

prologue

FIRESTORM

San Francisco, Thursday, April 19, 1906

THE WIND had shifted. Now the inferno turned its attention westward. Block by block, it savaged some of the city's finest houses. As the mayor, chief of police, and members of the municipal council retreated from building to building before the flames, they decided the city would make one last stand.

The final line of defense, they announced, would be Van Ness Avenue—a broad residential boulevard bisecting San Francisco from north to south. The street lay directly in the fire's path: if they could use it as a firebreak, they might be able to halt the advance. But if this last effort failed, what remained of the city would surely be lost.

Early the previous day, an enormous earthquake had shattered the city's core, snapping cast-iron water mains like twigs, toppling thousands of chimneys, and upending coal-burning stoves and boilers. Electrical utility poles fell over, bringing down live wires in showers of sparks. Gas lines ruptured. Kerosene and oil poured out of burst fuel tanks. In seconds, sparks and fuel combined, and dozens of fires exploded across the city. Then, energized by the wood in the city's buildings, small fires coalesced into mighty firestorms. Even when fire-fighters could maneuver around the piles of earthquake debris in the streets, they found no water in the hydrants.

By noon on the 19th, the fire had destroyed almost ten square kilometers of the city east of Van Ness Avenue. The financial district, Market Street, and the district south of Market were smoking ruins,

Chinatown was ablaze, and the docks, ferry terminal, and Telegraph Hill were under siege. The U.S. army had tried to deprive the fire of easily combustible material by blowing up hundreds of undamaged buildings in front of the flames. But so far their efforts had been futile, and supplies of dynamite were almost gone.

Orders went out to concentrate all soldiers, police, workers, and fire engines for the climactic fight along a sixteen-block section of Van Ness. They would raze the houses along the east side of the boulevard. So the last pounds of dynamite were brought on wagons from the Presidio and Alcatraz, placed in the buildings' basements, and connected to fuses. Police and volunteers rushed from house to house to evacuate residents. And because there wasn't enough dynamite, the army wheeled field cannon into position along the west side of Van Ness. The guns' muzzles pointed across the street.

The fire crested Nob Hill a few blocks to the east, enveloped the brand-new Fairmont Hotel, and now surged down California, Sacramento, and Washington Streets toward Van Ness. A broad wall of flames and smoke closed in on the defenders.

At 4 p.m., the cannon opened fire on the elegant mansions lining the east side of the street. "The sight was one of stupendous and appalling havoc," wrote a correspondent for *The New York Times*, "as the cannons were trained on the palaces and the shot tore into the walls and toppled the buildings in ruins." Simultaneously fuses were lit, and as the dynamite exploded, "the dwellings of millionaires were lifted into the air by the power of the blast and dropped to the earth a mass of dust and debris."

For hours, above the roar of the approaching flames, the air shook with the steady concussion of exploding artillery shells and dynamite. When the fire reached Van Ness, it seemed it would breach the defensive line. "The fire spread across the broad thoroughfare," wrote the *Times* correspondent, "and the entire western addition, which contains the homes of San Francisco's wealthier class, seemed doomed." But when the smoke cleared the next morning, the defenders found to their joy that their strategy had been largely successful. The flames had jumped the street in only a few places.

By then, though, it was obvious that much of the city had been obliterated. Hundreds of thousands of people had no shelter or food, and authorities feared famine and epidemic. Looking across San Francisco's smoldering hulk that day, no one could have imagined that such appalling

destruction would also produce some good; that it would not only lead to a rejuvenated city but also trigger a wave of events that would sweep around the world and, years hence, help create the Federal Reserve System of the United States—the country’s bank of last resort, an essential defense against financial panic, and one of the most important new institutions of the twentieth century.¹

Rome, Tuesday, May 13, 2003

The late-afternoon Italian sun is low in the sky, but still hot. In the shade of a tree, I’m enjoying a blessed moment of tranquillity. I’m perched atop the stubby base of a pillar among the ruins of the Forum in Rome—the center of political, religious, and public life through much of Ancient Rome’s history.

I look northwest toward the Arch of Septimius Severus and the Temple of Saturn. In front of me is a broad expanse of wild grass that shimmers green and gold. Here and there stand pitted and cracked imperial columns, crumpled brick arches, and bits and pieces of travertine steps—broken remnants of Rome’s triumph and power.

A breeze ruffles the grass.

I’m visiting Rome on a journey to better understand the complex problems we face—problems like energy shortages, climate change, disease, and economic crisis. And while it may be a moment of tranquillity for me, in mid-May 2003 much of the world is in turmoil. In the past weeks, a string of suicide bombings ripped through Israel. Terrorists attacked Western targets in Riyadh and Casablanca. Indonesia launched a war against rebels in the province of Aceh. The United Nations warned of a new genocide in northeastern Congo. A virulent form of pneumonia, SARS, caused near panic from Beijing to my home city of Toronto. And the United States and its allies achieved a lopsided military triumph over Saddam Hussein’s regime in Iraq. The victory seemed to confirm the United States as an imperial power, certainly the greatest since the Roman empire, and perhaps—in terms of the gulf between America and its nearest competitors in military and economic strength—the greatest of all time.

All this turbulence makes it seem as if nothing is dependable. Shocks and surprises seem to rush toward us faster than ever before. As I sat among the Forum’s scattered ruins, trying to imagine what the place must have



The Roman Forum

looked like two thousand years ago, I asked myself, Did the Romans ever have the same feelings? Were their certainties ever challenged, and did events ever seem out of control? I wondered whether the pressured, chaotic circumstances of today's world are in any way like those that existed when the western Roman empire crumbled in the fifth century. How could anything that seemed so permanent and consequential, as Rome must have seemed in its heyday, be reduced to these scraps of rubble? Of course in the

centuries since Rome's fall, countless others have asked the same kind of questions, but I suspected we'd learn something new by asking them again now, in light of new studies of why societies sometimes collapse.²

Isn't everyone intrigued by the idea of the fall of Rome? As a boy, I was fascinated by it. I marveled at Rome's feats of conquest and engineering. They were the stuff of wonder. Rome's legions subjugated Europe and North Africa and reached deep into western Asia, while its engineers built roads, aqueducts, temples, baths, and amphitheaters across the empire's landscape. But what really drew me to the story was what it revealed about our human frailty. There was something both spectacular and eerie about this civilization that so dominated much of the world—and then almost completely disappeared. Rome's vast influence on Western cultures endures, but we can see today only scattered fragments of its incalculable physical effort. For a ten-year-old on the cusp of adolescence, this tale was mysterious and subtly frightening. It hinted that—in the sweep of time—all our striving and building and all our passion about issues of the day are almost wholly inconsequential; that when viewed across thousands of years, even our most prodigious achievements will seem ephemeral.

At the very least, Rome's story reveals that civilizations, including our own, can change catastrophically. It also suggests the dark possibility that our human projects are so evanescent that they're essentially meaningless.

Most sensible adults avoid such thoughts. Instead, we invest enormous energy in our families, friends, jobs, and day-to-day activities. And we yearn to leave some enduring evidence of our brief moment on Earth, some lasting sign of our individual or collective being. So we construct a building, perhaps, or found a company, write a book, or raise a family.

We seldom acknowledge this deep desire for meaning and longevity, but it's surely one source of our endless fascination with Rome's fall: if we could just understand Rome's fatal weakness, maybe our societies could avoid a similar fate and preserve their accomplishments forever.

Of course, an infinite number of factors—most of them unknown and some unknowable—affect how our societies develop, and we can only rarely influence even those few factors we know about. So rather than resisting change, our societies must learn to adapt to the twists and turns of circumstance. This means we must sometimes give up our accomplishments. If we try to keep things largely the way they are, our societies will become progressively more complex and rigid and, in turn, progressively less creative and able to cope with sudden crises and shocks. Their

collapse—when it eventually does happen—could then be so destructive that there would be little of the prior order left behind. And there would be little left to seed the vital process of renewal that should follow.

Here we have ancient Rome’s real lesson. Most of us who recall a bit of history think that constant barbarian invasions caused the western empire to disintegrate, but actually these invasions were only the most immediate cause. In the background were more powerful long-term forces, especially the rising complexity of all parts of Roman society—including its bureaucracy, military forces, cities, economy, and laws—as the empire tried to maintain itself. To support this greater complexity, the empire needed more and more energy, and eventually it couldn’t find enough. Indeed, its increasingly desperate efforts to get energy only made its bureaucracies and laws more elaborate and sclerotic and its taxes more onerous. In time, the burden on the empire’s peasants became too great, while rising complexity strangled the empire’s ability to renew itself. The collapse that followed was dramatic: populations of cities and towns fell sharply, interregional trade dwindled, banditry and piracy soared, construction of monumental buildings and large-scale infrastructure stopped, and virtually all institutions—from governments to armies—became vastly simpler in their operation and organization.³

In this book I’ll argue that our circumstances today are surprisingly like Rome’s in key ways. Our societies are also becoming steadily more complex and often more rigid. This is happening partly because we’re trying to manage—often with limited success—stresses building inside our societies, including stresses arising from our gargantuan appetite for energy to run our factories, heat our homes, and fuel our cars. Eventually, as occurred in Rome, the stresses may become too extreme, and our societies too inflexible to respond, and some kind of economic or political breakdown will occur.

I’m not alone in this view. These days, lots of people have the intuition that the world is going haywire and an extraordinary crisis is coming. Some people, particularly those of a religious disposition, think we’re entering end times. Parallels between ancient Rome and the modern world are common; and fiction, religious preaching, and even scientific analyses abound with apocalyptic images of doom. Much of this stuff is nonsensical, which makes it easy for our “experts” to dismiss it with a patronizing wave of the hand. But I think that non-experts’ intuition is actually largely right. Some kind of real trouble does lie ahead.

That trouble doesn't have to be calamitous in its ultimate results, though. If we're smart and a bit lucky, we have a good chance of avoiding a terrible outcome. In fact, just as happened after the great San Francisco fire—when a new and more resilient city rose from the ashes and America's banking system was made far more resilient too—catastrophe could create a space for creativity that helps us build a better world for our children, our grandchildren, and ourselves.

The White Wall

It's late at night, and you're driving fast along a country road in a dense fog. Your headlights are strong, but you still can't see much. The beams reflect off the fog, creating a wall of white light that seems to hang motionless in front of your windshield.

It's a strange feeling: you know you're moving fast—your foot is pressing hard on the accelerator, the engine is roaring, and directly in front of your hood you can glimpse the pavement rushing toward you—but otherwise there's little evidence of motion, because no matter how hard you scan the white wall for details you can see only faint hints of what's coming your way.

Yet you feel calm and confident—secure, even. After all, this is sleepy farming country, and while you know you're driving a little too fast for the conditions and have never been down this road before, your map tells you it's straight and flat and that there are no side roads from which other cars can emerge. And because it's nighttime, there's little chance of oncoming traffic. Anyway, in spite of the hazards, you want to get where you're going as quickly as you can.

Sensible behavior? Most would say not. Countless things could go wrong. Perhaps the map is wrong, and there's a sharp curve ahead; perhaps a deer will jump into the road suddenly or a stranded motorist step out to flag you down.

Driving fast in the fog is, of course, not sensible. But it's exactly what we're doing today.

Think of the road as the line of time, stretching endlessly from the past behind us and into the future in front of us. We live in an instant of fast-forward motion between what has been and what's to come. We don't give the past much thought, although we might occasionally glimpse bits and

pieces—like Ancient Rome—shrouded in fog in our rearview mirror and reflecting our taillights' rosy glow. The decades that roll out in front of us are obscure, try as we may to make out their features. The car's headlights are like the best experts and forecasting technologies we can muster, but they penetrate only a short distance into the haze.

Even so, and despite those who sense calamity ahead, many people believe they have a pretty good idea where we're going. They're sure things will work out fine, because they're basically optimistic about the future and our ability to deal with its surprises. They see an ever-improving future of broadened and deepened global capitalism, expanded democracy and respect for human rights, and marvelous advances in science and technology—all changes that will strengthen our progress toward greater happiness and well-being. So they ignore the fog and keep their foot pressed on the accelerator pedal.

Many other people are just passengers on this wild ride. They'd like to slow down, but they're too scared to make any real changes because they don't know what would happen if they did.

What will our future really hold? We all need to recognize that the road ahead isn't going to be straight, flat, or unobstructed. We can't possibly know when sharp corners, other vehicles, or unexpected junctions will appear, but we can be sure that there are a huge number of them ahead and that we're still driving far too fast.

In the middle of the first decade of the twenty-first century, some of us have a feeling of dread. We see headlines about avian flu, impending oil shortages, and horrible terrorism in distant places. We realize that humankind is doing more things, faster, across a greater space than ever before, and that this is producing changes of a size and speed never before seen. Globalization erases our jobs, new technologies inundate our lives with information, waves of migrants push at our borders, and pollution destabilizes our climate. Stupendous changes are converging simultaneously on our societies, on our leaders, and on each one of us—leading many people to feel that things are out of control, and we're going to crash.

And we might well ask, What kind of trouble is our civilization likely to encounter ahead? How can we cope, and how might we take advantage of opportunities that arise for civilization's renewal?