

*Introduction*

## KEEPING CURRENT

**B**Y AGE THIRTY-FIVE, Thomas Alva Edison stood at the peak of his career. Presidents asked to meet him. Financiers hoped to fund him. Journalists vied to quote him, desperate to report his latest breakthroughs. Tourists crowded daily in his lab, just to watch him capture human voices on a disc and hear them back again. In a time before television, his image was so recognizable that a letter sent from North Carolina bearing only a sketch of his face easily reached him in New Jersey. The mere invoking of his name suggested genius, hard work, and the American “can-do” spirit. Then, in 1882, he illuminated part of New York City with his first central power station. So many other cities requested stations of their own that his company simply lost count. Edison had become a national icon, and the future looked full of fortune. There was a problem, however, one so obvious that Edison should easily have grasped it. The world was already outgrowing the very electric system he had helped devise. Edison’s lightbulbs used direct current, but only alternating current could power both tiny lightbulbs and gigantic machines over vast distances. When one of Edison’s star employees, a young man named Nikola Tesla, explained how they could harness alternating current and transform the way people live, Edison would have none of it. Edison had built his fame on direct current, and he could not imagine that anything more was

## BLUNDER

needed. It was an exceptionally bad decision. By rejecting a new and far superior technology, Edison set the stage for Tesla to eclipse him.

If mad scientists had a prototype, Nikola Tesla would be it. Nearly everything he did had to be divisible by three. He would swim twenty-seven laps each morning. He would only eat breakfast with eighteen napkins set at his place. He would count the number of steps from his lodging to his office, and if that number was not divisible by three, he would circle around the block to make the calculation fit. Certain furry things repulsed him. The thought of touching someone's hair made him queasy. The presence of a peach produced a fever. In his later years, he developed an excessive, almost romantic attachment to pigeons. Despite these traits, or perhaps because of them, his close friends, like Mark Twain and Robert Underwood Johnson, found him utterly endearing.<sup>1</sup> For their friendship, Tesla now and then delighted them with his laboratory magic. The tall and boyishly exuberant Serb mesmerized his visitors by sending bolts of spectral light dancing across the room. He commanded electric fireballs to engulf his body and always emerged unscathed. Occasionally he literally shocked the onlookers by directing waves of colored currents through his guests. Mark Twain and friends were privy to a futuristic light show at a time when electricity was barely understood. But to bring his magic to the world, Tesla would have to confront the wrath of the man synonymous with electric light.

Tesla had an endless stream of ideas that led him toward inventions far before his time. He saw that the future was wireless and constructed the first rudimentary radio, even before Marconi.<sup>2</sup> Tesla built the first remote control device and demonstrated to amazed New Yorkers how he could use it to command a model submarine from a distance. He created the field of

## KEEPING CURRENT

telegedynamics, once even simulating an earthquake in New York City that shattered windows across town. His work inspired the cyclotron, a device used for smashing atoms that is central to subparticle physics. He made substantial, some believe decisive, contributions to the development of robotics, ballistics, and theoretical physics. When he died in 1943 at age eighty-six, the U.S. government confiscated part of his plans and equipment, believing that the military applications of his ideas could be immense. Thomas Edison clearly underestimated the talent he had in his employ.

After being rebuffed by Edison over AC power, Tesla was snapped up by an aggressive, farsighted entrepreneur. George Westinghouse purchased the rights to Tesla's patents and hired the young inventor as a consultant. Westinghouse then began promoting the use of AC generators, placing Tesla's system in direct competition with Edison's. Edison fought back with a protracted campaign to discredit AC by highlighting its many dangers.

One of his most egregious ploys involved a new form of execution. Edison convinced the New York State correctional authorities that death by electrocution in a specially wired apparatus would be fast and efficient. This so-called electric chair would of course require alternating current. Before Edison could release his device, it had to be tested. Neighbors began to notice that their pets were disappearing. Dogs, birds, cows, and horses were all made subjects in a gruesome experiment. When the day came at last for the first prisoner to be electrocuted, the procedure went horribly wrong. William Kemmler was essentially roasted in a spectacle too grisly to describe. Westinghouse, Tesla, and the many proponents of AC's tremendous benefits were outraged at this perverted use of their technology and vowed to strike back. The battle of the currents was on.

## BLUNDER

Despite Edison's best efforts to discredit it, AC was on its way to becoming the standard current for industrial production. Tesla's designs were simply too practical to be resisted, and Westinghouse grasped that the tide would eventually turn in their favor. The public just needed a clearer demonstration of the good that AC could do. That chance came with the arrival of the 1893 Chicago World's Fair. Edison and other electric companies hoped to profit financially by lighting that event. Westinghouse recognized it as a public relations bonanza. Thousands of spectators oohed and aahed as AC power illuminated the night sky in a light show that truly none had ever seen before. Electricity was still unknown to most people who used only gaslight and tallow candles. Thousands from Europe joined the crowds of Americans at that event. They came to see not just the dazzling colored lights but the star who made them shine. Dressed in coat and tails, the enigmatic Tesla put on a show of wizardry, to everyone's delight. Few in the crowd could grasp the scientific explanations, but all could marvel at the magical whirl of sparkling currents. Not long after their brilliant display at the World's Fair, Westinghouse telephoned Tesla in his laboratory with news. He had just landed the Niagara Falls contract. The power of those falls would spin gigantic turbines generating alternating current to run industrial machines. This was the company's most significant contract yet. Soon AC's tremendous potential would be undisputed. Tesla's dreams were coming true. So, too, were Edison's worst fears.

Edison was not a bad man. Although he could be stubborn and ruled by self-interest, he could also rise above pettiness when necessary. Once, when a fire destroyed Tesla's laboratory completely, Edison provided his rival with a temporary workspace in

## KEEPING CURRENT

his own lab. Edison was a man who clearly saw the power of electricity and who championed a bona fide revolution in how the world would light its surroundings. In spite of that vision he could not accept that a modern world demanded more from electric power than what his system of direct current could produce. For all his brilliance, the man who invented the lightbulb was caught in a cognition trap—a rigid mind-set that undermined his own success. He failed to grasp a fundamental change occurring in the world around him.

Edison never recaptured the greatness of his early breakthroughs. Having lost the battle over AC, he poured nearly everything he had into a scheme to extract iron from ore by the use of magnets. After five years of tireless labor in the remote countryside, he had to abandon the effort. It was a total failure. Despite his gifted, inventive mind, Edison refused to adapt to changing times. Unable to accept that his phonograph had tremendous commercial value as an entertainment source, Edison insisted on its use as a Dictaphone and watched as another opportunity passed him by. In his eighties he enlisted Harvey Firestone and Henry Ford to back his search for a domestic rubber source. Again he failed. One employee even claimed that the inventor had secretly enriched his products with rubber extracted from condoms.

In a major corporate restructuring, the mighty J. P. Morgan, the banker who underwrote the Gilded Age, merged Thomas Edison's electric company with one of its rivals and renamed the new company General Electric. Despite the fact that Edison had personally electrified Morgan's mansion years before, the banker erased Edison's name from the company that would become one of the most profitable in American history. Decades after AC had become the standard current, the father of the

## BLUNDER

phonograph kept repeating he was right. Edison's resistance to AC proved the biggest blunder of his life.<sup>3</sup>

*Blunder* is a book about judgment calls. It is the story of how smart people like Edison get caught in cognition traps and wind up defeating themselves. Most complex problems have complex causes, and no single factor can explain it all. This book offers one possible explanation for why people blunder. I suggest that we all sometimes fall into "cognition traps"—rigid ways of approaching and solving problems.<sup>4</sup> Cognition traps are inflexible mind-sets formed from faulty reasoning. They are the stolid ways in which people approach and solve problems based on preconceived notions and preset patterns of thought. Although cognition traps are forms of faulty thinking, each rigid mind-set I describe does contain a powerful emotional component. They affirm that our reason and emotions are so often intertwined. Yet as badly as our passions can muddle sober judgment, the stories of how people become caught in cognition traps do not, in fact, prove that blunders are inevitable. On the contrary, they strongly suggest that we can all make wiser decisions by cultivating empathy and imagination. As we travel through past and present examples, you'll see how true this is.

I believe that one key reason why we blunder involves the way we approach and solve problems. Without realizing it, we often fall into rigid mental frameworks. To understand how these mind-sets trap us, we need to know more about cognition—the conscious process of thinking. When most of us want to understand cognition, we typically turn to science. We expect the best insights to emerge from inside the well-ordered laboratory. While science can tell us much about reason and decision making, the

## KEEPING CURRENT

scientist's methods of experimentation are only one way of understanding how we think. Another way is by examining our decisions as they actually occur in real life, rather than as they unfold within the confines of carefully controlled experiments. Fortunately, history has given us a wealth of cases for learning about how we think. This book is one historian's take on cognition.

Scholars from all manner of fields have been studying our thoughts to help explain the mental process. Neurologists, psychologists, cognitive scientists, even some social scientists—all are weighing in. But one profession has been needlessly silent. Historians have a unique role to play in these questions because they are ultimately concerned with how people think. Historians are not mere recorders of facts and dates. Although we care about what happened and when, our greater goal is to discover the causes of events. To do that, we need to know what thoughts led people to make history as they did.

When scientists study decision making, they create experiments in the present and watch as the future unfolds. Their subjects exist within a maze at least partly of the scientist's design, and they follow those subjects forward through time. Historians, in contrast, begin at the end. We start in the present and work our way to the past. After figuring out what people did, we then have to determine why they did it. We retrace their steps, exploring the labyrinth of options. Historians must also grapple with the challenge of getting inside our subjects' minds. Usually our subjects belonged to a vastly different culture from our own. The people we study typically spoke a different language, practiced different customs, and lived under completely different circumstances. Their actions are often mysterious, and the motives for their choices are opaque. Historians must act like detectives on a crime scene where the heroes, villains, and victims are all long gone. But unlike detectives, we are not just on the hunt for who

## BLUNDER

done it; we must discover *why* they did it in the first place. To succeed as a historian, you must become acutely sensitive to how other people think. You must unearth the roots of other people's decisions, the good judgments as well as the bad.

Douglas Feith, assistant to the U.S. defense secretary Donald Rumsfeld, was one of the principal architects of America's war in Iraq. Feith believes passionately in learning from history; the rise and fall of the British Empire is one of his personal fascinations. His home in the Maryland suburbs contains an extensive library, holding some five thousand books, most of them works of history. Yet Feith accepts that history is no substitute for sound judgment. "There's a paradox I've never been able to work out," Feith admitted to Jeffrey Goldberg of the *New Yorker*. "It helps to be deeply knowledgeable about an area, to know the people, to know the language, to know the history, the culture, the literature, but it is not a guarantee that you will have the right strategy or policy as a matter of statecraft for dealing with that area. You see, the great experts in certain areas sometimes get it fundamentally wrong . . . Expertise is a very good thing, but it is not the same thing as sound judgment regarding strategy and policy."<sup>5</sup>

Politicians, policy analysts, intelligence experts, and scholars will be studying for years how America, possessed of the world's most powerful and expensive spy agency and scores of intelligent advisers, could have misread Iraq so badly. But the Iraq debacle raises much larger questions: Why do individuals, businesses, and nations, employing their best and brightest minds, and focusing their finest resources on a particular problem, sometimes go horribly wrong? With ample access to historical precedents, why don't people learn the lessons of history? I believe we often blunder not because our thinking is wrong, but because it is rigid.



## KEEPING CURRENT

To be clear, let me make a distinction between three important terms. A *mistake* is simply an error arising from incorrect data, like believing that an electric wire is running direct current when it's actually on AC. A *blunder*, in contrast, is a solution to a problem that makes matters worse than before you began, like attempting to discredit a potentially liberating technology rather than adapting to it. Finally, a *cognition trap* is the mental framework that led you to a blunder, like the one I call static cling, the refusal to accept that a fundamental change is under way. This book is not simply a catalog of blunders. Instead, it's a typology of judgment calls combined with the stories of how they unfolded and how they were resolved. Each chapter defines a different cognition trap and offers historical and contemporary examples of how those traps were sprung. Cognition traps have nothing to do with a lack of intelligence. As you'll see throughout these stories, they can flummox even the brightest decision makers.

*Blunder* does not predict America's rise or fall. Instead, it explains the ways in which all nations, along with businesses and individuals, weaken themselves. America's errors in Iraq, for example, will not destroy the nation, but they surely weaken it. Most of the time, when countries blunder, they neither collapse nor revolt; they just squander precious resources and set back their progress toward prosperity, security, and strength. Eventually they regroup, right themselves, and blunder on.

Because I teach military officers at the Naval Postgraduate School in Monterey, California, part of *Blunder's* focus involves international conflicts. My students come not just from the navy, but the army, air force, and marines as well. And there are many from other countries' militaries. One of the core courses I teach explores the roots of war in the modern era. Through historical study, we look deeply into the causes of war and the

## BLUNDER

conditions for a stable peace. One of the many lessons I hope my students take away is that thoughtful decision making can be cultivated and improved. The poor judgments made in war and peace often result from the same kinds of rigid mind-sets, or cognition traps, that affect people every day.

*Blunder* is not a book solely about nations and wars. It shows how the same cognition traps that ensnare policy makers catch us in other realms as well. Just as cognition traps sap a nation's strength, they can sabotage personal relationships and shatter corporate competitiveness. They foil our best-laid plans in nearly every arena, from international relations to romantic relations, from environmental management to health care to weight loss, and much, much more. Cognition traps are insidious, and once you finish this book, you will likely start spotting them all around you.

Throughout the stories in these pages you will meet a remarkable range of historical figures from antiquity to the present. All of them, in one way or another, have either fallen prey to crippling cognition traps or else skillfully avoided them. And some of them have done both. What they share is not any unique vulnerability to being unconsciously hoodwinked, nor any extraordinary intellectual gifts that helped them break the destructive mental habits that afflict us all. Nonetheless, they do share certain common features. My hope is that by the end of this book, you will have a deeper grasp of the characteristics that contributed to blunders and the traits that helped to avoid them.

*Blunder* aims to help us recognize the destructive mental patterns we all employ. But identifying the most prevalent cognition traps is not enough to overcome them. The second aim of *Blunder* is to suggest concrete ways for all of us to escape cognition traps once we find them. If we can spot those self-destructive thought patterns in time, then we have a genuine

## KEEPING CURRENT

opportunity to break them. Naturally, it's always easy to look back at other people's errors and say how foolish they were. It's a much harder thing to be in the situation yourself and avoid the same mistakes. For that reason, in each chapter I contrast examples of people who blundered with people in comparable circumstances who managed to succeed. Even though no two situations can ever be exactly alike, we can still learn a lot from those who made sound decisions.

*Blunder* is a book about cognition, but it approaches the subject from a historian's point of view. Since historians love to tell stories, I illustrate cognition traps not solely with historical examples, but also by drawing on literature, poetry, and even a bit of clever folklore to ease us through the complex and crucial world of judgment calls.