock failed to give them their funds, the government would.

In October 2007 a top-tier bank in a nation of bankers—Switzerland—announced $3.4 billion in losses. The shuddering bank was UBS. And UBS was not some tiny local bank. It was a global player, with branches in fifty countries.[5] The chairman and CEO of UBS resigned. Then Citigroup, one of the world's two biggest banks,[6] with 12,000 offices in 107 countries and a staff of 358,000, sprang a leak. It announced that $3.1 billion had gushed from its coffers—$3.1 billion in dead loss. But that was only a prelude. The following week Citigroup announced another $5.9 billion in losses. Six months later Citigroup's publicly announced losses had mounted to $40 billion—enough to give every adult in Chicago an SUV. But that was just a taste of things to come.[7]

In October 2007, the trouble hit Merrill Lynch. Merrill Lynch was a titan. It had assets of over half a trillion dollars—$681.05 billion to be precise.[8] And Merrill Lynch was literally the symbol of Wall Street. Its branding device was a bull, and it paraded that symbol in the most emblematic place of all—in the form of a seven-thousand-pound giant bronze bull smack in the middle of the Wall Street district.[9] Why was Merrill Lynch's golden calf in the financial district's heart a bull? The muscular animal was more than just an arbitrary symbol of power. It said that Merrill Lynch was bullish on Wall Street. And it said it in an unforgettable way. So when Merrill Lynch's head resigned over $7.1 billion in bad loans, America's average, everyday investors got their first inkling that they were in for serious trouble. The trouble was so serious, in fact, that on December 6, 2007, President George W. Bush announced that he had a plan to bail out more than a million homeowners whose mortgages were about to go into foreclosure. It was the right move from the wrong man. Bush's credibility had been brought

down to zero by eight years of blunders, including the war in Iraq, which had proven to be a shabby, costly, and morally disturbing embarrassment.

Worse, our economic gurus had given us the false sense that catastrophic crashes like the Great Depression of 1929–1939 would never happen again. Why? Economists had cracked the code of the business cycle. They had found the secrets that stopped slides from becoming nosedives. Their tools? Raising and lowering interest rates, and knowing how and when to become financial saviors—"lenders of last resort." Economists like Federal Reserve Bank chairman Ben Bernanke, an economist who had spent a good part of his professional life studying the Great Depression, felt they knew how and when to "helicopter" cash.[10] How and when to drop bails of money into trouble spots and calm them. How and when to be catchers in the rye with big safety nets, big bundles of money.

But in 2008, helicoptering money into trouble spots did not do the trick. Nor did raising and lowering interest rates. The Fed, which bills itself (accurately) as the Central Bank of the United States,[11] began its emergency interest-twiddling on September 18, 2007, by cutting the rate at which it loaned money to banks by half a percent to 4.75. The meaning in English? This rate shift was supposed to free up more money by giving the retail lenders of greenbacks—banks—a cheap supply of cash that those banks could loan to you and me. Money they could sell us in the form of home loans, auto loans, refinanced mortgages, loans for vacations, student loans, and loans to pay off credit card debt. Interest rate changes theoretically also freed up money that the banks and brokerage houses could lend to corporations to cover payroll and inventory.

Did the tweak of interest rates work? Within six weeks of this careful interest adjustment, the giants of banking and investment—Citigroup and Merrill Lynch—had begun to teeter. Four months later, on January 22, 2008, the Fed made a rate cut so out of the norm that it was designed to startle us into economic health. Instead of a mere quarter of a percent or a bold half a percent, the Fed cut its rates by a shocking three-quarters of a percent—the biggest rate cut in twenty-four years. Did this fresh blitz of interest rate shock and awe make a difference? No. For a minute things looked hopeful. A few of the world's stock markets swung upward. Briefly. Others slid further into

the abyss. Then, a mere nine days later, a little-known company called MBIA announced that it had lost $2.3 billion in only three months.[12] That's enough money to buy all the grocery stores in Kansas.

Losses of this size would put most companies out of business instantly. But MBIA had a special importance. It was part of the hidden machinery designed to keep the investment companies that handle retirement funds from going belly up. It was the world's biggest bond insurer.[13] MBIA was part of an invisible safety net. And the securing lines of that safety net were in danger of being snipped.

MBIA blamed its troubles on, guess what? NINJA loans, aka subprime mortgages—theft from the lender.

The notion that modern economists can solve all problems with fiscal and monetary policy[14]—emergency money drops[15] and interest rate adjustments—took it on the chin again on April 20, 2008, when the Bank of England followed the US Federal Reserve Bank and lowered rates a quarter of a percent to 5. The effect was that of a popgun in an artillery barrage. To journalists reporting on the scene, it appeared that nearly everybody in England had been investing in real estate. Barbers, butchers, bakers, and candlestick makers had been buying flats, renting them out, and dreaming of flipping properties. But there was trouble in Real-Estateville, even in England. Despite the Bank of England's heroic lowering of interest rates on loans, the prices of houses, which everyone had bet would double or triple, dropped for the first time in twelve years. The fall was a mere 1 percent. But it came as a shock, an alarm bell that no one thought would ever ring. And within twelve days of the Bank of England's magic rate cut, 850 companies had gone belly up in Britain—going "into administration"—the rough equivalent of our bankruptcy.[16] The interest rate fiddling had failed, but the trouble wasn't limited to the United States and England. On May 22, 2008, the Swiss bank UBS, the bank whose former CEO and chairman had resigned over less than $4 billion in losses a mere six months earlier, confessed that the bank had lost ten times that amount—a whopping $37 billion. The money had gone down the drain of America's subprime mortgage implosion. UBS tried to give itself a lifeline by raising $15.5 billion in a "rights issue." But sophisticated insiders and investors were frightened of investment. And money was drying up.

The modern miracles of economic theory were not working. Nor

was another, far more ancient approach—scapegoating, the blame game. The FBI tried to give those whose confidence was quivering a boost by finger pointing, shaming the villains, the greed-mongers, the bad guys who had caused the debacle. On June 19, 2008, the bureau arrested 406 people, including real estate developers and brokers. The impact? None. Six days later one of the biggest and most august banks in England, Barclay's, began to crumble. The cracks in its foundation were growing so fast that it asked for help from Qatar, a tiny Persian Gulf oil nation at the sandy lip where the deserts of Arabia meet the Indian Ocean. Qatar had socked away a ton of oil money. The government-owned Qatar Investment Authority bought a full 7.7 percent of Barclay's—enough to have a major influence on the bank's policy for decades to come. The Qataris picked up this slice of one of the world's top banks for a mere 1.7 billion pounds, turning London, a city where Arabic was almost as common a language as English, just a tad more into what author Melanie Phillips called Londonistan. As if to demonstrate that the downslide was impervious to any remedies yet invented by economists, on July 9, 2008, one of the biggest stock markets in the world, Britain's FTSE, a mainspring in the global system, went into a sickening plunge, dropping a gut-wrenching 20 percent.

On July 13, 2008, a mere three months after Bear Stearns—Wall Street's fifth-largest bank—went down, the mortgage lender IndyMac dropped in its tracks. IndyMac wasn't small potatoes. The IndyMac collapse was the second-biggest bank failure the United States had ever experienced. And IndyMac's collapse proved contagious. It set off a financial plague. A plague of perception. A plague of emotion and belief. Investors panicked over the fate of all mortgage-based investments. The day after IndyMac's collapse, investors bailed out of Freddie Mac and Fannie Mae. The prices of Freddie's and Fannie's stocks plunged. Freddie and Fannie owned or guaranteed 5 *trillion* dollars' worth of American mortgages. That's trillion with a T. More than the entire annual output of Japan, the world's third-largest economy.

As Mathew Tombers, a TV producer in New York, said in his weekly update to his friends, "This is the week when the trillion became the new billion."

From August 2007 to January 2009 the economists would continue to apply their theories. There would be many more interest rate

adjustments. And many more attempts to "helicopter" cash to financial firms that were on the verge of collapse. Would these techniques work? No way. Why? Why did economics prove so useless? Why was monetary policy so helpless to stop the downslide?

Because economic crashes are not the fault of bad guys. They are not the result of obscure things like credit instruments and subprime mortgages gone hog wild. They are built into our biology. They are driven by a mass emotional engine. A mass perceptual engine. A search engine with which the cosmos feels out her possibilities. Booms and crashes are driven by a breakthrough generator—a transcendence engine.

What is a *transcendence engine*? It's a mechanism that takes the ephemeral and turns it into hard and fast reality. In the inanimate universe a transcendence engine takes what's imminent from nothingness into the realm of being. Among humans, a transcendence engine turns the whisperings of the spirit—visions and imaginings—into everyday things, into commodities. A transcendence engine is a secular mechanism that does the job often credited to a divinity.

Booms and crashes make you and me the agents of an evolutionary engine—a thoroughly secular engine—that does something only gods were once thought to do. The act of creation.

6

THE MUSIC OF BOOM AND CRASH

How the Great Depression of 1929 became a singing ghost.

What's a depression? Something your parents argue about for the rest of their lives. Or that's the way it looked to me growing up in Buffalo, New York, in the 1940s and 1950s. My dad had come to Buffalo from his hometown of Asbury Park, New Jersey, to seek his fortune during the darkest days of the 1930s, in the middle of the Great Depression. But 25 percent of American workers were unemployed, and fortunes were as hard to come by in a stunned steel-making and Great Lakes shipping city like Buffalo as they'd been back in the beach town resorts of New Jersey. The children's clothing store my father's cousins had founded had, apparently, not worked out. And that was the store in which my dad had come to work. According to my mom, my dad slept through the Depression. She did not approve of unemployed men who slumbered until ten a.m. After all, *she* was working. She had a good government job as a secretary to the head of the New York State Liquor Authority. And the Depression had not stopped the residents of New York State from drinking.

Despite my mom's carping, my dad insisted that he'd made it through the tough times since 1929 by restricting his diet to canned beans, meals in which he also claimed he ate the labels and the cans.

In 1964, when I was twenty-one years old, I wanted to help defeat conservative Republican bogeyman Barry Goldwater, the man many of us were convinced would start the first nuclear war. (We were probably wrong.) So I volunteered to work for whatever Democratic political candidate would have me. First, the campaign of Buffalo congressional candidate Max McCarthy put me to work writing position papers on the war in Vietnam. When I moved to New York City in September to start college at New York University, I switched to the campaign of another Democratic congressional contender, Ted Weiss. The Weiss campaign asked me to research the investments that had held their value through the Great Depression. What was the answer I came across while spending day after day buried in the stacks of the New York Public Library? The investment that had held its value through that ten-year slump was real estate. That and my parents' arguments were my first introductions to the subject of boom and crash, the subject of depressions.

Seventeen years later, in 1981, America endured the greatest recession since the 1930s. By that time I was doing fieldwork in mass behavior. I'd founded my second successful entrepreneurial company in the world of pop culture—The Howard Bloom Organization, Ltd.—the biggest public relations firm in the music industry. The economic downturn was so bad that companies in the music biz were laying off staffers by the hundreds. Not mine. How did we beat the recession? That's a story for another time. But this was another lesson in boom and bust, another lesson in depressions. A supremely practical lesson.

The smash of 1981 raised questions. What *is* a depression? Why does a depression start? How do you keep a depression from happening? And how do you climb out of a depression once it's flattened you? I ended my science project in pop culture in 1988, went back to science full-time, and began the research for my first book, *The Lucifer Principle: A Scientific Expedition into the Forces of History*. And I researched crashes and booms, business cycles, bubbles, and depressions. After all, when you slice open the cycles of war and peace you often find boom and depression just beneath the skin. And when you cut even that layer away, you find something even more basic—the naked patterns of mass behavior. And that's my territory, the mass behavior of everything from quarks to human beings.

Then came word of an appealing insight into boom and crash from MIT,[1] an insight based on a revival of the work of Soviet economist Nikolai Kondratiev[2]—the man who had headed the Institute for the Study of Business Activity in Lenin's bloody new Soviet Union. Kondratiev had been sentenced to death in 1938 by Stalin for his unconventional views (and for his loyalty to Stalin's chief rival, Trotsky). What were those heretical ideas? Kondratiev's concept was called the *Kondratiev wave*, or the *long wave*. Some called it the *supercycle*. Boom, said one interpretation of the Kondratiev wave, came when you pioneered a new technology, when that new technology took hold big time, and when you were the primary source of supply for that new technology's products.[3] Bust—depression—came when the technology you supplied had peaked, was in decline, and when other folks had developed the ability to make your once-hot new gadgets on their own. The nation that rises from the ashes of depression and that rules the world, the Kondratiev wave implied, was the nation that controls the new technology of the day. The nation that goes down is glued to the technology of the past. I bought it.

I was researching England's rise and fall in the nineteenth century at the time, and the Kondratiev wave model fit perfectly. Why? Until roughly 1830, the clothes on your back were among the most expensive pieces of property you owned. The aristocrats of Florence, Italy, spent 40 percent of their income on clothes. Just one spectacular outfit could cost "more than a good-sized farm out in the Mugello."[4] So you could make a fortune weaving, transporting, or retailing cloth and clothes. My father couldn't make a fortune with a children's clothing store in Buffalo, New York, in 1938. But if you were living in, let's say, Europe in 1550, you could. William Shakespeare's dad was in the wool business. Sir Isaac Newton was born in a hamlet named for the same fabric—Woolsthorpe-by-Colsterworth. Anton van Leeuwenhoek, the inventor of the microscope, was a cloth merchant.[5] The Medicis, the folks who financed Michelangelo, augmented their banking activities with a wool business.[6] And since roughly 1360 CE, England's king had sat on a bag of wool—the official woolsack—as a symbol of the source of his island kingdom's wealth.[7]

Then came a hot new technology. In 1769, an Englishman invented a gizmo-system beyond belief, an interlaced cluster of new devices that could allow a single unskilled worker to turn out goods that had pre-

viously taken the blood, sweat, and tears of a dozen highly skilled artisans.[8] The innovator's name was Richard Arkwright.[9] He'd gotten his start in a radically different kind of fiber business—barbering and wigmaking. But cloth production fascinated him. Arkwright invented a carding process to comb out cotton, a spinning machine to make thread, and an automatic weaving machine to weave cotton fabric. He also invented new ways to power these machines—driving their gears with horses in the beginning, then powering them with the rush of mountain streams. When Arkwright put all these innovations together, he'd created something new—the factory. Arkwright planted factories all over England and Scotland. His 1776 factory in Cromford, England, was an astonishing seven stories tall.

Meanwhile, in 1784, a Scottish mathematical instrument maker named James Watt perfected yet another magical invention, a machine that could do the work of two, three, four, or four hundred horses, a machine that could take up less space than the distance between a single horse's front and rear legs, a machine that could work twenty-four hours a day without the bother of horse manure or hay. That gizmo was the steam engine.[10]

When the Brits and an occasional American hooked steam engines to automatic weaving machines, installed steam engines on ships, and put steam engines on railroad trains, they transformed the world. For the next seventy years people from six continents clamored to get English goods—cotton fabrics, clothing, thread, railroad tracks, railroad trains, and steam engines. The English ruled the world. They ruled its finances and they ruled a passel of its nations, expanding into one of the biggest empires the world had ever seen. Just as the Kondratiev wave predicted, the British ruled because they dominated the hottest new technologies of the day. Then the technologies with which Britain had conquered and controlled peaked. Everyone who needed new clothes had them. Everyone who wanted a steam engine or a railroad train was nicely equipped with one and only needed a new model from time to time. What's more, *import replacement* had taken place.[11] Britain's old customers had learned to make steam engines and inexpensive cloth on their own. The result? A depression. The world economy tanked in 1873. It tanked hugely.

The downslide was extremely hard on the Brits. England entered a gloom of a kind it felt it had never known before. It bogged down

in a depression that seemed to last for the next twenty years. It was a depression so massive that it held the title of *The* Great Depression until another economic plunge stole that title in 1929.

Why had the British gone into such a massive slump? And why had the British lost their lead of the world when they came out of their depression? The Kondratiev wave seemed to hold the answer. England had pioneered the creation and mass marketing of the hot new technologies for a seventy-year-long period. But then new technologies had arisen, technologies the British had created but hadn't bothered to mass-produce, to market, or to promote. What were those sizzling new technologies? Steel, electricity, and the products of the chemical industry. All these had been created by clever Englishmen. But the Britons hadn't commercialized them. Who had developed steel, electrical, and chemical gadgets and mass marketed them? Two unlikely backward nations—Germany and America—two nations that would rule the next century.

There was a lesson in all this for the Americans. To come out of a depression on top, you have to produce and promote the hot new technologies of your century.

The Kondratiev wave of boom and crash seemed on target. So did the concept that depressions happen when an old technology is falling and a new one is about to arise. Do the arithmetic on four centuries of recent history and you discover that recessions happen every 4.75 years and great depressions strike once every 67 years, roughly once in a generation.[12] That's remarkably Kondratiev. There was just one problem. The Great Depression of 1929 to 1939 didn't fit the model. America did *not* go into depression because its technologies were old and in decline. Far from it. Five hot new technologies were rising in 1929—automobiles, airplanes, radio, electronics, and the wiring of homes for 24/7 electrical access. Count 'em, five. Every one of these techno-innovations would expand dramatically once the Depression was over. But every one of these was put on pause by a global crash.

When a new technology was still climbing toward its peak, the Kondratiev model predicted a boom. Yet the global economy had *crashed* in 1929, when autos, planes, radio, electronics, and the electrical wiring of homes were just starting their rocket ride to the top. Why? The MIT-Kondratiev model failed to answer the question. Was there another model that would?

At the end of another twenty years of research, I'd found an answer. Depressions don't come from our technologies. They come from our biology. They come from our emotions and our perceptions. They come from the way we feel and see. What's more, depressions come from the biocycles we help make when we are part of a group. They come from the soul of a society.

There was one more revelation. Boom and bust cycles are not unique to human beings. They arose when life itself began 3.85 billion years ago. They showed themselves among our first ancestors, bacteria. Then they reappeared in every other beast that lived in flocks, swarms, colonies, crowds, and herds. Why? Because boom and bust—the cycle of good times and depressions—performs a vital function for a society. That purpose? Exploration, consolidation, and repurposing—using something old in a very new way. Learning, thinking, and creating. Functioning as an evolutionary search engine that does something only the gods were once thought to do. Functioning as an evolutionary search engine that brings new creations into being. Functioning as a *secular genesis machine*.

What's a secular genesis machine? Genesis happens every day. New things come into being. And from time to time the cosmos invents something radically new—the first flood of atoms, the first flood of stars, the first flood of galaxies, the first flood of black holes, and the first flood of human beings. *A secular genesis machine is the mechanism that brings radically new creations into being without the hand of a deity.*

7

THE WORLD WIDE WEB OF 1931

The Great Knock-On Effect: How your investments got caught in the domino stack.

You heard the same thing repeated over and over again after the Great Crash of 2008 began. For the first time in history, the world is Internetted and World Wide Webbed. Our modern electronic interdependence is dangerous. Even worse, it's a cause of the 2008 crisis. Singapore is too closely tied to Germany. When Moscow twitches, Mexico City has a convulsion. Brokers in Japan can use the Internet to trade shares on the British stock exchange before most Britons are awake. Englishmen and women can watch commodities in Chicago rise and fall in real time and place their bets as if the global financial market were a giant casino.

But a global economic mesh is not new. We've been World Wide Webbed and Internetted since Rome began to import silks from China in roughly 200 BCE.[1] Credit collapses have been global since at least 1720, when England's South Sea Bubble and France's Mississippi Bubble collapsed within months of each other.[2] The Mississippi Bubble's main mover was a British financial whiz and convicted murderer (he killed an opponent in a duel for insulting his mistress) working in Paris, John Law. In 1717, Law convinced the regent for the seven-year-old king of France, Louis XV, to give Law's creation,

the Mississippi Company, a twenty-five-year monopoly on trade with the Mississippi territories of North America.[3] This included a monopoly on the Canadian beaver trade, exclusive right to trade with Asia, exclusive right to trade with the East Indies, a monopoly on the tobacco business, and the exclusive right to mint coins for all of France.[4] These projects were as far as twelve thousand miles away from Paris. They were global.

So was England's South Sea Company, which raised funds for trade between London and South America.[5] What started out as promising business propositions triggered speculative manias that defied belief. Mississippi Company stocks rose to five times their starting price, then ten times, then twenty times. Invest a thousand dollars and you got back twenty thousand. Who could resist? Normal people like you and me became frenzied speculators, convinced that if they could get their hands on Mississippi Company or South Sea Company stocks, they would become rich. Demand grew so feverish that stocks were issued just for the right to buy more stocks—options. Prices flew sky-high. Then one day the public switched from manic enthusiasm to depressive paranoia. And the price of Mississippi Company and South Sea Company stocks went down to nothing. High-placed politicians, super-rich civilians, and ordinary men and women who thought they were on their way to wealth and luxury discovered they'd lost their shirts or blouses. That's a bubble. That's how bubbles burst. And bubbles, even three hundred years ago, were threads in a global mesh.

To see the pre-Internet World Wide Web at work, take a look at the credit collapse of 1931, the credit collapse that kept the Depression of 1929 going and made it far, far worse.

The beginning of the credit collapse of 1931 can be pinpointed to a single day—May 8, 1931—when executives at a bank in Austria called on their government for help in handling a small problem. Things had been going badly in the world economy since the New York stock market crash of 1929 two years earlier. Investments in businesses, buildings, and land that had looked solid as could be, investments that had made their owners feel secure and wealthy, had melted away like the morning haze, evaporating into the ozone, their value gone utterly. The Austrian bank had lost 140 million schillings. It had lost 85 percent of all that it had, 85 percent of its equity—the equivalent of losing your shirt, pants, and underwear in a strip poker

game but still having your shoes and socks. The troubled Austrian bank was called Creditanstalt. Creditanstalt's problems should have been a minor incident. They were difficulties at a single bank you never heard of in the anonymous midriff of Europe, trouble in a land that had been beaten just a few years earlier in World War I. Trouble in a day long before wi-fi, an era of telephones nailed to the wall, an age of typewriters that worked with levers and not electricity, and trouble in a time when emergency messages were still sent by telegram. Not a serious problem, right?

In fact, Creditanstalt was more important than it seemed. Viennese academician Aurel Schubert, an economist at the Austrian National Bank and author of the definitive book *The Credit-Anstalt Crisis of 1931*, calls Creditanstalt a "superbank."[6] A legendary theorist of history who happened to be alive at the time—Arnold Toynbee, considered one of the greatest minds of his age and author of the twelve-volume masterwork *A Study of History*—took time out from his ponderings to explain that Creditanstalt was not just a local enterprise. It was, he said, "an integral and important part of the financial structure of the world."[7] Creditanstalt controlled an amount of money that equaled the budget of Austria's government. And Creditanstalt had a hand in a hefty percentage of Austria's major industrial companies.[8]

But the economists of the day felt they'd long ago learned to fill in potholes like the one Creditanstalt had just hit. These economists were not mere bumpkins tumbling from the turnip truck of elementary algebra. They had access to the advanced math of Albert Einstein's relativity. They lived in the age of the fancy equations of quantum physics. They were graced with the formulae of modern statistics and probability. And they could tap the wisdom of modern wizards like Britain's economist, mathematician, diplomat, and intellectual superman John Maynard Keynes. The Austrian government knew exactly what to do. It huddled for the weekend in top-secret meetings.

The ministers running Austria were antisocialist, but they decided to make an exception to their rules. They decided to rush in and "socialize the losses." They did what the governments of the seven-biggest industrial nations in the world—the G7—did in the Great Crash of 2008. They injected money to keep Creditanstalt standing. They "helicoptered" cash. They took money from government funds and arranged a special rescue package backed by one of Europe's

leading banking families, a family that specialized in loans to governments—the Rothschilds. Then the Austrians tried to spread the risk. They went international. They hit up the British central bank for money. The British turned them down. If there was going to be a domino effect and banks around the world were going to collapse one after the other, the Bank of England did not want to be one of the falling domino tiles. So the Austrian government turned elsewhere. It went to the Bank for International Settlements in Switzerland.

The Bank for International Settlements was a stratospheric force. It had been established a year earlier in 1930 by seven nations, seven of the biggest financial powers on the planet—Belgium, France, Germany, Italy, Japan, England, and the United States.[9] But the Bank for International Settlements only agreed to inject a sum that amounted to pocket change—less than 100 million schillings.

And there were delays—not a good thing when the confidence of the world is quivering. Finally, after two weeks of glitches, the Bank for International Settlements came through with a cash transfusion for the Austrians. The trouble should have ended there. The *Wall Street Journal*, in fact, was sure that the ruckus had been brought to a dead halt. The world's financial system was now crash-proof, the *Journal* crowed with triumph. The Creditanstalt crisis, it declared, had proved to be just "one more sore spot" that the decisive powers of modern government and finance had healed before it could break out in a rash. One more mess the economic maintenance team had "cleaned up."[10]

But this upbeat self-confidence lasted less than seven days. Before the week was out, the public and five other Austrian banks had yanked their deposits from Creditanstalt. And money had started to gush from banks in Hungary, Yugoslavia, Germany, and the Free City of Danzig. The problem was spreading! So the Bank of International Settlements jumped in to help once again, shoveling money into the empty Eastern European bank vaults and trying to plaster banknotes over the leaks. But the shivers spread, and the forces of government and high finance turned to another strategy that we would try in the Great Crash of 2008—massive global cooperation. One hundred and thirty foreign banks chipped in to keep the global credit system afloat.

Now even England was nervous. It tossed 150 million schillings into the pot. But that was nowhere near enough. Creditanstalt's stumble flung the Austrian government from power. Austria's minister

of the interior was virulently against "a prolongation of the agony of Creditanstalt for two years, at the price of losing her financial freedom." He apparently could see the cataclysm that was about to arrive. He resigned four hours after an agreement was signed. That forced Austria's prime minister and his entire cabinet to resign. The old government imploded. A new government came in and guaranteed Creditanstalt's liabilities, all 1.2 billion schillings of them. If you were a Creditanstalt depositor (and a lot of Americans were), the Austrian government would make sure you could always withdraw your money. But that promise was not enough to create public confidence. The Austrians had just proven that in a credit collapse, even governments come and go. Not to mention government promises.

The withdrawals continued. And the new Austrian government tried mightily to make good on its word. It pumped out cash until its foreign reserves were sucked down to nothing. Then it got an extra bit of bad news. Creditanstalt had finished doing its books. Its losses were not its previously estimated 140 million schillings—no matter how massive that figure was. They were worse—1.2 billion schillings! Savers and investors yanked their money out of anything Austrian, including the schilling itself, and the Austrian currency collapsed.

It was time for more global muscle. The League of Nations—the early version of the United Nations—kicked in. It guaranteed a loan of 300 million schillings. But the League of Nations was, alas, a bureaucracy. The loan took a year to come through. The Austrians didn't have that kind of time. Nor did the world's economy. The banks in Hungary and Yugoslavia continued to quake ominously. So Germany jumped in to save the day. But the crisis sapped money so fast that Germany's equivalent of Fort Knox—its official government gold reserve—ran out of precious metal. German banks refused to pay depositors who showed up with their bankbooks and tried to take out their cash. Technically, it was called a *suspension of payments*. And suspensions of payments lead to bank runs—days when every depositor shows up before sunrise and scrambles for a place in a line that snakes around the block, a line of people hoping to withdraw what they can before the bank's last pfennig runs out. Suspensions of payments lead to panics.

In 1931 London was the banking center for the world. It held deposits from super-rich individuals and from big companies all over

the globe. But the German banking cataclysm led to a run on Britain's impregnable fortresses of finance. The Brits shut down the boiler before it could explode. They froze credits. If you asked for your money, you got nothing. That amplified the panic.

Meanwhile, the Germans turned to the French and the Americans. The result? Between 1929 and 1933, two out of every five American banks collapsed—10,763 out of 24,970 banks went down. Many of those were swept away by the tidal wave that began with the dive of the Creditanstalt in Austria in 1931. There was no Internet in sight, but the financial system of the planet was already World Wide Webbed.

* * *

Only the banks of one European nation survived the Creditanstalt collapse intact. That nation was Italy. Italy was led by a fascist dictator—Benito Mussolini. And Mussolini was a master of public perception and mass emotion. He was a master of the force that turns the wheel of the business cycle. Mussolini knew the cues you have to send when times are tense. He went behind the scenes, met with his bankers in secret, and pumped cash into the Italian banks' vaults and tills. This is exactly what other government leaders had done, but there was a potent difference. Mussolini never let the trembling of his banks show. He flashed what animal behavior experts call *dominance cues*. He gave the impression that Italy's financial institutions stood strong and fearless in the storm. He worked the levers of emotion and perception. And emotion and perception are the keys to boom and crash. Emotion, perception, and the forces that shape them—the cycles of biology.

The result? If you'd just yanked your money out of a bank in Austria, Germany, England, or the United States, if you'd just pulled your savings out of a bank in a nation trembling with panic, to what nation would you send your money for safekeeping? Italy. Mussolini understood that emotion and perception are the core of economics. And he used the forces of the natural oscillators that move emotions the way the waves of the sea raise and lower a cork. Those oscillators? Cycles of exploration and digestion. Cycles of gamble and structure creation. Cycles driven by the pendulum of repurposing and the flywheel of insecurity. Cycles of creativity. Cycles that power an evolutionary search engine. Cycles that propel a secular genesis machine.

8

WHY X-RAY A BOOM?

> Crash and boom are primal powers in disguise.
> When you strip their mask, what do you see?

The Great Depression of 1929–1939 was not a local event. The economies of the world were Internetted and World Wide Webbed long before the introduction of computers and the invention of programmed trading. So even eighty years ago, flawed local decisions could go global. And those decisions could shape the mask with which the cycle of boom and bust hides its real face. In the late 1920s, President Calvin Coolidge was afraid of rampant inflation.[1] The US government had printed and issued paper money to make it through World War I. But Coolidge had no confidence in paper. The only real money, he felt, was gold.[2] Coolidge was determined to get us back on the gold standard. A standard that says to governments and to banks that you can only print a ten-dollar note if your vault holds ten dollars' worth of gold.

To put this conservative money strategy in place, the Coolidge economic team ratcheted up the price of credit.[3] America's Federal Reserve Bank raised the interest rate it charged for loans to American banks. Government banks—central banks—around the world followed the American example. That kind of move makes commercial banks—the banks that supply cash to big businesses and that give

loans to you and me—leery about lending. When central bank interest rates go up, loans become hard to get. When businesses can't get loans to make it through their dry spells, they are sometimes forced to tighten their belts, to get "lean and mean." That can mean layoffs. In other words, a tightening of credit can put a tourniquet around your neck and mine. It can get us tossed out of our jobs.

Credit tightening can also trigger what psychologists call *emotional contagion*.[4] The contagion of what former chairman of the Federal Reserve Board Alan Greenspan famously called "irrational exuberance," contagion of the frenzy that powers a boom,[5] or the contagion of mass panic, the frenzy that triggers a bust. And these emotional contagions easily spread worldwide.

In 1928, after President Calvin Coolidge notched up the cost of American credit, the German, Brazilian, and Southeast Asian economies turned sickly.[6] They were soon joined on the sick list by a small crowd. In 1929, the economies of Poland, Argentina, and Canada caught a cold. Then came the big sneeze. In 1929, the American stock market crashed. On Black Monday and Black Tuesday, October 28 and 29, US stocks took a stomach-clenching dive.[7] They lost a quarter of their value. The plunge wiped out thirty billion dollars in value, a chunk ten times the size of the US government's budget. Wealthy investors became poor overnight. Some couldn't take it and committed suicide. Urban legend reports that in Manhattan hotels, when businessmen asked for rooms, the clerks behind the check-in desk asked, "Will that be for jumping, or will you stay overnight?" Over the next four years, America's total output of goods and services, its gross national product, fell a staggering 30.9 percent. One out of every four American breadwinners was out of work. And in one typical farm state, Mississippi, one out of every four farms was seized by banks for unpaid debt and put up for sale.[8]

But this crash was not confined to America. Emotional contagion went global. On Black Tuesday, Japan's Nikkei stock market lost 15 percent of its value, as if the Japanese were picking up the panic in New York via telepathy.[9] As things got worse, stock markets all around the world came to the brink of collapse.[10] And American banks, sliding downward rapidly, were forced to call in their loans to the banks and businesses of Europe, pulling the plug on fragile countries like Germany, which was still trying to recover from World War I.[11]

When economists tell you the story of the Great Depression, they point to America's tightened credit and to the Coolidge government's tight-money policies, then they point to what happened next. They say that one caused the other. They may be wrong. They may be suffering from what Nassim Nicholas Taleb, a Lebanese-American market trader and author of the influential book *The Black Swan*, calls the *narrative fallacy*, the notion that by telling the story of the events that happened before and after a market boom or crash you explain it.[12] Taleb feels that a more powerful pattern may underlie financial upheaval, a pattern that has very little to do with the tale of what was happening in the months and days before the market went through a mega-flip.

In fact, the tightening of credit in the late 1920s and what happened afterward may just be symptoms of a far bigger shift, a biological shift from what evolutionary biologists call one *phenotype* to another. A shift in the *wet-ware* and in the software that runs your body and your brain. A shift in your neurohormonal receptors. A bio-shift from exploration to digestion and from ebullience to fear. A backswing in the pendulum of repurposing and a forward flick from the flywheel of insecurity.

Why do we have crashes? And what can we do about them? Step one: understand them, and in the process, understand far more about who and what you and I are. Even more important, in the process of understanding booms and crashes, understand what we mean to each other. Through boom and crash we can understand what we achieve for each other. We can see how deeply we are connected to each other's hungers, insecurities, restlessness, fantasies, delights, and needs. What's more, we can see *why* we are so important to each other. We can see what our interconnections achieve. We can see the invisible amazements that you and I with our insecurities, our panic over decisions, our itch for entertainment, our need for the warmth of others, our ferocious hunger for attention, and, most important, our daily labors, bring into being. And we can understand how emotion, perception, passion, and soul are the primary forces of that seemingly soul-less machine called a capitalist economy.

We can see the workings of something we've never made out clearly before, something that has been there right in front of our eyes. We can see the operations of the ultimate breakthrough generator. We

can see the clockwork of an utterly secular miracle maker. Through crash and boom, we can see how you and I are part of an evolutionary mechanism that ratchets forward relentlessly. We can see how that mechanism turns daydreams into realities, then uses these new realities to generate a quantum-shift, a radical upgrade, in the level of the next generation's fantasies. Through crash and boom we can see how you and I contribute to a system that seizes on that new level of fantasy and once again generates something from nearly nothing, a system that creates the next utter transformation of the everyday.