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# introduction

On the moonless night of May 2, 2011, specially cloaked Blackhawk helicopters slipped over the border between Afghanistan and Pakistan. Their target was Osama bin Laden, the most wanted terrorist in the world. After a fruitless decade spent hunting him in the wilds of Afghanistan, the U.S. military had found him living in a fortified mansion in the large city of Abbottabad, Pakistan.

The helicopters landed near the mansion, disgorging dozens of Navy SEALs into the darkness. The soldiers of SEAL Team Six ran upstairs, burst into bin Laden's room, and shot him twice: once in the chest and once above the left eye. Within twenty-four hours, they had buried his body at sea. It was the end of a terrorist mastermind, and the end of a megalomaniacal ego that believed itself to be the champion of Islam, the savior of Muslims worldwide, the spiritual heir to the prophet Mohammad, the defeater of the Soviet Army, and the scourge of America. While none of these grandiose visions was true, bin Laden was the man who inspired, organized, and financed the September 11 attacks on the United States—a turning point in world history.

The function of an individual human brain that creates and sells these stories about itself, that coordinates all the efforts to manifest that vision, is the ego. Until fifty thousand years ago, the ego didn't exist. But once it came into being as a function of the brain, the ego changed the world—both for good and for bad.

Fifty thousand years ago, the human species was rocked by a radical shift in cognitive ability. In the blink of an evolutionary eye, we

went from being smart apes to being fully human, from living at war with the elements and each other to becoming civilized. Although outwardly our bodies did not change, inwardly our experience of the world transformed. This burst of cognitive power, called the conceptual revolution, paved the way for civilization to take hold. It allowed our attention to shift from a focus on the physical world to a focus on mental models so that we could plan more efficiently and imagine safer ways to live. But the most crucial new brain function that came on line during the conceptual revolution was the ego—the mental model of ourselves.

The function of the ego is to coordinate thoughts, emotions, body sensations, memories, and desires. It is an avatar for the whole self, a mental stand-in for our total organism that allows us to engage in complex behavior. Most humans call this chimera of brain software “me,” firmly believing that this construction is actually who they are. Ego identification has been the defining human experience for millennia. But the age of the ego may be coming to a close.

We believe that the evolutionary process is moving the human species toward a watershed transition. A careful review of our evolutionary history shows that the development of the human brain has always gone hand in hand with expansion of technology and complexity of social networks. These three—brains, tools, social connections—form a feedback loop that continuously bootstraps humanity forward. The ability to conceptualize and create tools took us from ape to human. The ability to conceptualize ourselves and each other gave us civilization. The next cognitive step forward will be a massive expansion of conscious awareness: the ability we all have to witness our own usually subconscious brain function. Our Stone Age brain is still running the show, even in the twenty-first century, and it is riddled with cognitive biases, knee-jerk reactions, and an ego that traps us in a cramped, me-first, life-and-death struggle for survival in an environment in which that mind-set is

out of date and out of tune. Increased conscious awareness will let us peek under the hood at our own deep psychology, understand our hidden motivations, and get a handle on these normally inaccessible drives and motivations. Most important, it will allow us to experience the ego directly as a function, rather than as “me”: a profoundly liberating experience that will permanently change our relationship to our lives, ourselves, and others.

The evolution of the human race has not ended. Although the natural-selection pressures we face may no longer be biological, evolution continues, and our species changes for the better with each successive generation. IQs are steadily rising; human rights went from nonexistent to a dominant world issue in less than a hundred years; modern medicine formed itself in less than 150 years; democratic revolutions have been breaking out around the globe for more than two hundred years; businesses have steadily moved away from labor exploitation toward egalitarian teams; the Internet is turbocharging our access to new and different viewpoints, making us more aware and tolerant; and each generation relieves the culture from the pressure of yet another taboo, becoming more open about money, sex, relationships, illness, and mental and emotional difficulties. Instead of problems hiding behind closed doors, everything is more transparent and out in the open.

These changes signal that people are moving beyond the constricted, dominance-oriented, narrow self-interest of the ego and are starting to integrate themselves into the larger process of life as it evolves on the planet. Someday the sort of dangerous, delusional ego—so full of its own self-centered importance it can smash airliners into skyscrapers—may become a relic of our past.



PART ONE



# The Prison of Feelings



# 1 chapter

## evolution's unfinished product

On September 11, 2001, two jet airliners plunged into the Twin Towers of the World Trade Center, another hit the Pentagon, and a fourth crashed. In less than an hour, a group of just nineteen people had changed the course of world history. That such a small group of humans could have such a large effect on an entire planet of almost 7 billion is due in part to the fact that the terrorists had at their disposal all the energy resources, sophisticated tools, and complex interactive social structures of a modern technological society.

Imagine a genetically modern human living in the Paleolithic, about a hundred thousand years ago. In order to defend himself, he would have had a choice of two weapons: a rock or a stick. He would have crafted these by himself in a few minutes, chipping the rock into a hand axe or stripping the branch of twigs. A Boeing 767 aircraft contains 3.1 million parts, which come from more than eight hundred separate suppliers around the world. It is constructed in the largest building in the world at a plant in Everett, Washington,



covering 4.3 million square feet, or about the size of about nineteen hundred family homes. It takes more than thirty thousand people working on three shifts to operate the factory, which has its own fire department, security force, medical clinic, electrical substations, and water treatment plant.

Even the most swiftly wielded stick has a limited impact. Our Paleolithic ancestor would only be able to hit one person at a time. His clumsy overhand hammering, which is our genetically programmed manner of striking, is notoriously inefficient. It might take many hits to do serious damage to an enemy.

A hunter-gatherer's only power would be the strength of his own arm. Al-Qaeda, on the other hand, had the imagination to turn a Boeing 767-200 into a highly explosive guided missile. Each airliner that hit the World Trade Center was loaded with about ten thousand gallons of jet-grade kerosene, enough to fill the gas tanks of five hundred minivans. The total energy of the kerosene was *1.3 trillion* BTUs, enough to power three hundred thousand houses for a month. The fire created by the explosive burning of this fuel was so intense that it weakened the Twin Towers' steel skeletons, causing them to collapse, killing several thousand people.

The hunter-gatherers of the Paleolithic lived in groups of up to fifty people. They were nomadic, roaming the landscape in search of food and erecting only temporary shelters. Each person required a minimum of a square mile to sustain themselves. Modern Manhattan has a population of about 1.5 million people living in just twenty-three square miles.

The Twin Towers had stood for thirty years and were about thirteen hundred feet tall, from which height people could see almost fifty miles in clear weather. On any given day, about fifty thousand people came to work in the buildings, with another two hundred thousand passing through for business or pleasure. The complex was so large that it had its own zip code (10048) and housed financial

giants Morgan Stanley, Salomon Brothers, and Aon Corporation, as well as its own mall containing eighty stores including Sam Goody, The Limited, J. Crew, Banana Republic, Ann Taylor LOFT, plus restaurants, banks, and much more. It also contained a PATH train station that had been in service since 1909 and through which more than twenty-five thousand people passed every day to and from New Jersey. Atop the North Tower was a massive array of television, radio, and cell phone antennas, including a 360-foot-tall digital television mast.

The first plane, American Airlines Flight 11, hit the North Tower at 8:46 a.m. By 8:50 a.m. the firefighters of the Fire Department of New York (FDNY) had arrived and set up the first of many incident command posts to handle the fire. The original fire department in the city, back when it was New Amsterdam, was a bucket brigade organized in 1648; the Dutch brigades carried water in leather buckets made by the shoe cobblers of the colony. By 1731 the colony's new English rulers had sent two fire engines from London, which were pulled to the fire by volunteers, who then pumped the water by hand. Over the centuries this had grown into the FDNY, an emergency response organization of 11,600 firefighters and thirty-two hundred emergency technicians. The FDNY in 2001 used dozens of Seagrave Marauder II fire trucks with 500-horsepower engines, capable of pumping up to two thousand gallons of water per minute. In the first hours after the attack, 121 engine companies and sixty-two ladder companies rushed to the area.

The New York Police Department (NYPD), the largest in the world with around forty thousand officers and support staff, quickly sent emergency units and officers, as well as helicopters to report on conditions at the site. After the buildings collapsed, the NYPD took charge of evacuating thousands of civilians from Lower Manhattan. Boats came from all around the harbor, including commercial tugs, ferries, police and fire boats, local mariners, Coast Guard boats and

cutters, navigating by radar through the thick smoke. They evacuated an estimated million people, who then began telling the world what they had experienced.

It is likely that humans of the Paleolithic era could speak only in a rudimentary way. Communication happened face to face, using gestures and sounds. There would be no written communication for another ninety thousand years, and news probably didn't travel more than a few miles at the most. On 9/11, humans around the globe gathered to watch the events in New York and Washington DC. By 11:54 a.m. Space Imaging's Kronos—a commercial, high-resolution satellite traveling 426 miles above the earth at 17,500 miles per hour—had been redirected toward Manhattan and was taking pictures of the enormous cloud of smoke emanating from the cratered remains of the towers. With its one-meter resolution, details of the building debris and emergency vehicles were clearly visible. At the same time, a member of the Expedition Three crew aboard the International Space Station snapped photos of the New York region with a commercial digital camera from an altitude of 250 miles. People all over the world had almost instant access to these images. Since that day, communications about 9/11 have snowballed. An Internet search of “9/11” reveals over *132 million* results, and there are at least five hundred books on amazon.com in English on the subject. The September 11 Digital Archive contains more than forty thousand firsthand stories and fifteen thousand images.

International reaction to 9/11 ran the gamut from compassion and sympathy to victory celebrations. People in English-speaking nations offered their profound and sincere condolences and support. For example, thirty-five hundred miles away from New York, in London, the queen expressed “growing disbelief and total shock,” and Ireland declared a national day of mourning. In Berlin two hundred thousand Germans marched through the streets to express solidarity with the US. The French newspaper *Le Monde* ran this