# Excerpts from "Abundance" By Ezra Klein & Derek Thompson (2025)

# INTRODUCTION—BEYOND SCARCITY

# **Scarcity Is a Choice**

This book is dedicated to a simple idea: to have the future we want, we need to build and invent more of what we need. That's it. That's the thesis.

It reads, even to us, as too simple. And yet, the story of America in the twenty-first century is the story of chosen scarcities. Recognizing that these scarcities are chosen—that we could choose otherwise—is thrilling. Confronting the reasons we choose otherwise is maddening.

Many times, our crises reflect the overhang of the past into the present. One generation's solutions can become the next generation's problems. After World War II, an explosion of housing and infrastructure enriched the country. But without regulations for clean air and water, the era's builders despoiled the environment. In response, the US passed a slew of environmental regulations. But these well-meaning laws to protect nature in the twentieth century now block the clean energy projects needed in the twenty-first. Laws meant to ensure that government considers the consequences of its actions have made it too difficult for government to act consequentially. Institutional renewal is a labor that every generation faces anew.

But some of this reflects a kind of ideological conspiracy at the heart of our politics. We are attached to a story of American decline that is centered around ideological disagreement. That makes it easy to miss pathologies rooted in ideological collusion. Over the course of the twentieth century, America developed a right that fought the government and a left that hobbled it. Debates over the size of government obscured the diminishing capacity of government. An abundance of consumer goods distracted us from a scarcity of homes and energy and infrastructure and scientific breakthroughs. A counterforce is emerging, but it is young yet.

## The Supply-Side Mistake

The words "supply-side" are coded as right-wing. They summon memories of the curve that the conservative economist Arthur Laffer jotted on a napkin in the 1970s, showing that when taxes are too high, economies slow and revenues, paradoxically, fall. This led, in part, to decades of Republican promises that cutting taxes on the rich would encourage the nation's dispirited to work smarter and harder, leading economies to boom and revenues to rise.

Tax cuts are a useful tool, and it is true that high taxes can discourage work. But the idea that tax cuts routinely lead to higher revenues is "voodoo economics." It has been tried. It has failed. It has been tried again. It has failed again. These failures, and the Republican Party's dogged refusal to stop trying the same thing and expecting a different result, made it vaguely disreputable to worry about the supply side of the economy.

This is where you might have expected Democrats to step in. But Democrats, cowed by the Reagan revolution and frightened of being seen as socialists, largely confined themselves to working on the

demand side of the ledger. Progressivism's promises and policies, for decades, were built around giving people money, or money-like vouchers, to go out and buy something that the market was producing but that the poor could not afford. The Affordable Care Act subsidizes insurance that people can use to pay for health care. Food stamps give people money for food. Housing vouchers give them money for rent. Pell grants give them money for college. Tax credits for child care give people money to pay for child care. Social Security gives them money for retirement. The minimum wage and the earned-income tax credit give them more money for anything they want.

These are important policies, and we support them. But while Democrats focused on giving consumers money to buy what they needed, they paid less attention to the supply of the goods and services they wanted everyone to have. This reflected a faith in the market that was, in its way, no less touching than that offered by the Republicans. It assumed that so long as enough money was dangled in front of it, the private sector could and would achieve social goals. It revealed a disinterest in the workings of government. Regulations were assumed to be wise. Policies were assumed to be effective.

The problem is that if you subsidize demand for something that is scarce, you'll raise prices or force rationing. Too much money chasing too few homes means windfall profits for homeowners and an affordability crisis for buyers. Too much money chasing too few doctors means long wait times or pricy appointments. This leads to the standard Republican riposte: Keep the government out of it. Let the market work its magic. That's fine for goods where access is not a matter of justice. But that cannot be said for housing and education and medicine. Society cares about access to these goods and services, as well it should. Democrats and Republicans passed policies into law that, collectively, spend trillions of dollars helping people afford them. But giving people a subsidy for a good whose supply is choked is a terrible mistake.

The results of that mistake are everywhere. In 1950, the median home price was 2.2 times the average annual income; by 2020, it was 6 times the average annual income. Between 1999 and 2023, the average premium for employer-based family health insurance rose from \$5,791 to \$23,968—an increase of more than 300 percent—and the worker contribution to that premium more than quadrupled. In 1970, the annual average cost of tuition and fees was \$394 at public colleges and \$1,706 at private colleges. In 2023, it was \$11,310 at public colleges for in-state students and \$41,740 at private colleges.

The supply problem has lurked for years, but it has not been the core of our politics. That is changing. A new theory of supply is emerging—and with it, a new way of thinking about politics, economics, and growth.

## Society Is Not a Pie

Perhaps you've heard the chiché that the economy is a pie we must grow rather than slice. It is hard to know where to begin with what this image gets wrong, because it gets almost nothing right. If you somehow grew a blueberry pie, you'd get more blueberry pie. But economic growth is not an addition of sameness. The difference between an economy that grows and an economy that stagnates is change. When you grow an economy, you hasten a future that is different. The more growth there is, the more radically the future diverges from the past. We have settled on a metaphor for growth that erases its most important characteristic: change.

Dig within the equations that power modern economics and you'll find that growth comes from one of only a few places. An economy can grow because it adds more people. It can grow because it adds

more land or natural resources. Bur once those avenues are exhausted, it needs to do more with what it has. People need to think up new ideas. Factories need to innovate new processes. These new ideas and processes must be encoded into new technologies. How much more can we produce with the same number of people and resources? When productivity surges, what we get is not more of what we had, but new things we never imagined.

The nostalgia that permeates so much of today's right and no small part of today's left is no accident. We have lost the faith in the future that once powered our optimism. We fight instead over what we have, or what we once had in the past.

We already know how to build much that we need for the world we want. But much else that we need for the world we want still needs to be invented and improved. Markets, we hope, will proffer some of these advances. But not nearly enough of them. The market cannot, on its own, distinguish between the riches that flow from burning coal and the wealth that is created by bettering battery storage. Government can. The market will not, on its own, fund the risky technologies whose payoff is social rather than economic. Government must.

Too often, the right sees only the imagined glories of the past, and the left sees only the injustices of the present. Our sympathies there lie with the left, but that is not a debate we can settle. What is often missing from both sides is a clearly articulated vision of the future and how it differs from the present. This book is a sketch of, and argument for, one such vision.

#### **A Liberalism That Builds**

We are both liberals in the American tradition. The problems that we seek to solve are mostly problems that exist within the zone of liberal concern. We worry over climate change and health inequality. We want more affordable housing and higher median wages. We want children to breathe cleaner air and commuters to move easily on mass transit systems. We have many disagreements with the modern American right. But we focus, in this book, on the pathologies of the American left.

There is an anger any liberal should feel when looking at the states and cities that liberals govern. One of us was born in California and lived there throughout much of the writing of this book. California's most populous cities are run by Democrats. Every statewide elected official in California is a Democrat. Both chambers of the legislature are run by Democrats. And California is a land of wonders. It leads the world in technology. It creates the culture that much of the world consumes. It is astonishingly, breathtakingly beautiful. If it were its own country, it would have the fifth-largest GDP in the world.

Liberals should be able to say: <u>Vote for us, and we will govern the country the way we govern California!</u> Instead, conservatives are able to say: <u>Vote for them, and they will govern the country the way they govern California!</u> California has spent decades trying and failing to build high-speed rail. It has the worst homelessness problem in the country. It has the worst housing affordability problem in the country. It trails only Hawaii and Massachusetts in its cost of living. As a result, it is losing hundreds of thousands of people every year to Texas and Arizona. What has gone wrong?

California's problems are often distinct in their severity but not in their structure. The same dynamics are present in other blue states and cities. In this era of rising right-wing populism, there is pressure among liberals to focus only on the sins of the MAGA right. But this misses the contribution that liberal governance made to the rise of Trumpism. In their book *Presidents, Populism, and the* 

*Crisis of Democracy,* the political scientists William Howell and Terry Toe write that "populists don't just feed on socioeconomic discontent. They feed on ineffective government—and their great appeal is that they claim to replace it with a government that is effective through their own autocratic power."

Voting is a cheap way to express anger. Moving is expensive. But residents of blue states and cities are doing that, too. In 2023, California lost 342,000 more residents than it gained; in Illinois, the net loss was 115,000; in New York, 284,000. In the American political system, to lose people is to lose political power. If current trends hold, the 2030 census will shift the Electoral College sharply to the right; even adding Michigan, Pennsylvania, and Wisconsin to the states Harris won won't be enough for Democrats to win future presidential elections.

The problem is not just political. Young families are leaving large urban metros so quickly that several counties—including those encompassing Manhattan, Brooklyn, Chicago, Los Angeles, and San Francisco—are on pace to lose 50 percent of their under-five childhood population in the next twenty years. Democrats cannot simultaneously claim to be the party of middle-class families while presiding over the parts of the country that they are leaving.

A good way to marginalize the most dangerous political movements is to prove the success of your own movement. If liberals do not want Americans to turn to the false promise of strongmen, they need to offer the fruits of effective government. Redistribution is important. But it is not enough.

### **The Abundant Society**

There is a word that describes the future we want: <u>abundance</u>. We imagine a future not of less but of more. We do not subscribe to the seductive ideologies of scarcity. We will not get more or better jobs by closing our gates to immigrants. We will not turn back climate change by persuading the world to starve itself of growth. It is not merely that these visions are unrealistic. It is that they are counterproductive. They will not achieve the futures they seek. They will do more harm than good.

Abundance, as we define it, is a state. It is the state in which there is enough of what we need to create lives better than what we have had. And so we are focused on the building blocks of the future. Housing. Transportation. Energy. Health. And we are focused on the institutions and the people that must build and invent that future.

#### **CHAPTER 1–GROW**

Housing follows the laws of supply and demand. When supply is thick and demand is light, prices fall. The average home in Cleveland sells for about \$115,000. When supply is tight and demand is hot, prices rise. The median home in Manhattan now sells for \$1.1 million, and it is \$1.3 million in San Francisco, \$1.0 million in Los Angeles, \$900,000 in Seattle, and \$830,000 in Boston.

The result is a housing crisis of staggering proportions. Almost 30 percent of American adults are "house poor"—spending 30 percent or more of their income on housing. But that understates the problem. Housing costs are highest in the superstar cities that now drive the economy. Millions endure multi-hour commutes in order to live in a far-flung city where they can afford a home.

Too many have bought into a perverse inversion of what the city should be. Cities are where wealth is created, not just where it is displayed. They are meant to be escalators into the middle class, not

penthouses for the upper class. But through bad policy and worse politics, we are doing in the twenty-first century what we feared in the nineteenth: we are closing the American frontier.

# **The Great Divergence**

Cities play two roles. They are engines of innovation and engines of mobility. High housing costs have blunted their role in innovation, but only modestly. The richest firms and most productive workers can still afford to locate in expensive zip codes. But high housing costs wreak havoc on the city's offering of opportunity. Think of it as the firefighter test. Could a firefighter serving a city afford to live in that city? If not, then not only is that firefighter going to be forced into a longer commute, but his children also will be deprived of the awesome possibilities of the city their father works to safeguard.

Consider also the fortunes of janitors and lawyers. Janitors and lawyers have long made more money working in New York than in the Deep South. As a result, many of them migrated from the Deep South to New York. But as housing costs in New York rose, the benefits of migration crumbled, at least for the janitors. The lawyers still came out ahead, but the janitors saw housing consume more than 50 percent of their paychecks. It used to be that both high-wage and low-wage workers moved from poorer areas to richer ones. By the 1990s, poorer workers were moving <u>away</u> from high-income areas—and from the opportunities they once offered.

It is, then, no surprise that income inequality began rising in the '70s and reached such striking peaks in recent decades. We took a process responsible for much of the march toward income convergence and threw it into reverse. We made mobility into an engine of inequality, and we did it on purpose, using policy levers that made life in dynamic cities too costly for the poor to afford.

But the "we" here is hiding some uncomfortable culprits. It is liberals—and particularly a strain of liberalism that began to develop in the '60s and '70s—that bears much of the blame.

## The Problem with Lawn-Sign Liberalism

There is an old finding in political science that Americans are "symbolically" conservative but "operationally" liberal. Americans talk like conservatives but want to be governed like liberals. The Tea Party-era sign saying "Keep your government hands off my Medicare" is perhaps the most famous example of this divided soul. Americans like both the rhetoric and reality of low taxes, but they also like the programs that taxes fund. They thrill to politicians who talk of personal responsibility but want a safety net tightened if they, or those they know and love, fall.

This dynamic is so well known, so easy to see, that we miss how often it gets reality backward. In many blue states, voters exhibit the same split political personality, but in reverse: they are symbolically liberal but operationally conservative.

Texas has been the single largest beneficiary of California's housing crisis. And that is, in part, because Texas is California's mirror image in housing. The Austin metro area led the nation in housing permits in 2022, permitting 18 new houses for every 1,000 residents. Los Angeles's and San Francisco's metro areas permitted only 2.5 units per 1,000 residents. In our political typologies, it is liberals who embrace change and conservatives who cling to stasis. But that is not how things work when you compare red-state and blue-state housing policies.

To be fair, any growing community that likes things roughly the same as they are faces a problem. If more people want to live in that community, developers will build places for them to live. Worse, they might build dense places for them to live. A plot of land that holds a large single-family house could become a plot of land housing a small building with six units. You can make more money, typically, selling homes to six families than to one family, so it's relatively easy for the developer to offer the family living there now a good price for their home, raze the building, stack six units atop each other, and make a profit. This can be done in many places at once, fairly quickly, and the community will soon wake to find that it is unrecognizable to itself.

So how do you stop people from selling homes they own and developers from building on land they own and people from moving to a city they would like to be part of? Who invented this whole business of cutting cities into "zones" and creating rules about what can and can't be built there? The answer takes us back more than a hundred years.

In the 1800s, no American city had zoning rules, the American economist William Fischel writes in his aptly titled book *Zoning Rules!* In the early 1900s, Los Angeles adopted a small package of regulations that divided the city between zones for industrial buildings and residential construction. New York City followed, and soon enough, so did almost everywhere else. "Eight cities had zoning by the end of 1916," Fischel writes. "By 1926, 68 more cities had adopted it, and between 1926 and 1936, zoning was adopted by 1,246 additional municipalities." The concept of zoning, unheard-of in 1900, covered 70 percent of the US population by 1933.

The first zoning rules did little to prevent housing construction at scale. Instead, they dictated what kind of buildings could go where. But the American zoning experiment wasn't finished—not even close. What came next is what really put the clamps on housing supply: zoning as a form of anti-growth regulation. It is this form of zoning that still governs cities and suburbs today.

Two communities in California trace the rise of the anti-growth movement. After World War II, millions of veterans returned from the European and Pacific theaters. They started families in a hurry. Birth rates spiked and young parents balancing babies in their arms scoured the country for houses. No suburban development epitomized this go-go era more than Lakewood, California, a planned community built on open farmland just north of Long Beach. Between 1950 and 1953, more than 17,000 homes went up. At its most furious pace, the city's builders finished a new home every seven and a half minutes. By the spring of 1954, a sparse farmland for sugar beets and lima beans had been transformed into one of California's twenty largest cities.

Two decades later, several hundred miles north of Lakewood, another city revealed how rapidly the politics of housing were changing. Petaluma also saw its population bloom following the war. But unlike Lakewood, the city became famous for stopping growth rather than for welcoming it. In 1971, city officials introduced the Petaluma Plan. It included a growth rate cap of 500 annual new housing units and an urban growth boundary to prevent sprawl. Despite facing several legal challenges, the law was largely upheld in the courts. In the following decades, the Petaluma Plan offered a useful formula for Californians who wanted to freeze development in their neighborhoods, and other cities quickly adopted its quota system for building permits.

# This Is Your State on a Housing Shortage

In 2015, when the California Legislative Analyst's Office investigated the cause of the state's housing cost and availability crisis, the authors were unambiguous in their diagnosis. "First and foremost, far less housing has been built in California's coastal areas than people demand," they wrote. Little has changed since the publication of that document. Since 2015, the state has authorized construction on about half as many housing units as Texas, despite it having 9 million more residents. California has about 12 percent of the nation's population, 30 percent of the nation's homeless population, and about 50 percent of its unsheltered homeless population.

One way to think about homelessness is to imagine a game of musical chairs. With ten chairs and ten people, everyone will find a chair when the music stops. This will be true even if one of the players is on crutches. With nine chairs, someone will inevitably be left out. That's when individual life circumstances begin to predict homelessness. If you live in a city with too few homes, poverty and drug abuse and unemployment and mental illness make it likelier that you will be among those who end up without a home. But the cause of homelessness isn't the poverty or the addiction or the unemployment. All those conditions are far more prevalent in, say, West Virginia than in California, and yet California has six times the per capita homelessness of West Virginia.

This leads to a reality many prefer not to acknowledge. If homelessness is a housing problem, it is also a policy choice—or, more accurately, the result of many, many small policy choices.

As one example, boarding houses were a common place for adults to live through much of American history. They worked something like today's college dorms: The rooms were small, the bathrooms and kitchenettes were shared, and the cost was low. They weren't as nice to live in as a single-family home with a detached garage, but they were far nicer than a tent in the middle of an encampment in the dark of winter. So where did they go?

The answer is that they were made, in most jurisdictions, functionally illegal. By the 1950s, rooming houses were already a target for city planners looking to maintain high home prices and orderly neighborhoods. A report from the American Society of Planning Officials that same year offered guidance to planners looking to creatively rid their cities or neighborhoods of such nuisances: "Zoning is not the only tool available to control the blighting effects of rooming houses. Housing codes in an increasing number of cities require that decent—though often minimal—standards be maintained in them. Besides protecting the roomers, enforcement of these codes can do a great deal to assure that rooming houses do not harm districts in which they are properly located."

Over time, planners did exactly that: Zoning and building codes required rooming houses to be built with ever more features and amenities. Minimum parking requirements were added and maximum residency limits appeared. Some of this was done to upgrade housing stock or protect health and safety. Some of it was done to eliminate entire forms of housing that gave the poor or the unlucky a continued toehold in richer neighborhoods. Does it really "protect the roomers" to move them from a boarding house without parking to a tent beneath the overpass?

The point is not that cities wanted the homelessness crises they now face. They didn't. Their hope was that people who couldn't afford the kind of housing they allowed would leave. Many did exactly that, of course. But some had nowhere else to go. Others needed to stay near their families or jobs. And these policies did not generate crisis in a single year, or even a single decade. It took time before choices to

limit housing led to mass homelessness. But it is not really surprising that choices to limit housing led to mass homelessness. And it is also not surprising that cities often choose to limit the forms of housing, or even the amount of housing, that can be built nearby. After all, if you already own a home, scarcity makes the asset you own all the more valuable.

## What Happened in the 1970s?

There's an odd website called WTF Happened in 1971? It's a long stack of charts, gathered magpie-like from all manner of books and papers and articles, recording the many ways society began to tilt on its axis as the '70s dawned. The most convincing of them are economic: starting in the '70s, wages began to stagnate, inequality began to soar, inflation began to rise, and housing prices began their inexorable march upward. Our favorite of these charts shows how many years an average wage earner would presumably need to save to buy a home. In 1950, it's 2.3 years. In 1960, it's 2.6 years. In 1970, it's 2.4 years. But then something happens. By 1980, it's 3.8 years. By 1990, it's 5.4 years. By 2000, it's 7 years.

Real wages stagnated over these decades, but they didn't fall. The action was in housing prices, which rose and rose. This was something new. Prior to 1970, housing wasn't a prime asset. You bought a home to live in it. But that changed in the 1970s. Inflation was part of the reason. One of the main aims of federal housing policy has been to make possible the thirty-year fixed-rate mortgage, a peculiar financial device that wouldn't survive a day in the economic wild. What lender in their right mind would hand out thirty-year loans on fixed terms to virtually anybody with a job? But the federal government backed these mortgages and made the interest payments on them into large tax deductions, and so they became the cornerstone of the American housing market. But they became something else, too: a hedge against inflation. A fixed-rate mortgage holds payments flat on an appreciating asset. While inflation eats away at the real value of those payments, the value of the thing the payments are going toward—the house—just goes up and up.

In the '70s, rising inflation and slowing home building turned the homes people did own into the center of their wealth. But how do you protect the value of that asset? You can insure a home against fire, but you can't insure it against rising crime rates or local schools slipping in quality or a public housing complex being built down the street.

To manage those risks, you need to control what happens around your home. You do that through zoning and organizing. You do it through restricting how many homes and what kinds of homes can be built near you. You do it by making the minimum allowable lot sizes bigger and the parking requirements more expansive because both those rules ensure that only wealthier people will be able to buy into your community. You do it through organizing at planning meetings to defeat proposals for apartment buildings—they'll change the character of the neighborhood, and think of the traffic!—and refusing to expand sewer systems to areas where developers might want to build new houses.

In her essay "The Homeownership Society Was a Mistake," Jerusalem Demsas, who covers housing at the *Atlantic*, traces the politics of treating homes as assets. Housing is often spoken of as a safe investment, but it's not. Homes rise in price when there are too few of them to go around. The greater the gap between supply and demand, the higher the return for homeowners. "At the core of American housing policy is a secret hiding in plain sight," she writes. "Homeownership works for some because it cannot work for all. If we want to make housing affordable for everyone, then it needs to be cheap and widely available. And if we want that housing to act as a wealth-building vehicle, home values have to

increase significantly over time. How do we ensure that housing is both appreciating in value for homeowners but cheap enough for all would-be homeowners to buy in? We can't." The logic of this is inescapable, and the politics it creates is predictable. "A home's value is directly tied to the scarcity of housing for other people," Demsas says. "This system by its nature pits incumbents against newcomers."

# **CHAPTER 2—BUILD**

No less than housing, climate change makes a hash of our traditional political categories. Here it is typically the right that is willing to leap into the unknown, confident that humanity can adapt to unimaginable change. Here it is largely the left that wants to conserve the climate that the entirety of human civilization has known.

But to conserve our climate requires more than mere inaction. To do nothing—to let greenhouses gas emissions accelerate as they would if we kept burning coal and oil and gas heedlessly—is to welcome warming of four or five or six degrees Celsius. These are numbers that diverge from the climate of the eighteenth century as sharply as the climate of the eighteenth century diverges from the Ice Age. These are numbers inside which the planetary systems that sustain us break.

To maintain the climate we have had, or anything close to it, requires us to remake the world we have built. One vision that is popular in some corners of the left is called "degrowth." It holds that climate change reflects humanity's thrall to an impossible dream of endless growth. Rich countries must accept stasis, shuttering or scaling down major industries, and poorer countries must grow more gently and prudently.

Degrowth is simultaneously much more and much less than an answer to the climate crisis. It is much more than an answer because it is not really about climate at all. It is an anti-materialist philosophy that holds that humanity made its fundamental errors hundreds of years ago, trading the animism of our ancestors for Christianity's promise of dominion over nature. The problem is not simply greenhouse gas emissions or microplastics. It is Cartesian dualism and American-style capitalism and everything these systems of thought and practice have taught us to value and prize and want.

Degrowth recognizes the difficulty that politics poses to climate policy. It knows that people want more of what they have, and although it blames capitalism and plutocracy for these wants, it sees the challenges these wants pose to traditional climate politics. But those challenges apply to the degrowth vision with even greater force. If you cannot imagine convincing people to change their desires in the presence of energy abundance, how do you imagine convincing them to accept the rapid, collective scarcity that degrowth demands?

The cost of trying and failing to implement the degrowth vision would not merely be missing our climate targets by a few tenths of a percentage point. It is to deliver a future of populist authoritarians who drill and burn their way back to a false prosperity. It is to discredit parties that care about climate change and empower strongmen who will give people what they have always wanted: the gift of abundant energy.

#### "We Just Burned It"

"Take any variable of human well-being—longevity, nutrition, income, mortality, overall population—and draw a graph of its value over time," Charles Mann writes in *The Wizard and the Prophet*. "In almost every case it skitters along at a low level for thousands of years, then rises abruptly in the eighteenth and nineteenth centuries, as humans learn to wield the trapped solar power in coal, oil and natural gas."

Can we all be energetically wealthy? Not if we're burning coal and oil. The stocks of fossil fuels are finite and their continued combustion is lethal. This would be true even if climate change was a hoax. Air pollution kills between 7 million and 9 million people every year; this is six or seven times the death toll from traffic accidents and hundreds of times the death toll from war or terrorism or all natural disasters combined. It is deadliest where people cook by burning wood or charcoal and farm by burning the end of the last season's crops. That is to say, it is deadliest where people are energy poor, because where people are energy poor, they burn fuel and breathe in the byproducts.

For most of human history, there was no other choice. That is why nearly every society that has become rich since the industrial revolution has seen air pollution build to crisis levels. Human beings chocked on smog in London in the nineteenth century and in New York and Los Angeles in the twentieth century. A few years ago, Beijing's air quality was an international scandal, and now the same is true for Delhi. But notice: the problem passes. Los Angeles got richer and its residents now breathe clean air. The same is true in London, where air pollution in the eighteenth century was worse than Delhi is today.

"Environmental action is often framed as at odds with the economy," writes Hannah Ritchie in *Not the End of the World*. "It's either climate action or economic growth. Pollution versus the market. This is just wrong." As societies become economically and technologically rich, they clean their air and water. Air pollution is not a problem of using too much energy or pursuing too much growth. It is a problem of using dirty energy because you do not have the money or the technology to grow another way.

The same is true for climate change. We did not always know how to power economies without using fossil fuels. We do now. This is the technological miracle of our age. The cost of solar energy fell by about 90 percent from 2010 to 2020. The cost of wind power fell by nearly 70 percent. solar power does not choke the lungs. Wind power does not sting the eyes. Neither of them warms the planet. Two decades ago, it was not possible to imagine that modernity was compatible with renewable energy. Now we need not imagine it.

As the climate writer and activist Bill McKibben puts it, "In the place of those fires we keep lit day and night, it's possible for us to rely on the fact that there is a fire in the sky—a great ball of burning gas about ninety-three million miles away, whose energy can be collected in photovoltaic panels, and which differentially heats the Earth, driving winds whose energy can now be harnessed with great efficiency by turbines. The electricity they produce can warm and cool our homes, cook our food, and power our cars and bikes and buses. The sun burns, so we don't need to."

To this miracle one might add humanity's harnessing of nuclear power, or our growing ability to tap the geothermal energy pulsing beneath the earth or the hydropower generated by the waves. So much clean energy is possible, and available, if we can muster the ingenuity and the will to harness it.

#### CHAPTER 3—GOVERN

Tahanan, at 833 Bryant Street in the Soma neighborhood of San Francisco, is 145 studio units of permanent supportive housing for the chronically homeless. Completed in 2021, it's a cheerful, efficient building that bears the hopes and scars of the population it serves. The curated murals and architectural flourishes are pockmarked by extensive water damage inflicted when a resident on an upper floor reportedly slept with the faucets running. Social workers stride purposefully through the halls, and well-loved dogs are being walked everywhere you turn.

But what makes Tahanan notable isn't its aesthetic. It's the way it was built. Tahanan went up in three years, for less than \$400,000 per unit. Affordable housing projects in the Bay Area routinely take twice as long and can cost almost twice as much. "Development timelines for affordable projects in San Francisco have typically stretched to 6 years or longer and development costs have reached \$600,000 to \$700,000 per unit," reported the Terner Center for Housing Innovation at the University of California, Berkeley. San Francisco cannot dent its housing crisis at the speed and cost at which it is building affordable units now. But if the pace and price of Tahanan were the norm, the outlook would brighten.

So how did Tahanan do it? The secret, for liberals, is depressing. It used private money to avoid the pile of rules and regulations that taking government money triggers. But it could only do that because it had the support of city and state officials who streamlined zoning and cut deals to make it possible. Tahanan reveals a confusion in the way we talk of the government. The government is a plural posing as a singular. Different factions and officials and regulations and processes push in different directions. It is often the case that no one is more frustrated by how the government works than the people who work in it or who are charged with running it.

## A False Divide

We are used to understanding the battle lines of American politics as cleaving liberals who believe in a strong, active government from conservatives who doubt it. The truth is far more complicated. Liberals speak as if they believe in government and then pass policy after policy hamstringing what it can actually do. Conservatives talk as if they want a small state but support a national security and surveillance apparatus of terrifying scope and power. Both sides are attached to a rhetoric of government that is routinely betrayed by their actions. The big government-small government divide is often more a matter of sentiment than substance.

Neither side focuses on what scholars call "state capacity": the ability of the state to achieve its goals. Sometimes that requires more government. Sometimes it requires less government. But it always requires a focus on what the state is trying to achieve and what is in its way. In the absence of that focus, absurdity reigns.

The reality of housing development doesn't track along such neat ideological lines. Bob Kuttner, cofounder of the stalwart liberal publication *The American Prospect*, says that eliminating zoning restrictions and making it easier to build multifamily housing would make only a modest difference in our problems. He does not provide any evidence for this claim, but there is evidence against it. Houston has no zoning rules at all, though it does have some land use regulations. As a result, it is dramatically easier to build in Houston than to build in Los Angeles or San Francisco or Seattle or Boston.

In 2023, the San Francisco metro area issued about 7,500 new housing permits. The Boston metro area issued 10,500. New York City, Newark, and Jersey City—together—issued slightly fewer than 40,000. The Houston metro area issued almost 70,000. This divergence is decades old, and its consequences are clear. Houston has the lowest homelessness rate of any major US city. Officials estimate that it costs \$17,000 to \$19,000 to house a homeless resident of Houston, with about \$12,000 of that going to housing and the rest to wraparound services. In San Francisco, the cost is between \$40,000 and \$47,000 annually, with about \$35,000 going to housing costs alone. This tracks the broader difference between the two cities: In Houston, the median home costs a bit over \$300,000 rather than a bit over \$1.7 million in San Francisco. Houston is not free of affordability problems. But it is not facing the crises of homelessness and housing affordability seen in the superstar cities of many blue states.

Liberals lament that private developers want to build profitable developments when what is needed most is affordable housing. But even aside from how much housing is built, one way to make housing more affordable is to make it cheaper to build. The problem is that many liberal jurisdictions have layered on rules and regulations that make housing pricier even when it is constructed—and that, of course, makes it less affordable. In San Francisco, a 2023 state report found that it took 523 days, on average to get clearance to construct new housing, and another 605 days to get building permits—and that's for the projects that aren't killed by community opposition during the planning process.

## A Government That Chooses Is a Government That Works

On June 11, 2023, a tanker truck carrying 8,500 gallons of gasoline flipped over. The truck ignited underneath the I-95 bridge in Philadelphia, killing the driver and melting the steel beams undergirding it. The I-95 bridge, which carries 160,000 cars daily, collapsed. This wasn't just a crisis for a roadway. It was a crisis for a region. I-95 is one of the main transportation arteries on the East Coast. It's a crucial connector between New York and Washington. Officials, including Pennsylvania governor Josh Shapiro, warned that rebuilding it would take months.

And it would have taken months, if not longer, under Pennsylvania's normal rules. "We would hire a consultant to design it," Mike Carroll, the Pennsylvania secretary of transportation, says. "We'd need final design approved by the Federal Highway Administration. Then there'd be bidding from interested contractors. Then we'd process the bids. Then we'd issue a contract. That'd take about twelve to twenty-four months."

But Shapiro signed a declaration of emergency that exempted the rebuilding process from the rules and requirements that slow so many public projects down. Speed was the priority here. There would be no environmental impact statement. There would be no lengthy bidding process. The procurement rules were shunted aside. When Carroll arrived at the disaster, a contractor the state had worked with before was already at the bridge on another job. They were chosen to oversee the demolition. A highway contractor was also nearly, working on another project. That firm was pulled in, too. "The emergency declaration gave us the ability to engage contractors without bidding," Carroll said. "Work commenced the moment the fire department released the scene—that same day."

All the labor that Pennsylvania used was union labor. And they pushed hard: work went on twenty-four hours a day, seven days a week. A twenty-four hour live cam trained on the site allowed the public to follow along. Shapiro took to giving updates on Twitter and TikTok. He turned the I-95 rebuild into a crucible for his governorship and an object lesson in something few still believed: That government

could build big things fast. That it could do so using union labor. That it could move at the speed of an emergency rather than according to its own rules.

"The emergency declaration was a game changer," Carroll says. "I took calculated risks that I'd not have taken in a normal project. It could've gone badly, but it didn't." It's worth taking seriously what Carroll says here. There were risks. There are reasons these rules are in place. No-bid contracts can enable corruption as well as speed. But in turning these questions from choices into rules, we have taken discretion and judgment away from people like Carroll. We prefer that projects go badly by the book. We minimize some risks but make delay and high costs routine.

The emergency declaration allowed Shapiro to make choices. He chose to use union labor but to gore a lot of other interests and processes. <u>I-95 reopened in just twelve days</u>—not the "months" initially forecasted. The process Shapiro used would typically be illegal. Yet national Democrats and Pennsylvania voters alike loved it. What does that say about the typical process?

In his paper "State Capacity: What Is It, How We Lost It, and How to Get It Back," Brink Lindsey puts it well: "What is needed most is a change in ideas: namely, a reversal of those intellectual trends of the past 50 years or so that have brought us to the current pass. On the right, this means abandoning the knee-jerk anti-statism of recent decades, embracing the legitimacy of a large, complex welfare and regulatory state, and recognizing the vital role played by the nation's public servants (not just the police and military). On the left, it means reconsidering the decentralized, legalistic model of governance that has guided progressive-led state expansion since the 1960s, reducing the veto power that activist groups exercise in the courts, and shifting the focus of policy design from ensuring that power is subject to progressive checks to ensuring that power can actually be exercised effectively."

Liberals have chosen to trust elected politicians and government workers less and trust regulatory and judicial processes more to ensure that government delivers. That may have made sense in a past era, but given the problems we face now, it is a mistake. Whether government is bigger or smaller is the wrong question. What it needs to be is better. It needs to justify itself not through the rules it follows but through the outcomes it delivers.

## **CHAPTER 4—INVENT**

## **The Politics of Invention**

Invention—the act of solving problems by bringing new products, systems, and ideas into existence—is the basis of human progress. Modern liberal politics is made possible by invention. Almost every product or service that liberals seek to make universal today depends on technology that did not exist three lifetimes ago—or, in some cases, half a lifetime ago. Medicare and Medicaid guarantee the elderly and poor access to modern hospitals, where many essential technologies—such as plastic IV bags, MRI and CT scan machines, and pulse oximeters—are inventions of the last sixty years. It is tempting to say that, with these essentials already in existence, it is time for society to focus at last only on the fair distribution of existing resources rather than the creation of new ideas. But this would be worse than a failure of imagination; it would be a kind of generational theft. When we claim the world cannot improve, we are stealing from the future something invaluable, which is the possibility of progress. Without that possibility, progressive politics is dead. Politics itself becomes a mere smash-and-grab war over scarce goods, where one man's win implies another man's loss.

The world is filled with problems we cannot solve without more invention. In the fight against climate change, the clean energy revolution will require building out the renewable energy that we have already developed. But decarburization will also require technology that doesn't exist yet at scale: clean jet fuel, less carbon-intensive ways to manufacture cement, and machines to remove millions of tons of carbon from the atmosphere.

In health care, the last few centuries of invention have turned a death planet—where disease ran rampant and, before 1850, one in two babies perished before their sixteenth birthday—into a world where people can look forward to generation-over-generation increases in life expectancy. But there are still so many mysteries that require fresh breakthroughs. We've made disappointingly little progress with many cancers. Complex diseases like Alzheimer's and schizophrenia elude treatment or even basic comprehension. The cellular process of aging is a deep mystery. We still don't have effective vaccines for adult tuberculosis or hepatitis C, or vaccine platforms that we can immediately scale up in the event of a new pandemic.

Inventions that may seem outlandish today may soon feel essential to our lives. Streets filled with electric self-driving cars that give us mobility without emissions and free us from the vast number of deaths caused by faulty human reflexes or judgment. Gigantic desalination facilities that transform our oceans into drinkable tap water. An economy with robots that build our houses and machines that take on our most dangerous and soul draining work. Wearable devices to scan our bodies for diseases. To make these things possible and useful in our lifetime requires a political movement that takes invention more seriously.

So, where is that movement? Invention rarely plays a central role in American politics. In health care, for example, Democrats have spent decades fighting for universal insurance, while Republicans have consistently fought its expansion. But while the dominant fight in Washington is typically about how we buy heath care, we rarely talk about the health care that exists to be bought. After all, in the future, progressives don't just want everyone to have an insurance card; they want that card to provide access to a world of treatments that liberates patients from unnecessary disease and debilitating pain. Technology expands the value of universalist policies.

"There is widespread agreement that scientific research and invention are the key driver of economic growth and improvements in human well-being," the Dartmouth economist Heidi Williams said. "But I think researchers do a poor job of communicating its importance to lawmakers, and lawmakers do a poor job of making science policy a major focus."

## The Great Science Slowdown

By some measures, the business of academia in America has never been bigger. In the 1930s, there were just 80,000 professors across all US universities; today there are more than 1.5 million. The search for knowledge has never been easier. We have more information about our genes, our proteins, and our cells, along with tools to make it easier to search, copy, paste, and organize the data and to run statistical analyses. It is easier than ever to collaborate across large distances on the internet. Surely it seems like, if we value science, our society has done everything right.

But, mysteriously, progress in many fields seems to be slowing down. In April 2020, just as the world was convulsing from the pandemic, a group of economists from Stanford and MIT published a study with

the irresistible title "Are Ideas Getting Harder to Find?' Their answer was an unambiguous yes. From medicine to agriculture, basic science is becoming less productive.

How can we possibly account for this puzzle: more scientists, more money, more years of education, more knowledge, more technology, and more papers—but, in many fields, slower progress? In 2008, the Northwestern economist Benjamin Jones proposed an elegant theory to explain the slowdown across science. It starts with two simple observations. First, nobody is born an expert. Second, total expertise in any given domain of knowledge—say, physics or chemistry, —grows over time, as we unravel the mysteries of the natural world. As we build expertise in a field like medicine, it's a bit like picking the lowest-hanging fruit from a tree. The more low-hanging fruit we pick, the higher in the tree we have to climb to pick additional fruit, and the more resources we need to do it. Jones called this escalating challenge "the burden of knowledge."

If keeping up the pace of scientific progress demands more resources, it points to a clear solution: recruit more scientists and spend more money. As a share of the economy, government-funded R&D has declined in the last sixty years. If scientific spending is fundamental to economic growth, this suggests that the US has hugely underinvested in basic research.

Meanwhile, recruiting brilliant immigrants to the US has for decades been the "secret ingredient" to America's success in science and technology. Some of the greatest achievements in US history including the Manhattan Project and the Apollo program are impossible to imagine without the contribution of people who were born abroad. Despite making up only about 14 percent of the US population, immigrants accounted for 23 percent of US patents from 1990 to 2016, 38 percent of US Nobel Prizes in chemistry, medicine, and physics from 2000 to 2023, and more than half of the billion-dollar US startups in the last twenty years.

Today, however, this talent pipeline is at risk. As immigration politics has been subsumed by debates about border control policies, the US has quietly made it harder for the typical foreign-born student to stay. America has allowed wait times for green cards to lengthen, while the number of applicants stuck in immigration backlogs has gotten so large that some talented immigrants have stopped waiting and moved away. Since 2007, the share of international students on academic visas applying to stay and work in the US has declined by more than a third.

More money and more scientists might help the US fight the knowledge burden. But in the same way that throwing housing vouchers into a market with insufficient supply raises home prices, throwing more money into a flawed science system might exacerbate its problems. American science funding has become biased against young scientists and risky ideas. What is most obvious is that American science is getting older. In the early 1900s, some of the most famous scientists—Einstein, Heisenberg, Schrodinger—did their breakthrough work in their twenties and thirties. Indeed, their youth may have been critical to their paradigm-busting genius. But these days the twentysomething scientist is an endangered species. The share of NIH-funded scientists who are thirty-five years old or younger declined from 22 percent in 1980 to less than 2 percent by the 2010s.

American science also seems to produce far too many papers that don't create new knowledge while overlooking researchers with promising new ideas. A 2023 study titled "Papers and Patents Are Becoming Less Disruptive Over Time" found that any given paper today is much less likely to become influential than a paper from the same field decades ago. This could be because too many papers are

essentially worthless. Or it could mean that scientists feel pressured to herd around the same few safe ideas that will keep them in good standing with their peers.

## The Idea Factories

In October 1957, a strange-looking device breached our planet's atmosphere and entered space. It resembled a kind of robotic daddy longlegs, with four spindly antennas connected to a spherical head made of polished metal. This space-age insectoid didn't live a long life, By January, it had fallen back to earth and incinerated. But in its three-month lifespan, the little machine changed the world. Sputnik, as it was called, was the first man-made object to orbit the earth. And to the great astonishment of many Americans, it was not launched by the United States but rather by its chief rival, the Soviet Union.

Sputnik ignited the space race, pushing the US to invest in propulsion and rocket technology that would eventually put an American flag on the moon and leave boot prints in the moon dust. It also sparked an innovation race for terrestrial inventions. In 1958, vowing that the US should never again be on the other side of a technological surprise, the Department of Defense established the Defense Advanced Research Projects Agency, or DARPA, which produced a gaudy record of ingenuity. The internet, GPS, personal computers, and self-driving vehicles all trace their roots back to DARPA-funded research. What started as a bureaucratic reaction to a Soviet satellite became the seeds of the communications revolution that would shape the next sixty-five years of American innovation.

The science and tech community has fervently debated what makes DARPA so special. With an annual budget of \$4 billion—about one-tenth of the NIH—DARPA punches well above its weight. One answer is that DARPA empowers domain experts called program managers to pay scientists and technologists to work together on projects of their own design. "There's no question to me that program managers— especially program managers with vision, creativity, and independence—are the most important part of DARPA," said Erica R. H. Fuchs, a professor of engineering and public policy at Carnegie Mellon. Unlike traditional scientists, these program managers do not face peer review. They can make big counterintuitive bets, are not punished for failure, and are not hauled before congressional committees for supporting weird-sounding projects.

If the DARPA model holds a lesson, it is that the agency works because it empowers program managers to pursue their most radical ideas with an open-ended budget and vast connections throughout science and industry. By contrast, as John Doench of the Broad Institute said, many scientists seeking funding today are disempowered to the point of infantilization. Their time is colonized by paperwork, and their ambition is pinched by grantsmanship. The American innovation system would benefit from trusting individuals more and bureaucracies less.

DARPA isn't the only midcentury factory of innovation that we can turn to for inspiration. Bell Labs was established in 1925 as the research and development arm of AT&T and Western Electric. Between the 1930s and 1950s, it became one of the most prolific research institutions in the world, responsible for a staggering list of accomplishments. In 1947, its engineers build the first transistor, which enabled the development of smaller and more efficient electronic devices. In 1954, Bell Labs demonstrated the first practical silicon solar cell, opening the door to solar energy as a viable power source. In 1958, the lab published a paper outlining the principles of the laser.

While DARPA and Bell Labs are both considered icons of innovation, their successes took place in very different contexts. DARPA emerged in a period of geopolitical insecurity. Bell Labs thrived in an environment of extraordinary security. As a state-sanctioned monopoly, AT&T could invest in every

facet of telecommunications science without concern for short-term profits, which gave its scientists and engineers the freedom to pursue ambitious projects over decades. This long-term security was essential for many of Bell Lab's most important technological advances, such as fiber optics and electronic switching, which took decades to develop.

"If Bell Labs had a formula, it was to hire the smartest people, give them space and time to work, and make sure that they talk to each other," Jon Gertner, author of *The Idea Factory* said. Like DARPA, the program thrived by identifying brilliant people who wouldn't normally work together and by giving them freedom to pursue their most ambitious ideas together. This blending of minds got scientists to think about their work in new ways.

Our institutions shape the way we think, and new institutions can make new kinds of thinking possible. For decades, too many university researchers applying for NIH funding have constrained their own curiosity. The perceived biases of the NIH became their own biases. By contrast, the best DARPA program managers see the world as a set of puzzle pieces to snap together in the creation of a new initiative. America's innovation system still relies on agencies and habits that were developed in the middle of the twentieth century. Decades have now passed. The world has changed, and today's scientific challenges are getting harder. So, how do we build new centers that are as transformative in our time as DARPA was in its own? Where are the brand-new government research labs for the 2020s? Such institutions are not guaranteed to succeed, but they represent the sort of risk-taking that American science needs more of.

Generations from now, inventions that we can scarcely imagine will feel core to modern life: all-disease saliva and blood tests, vaccines that wipe out whole classes of virus and disease, materials stronger than steel and lighter than air, infinite clean energy from fusion reactors. If these things are possible in the realm of physical reality, then they are possible to discover; and if they can be discovered in a century, they can be discovered in a decade, or in a year. These achievements will require a level of risk-taking and ambition that we are too effective at snuffing out. For all the wonders of American invention, it is astonishing to realize that we don't know for sure how the process of discovery actually works.

## **CHAPTER 5—DEPLOY**

## The Eureka Myth

When a good idea is born, or when the first prototype of an invention is created, we should celebrate its potential to change the world. But progress is more about implementation than it is about invention. An idea going from nonexistence to existence—from zero to one—introduces the possibility of change. But the way that individuals, companies, and governments take an idea from one to one billion is the story of how the world actually changes.

And it doesn't always change, even after a truly brilliant discovery. The ten-thousand-year of human civilization is mostly the story of things not getting better: diseases not being cured, freedoms not being extended, truths not being transmitted, technology not delivering on its promises. Progress is our escape from the status quo of suffering, our ejection seat from history—it is the less common story of how our inventions and institutions reduce disease, poverty, pain, and violence while expanding freedom, happiness, and empowerment. It's a story that has been at risk of grinding to a halt in the United States.

The US has thrown tens of billions of dollars annually into scientific discovery. But it hasn't brought as much progress as we'd expect. As we explained in the previous chapter, we have haphazardly burdened the scientific process with the same flavor of procedural kludge that has slowed down other critical parts of the economy. What's more, as we'll explain in this chapter, we have gotten worse at translating our inventions into domestic industries. To borrow some familiar language, it's not just that ideas are getting harder to find. The problem is also that new ideas are getting harder to use.

What went wrong? There are many answers, but one is that we have become too enthralled by the eureka myth and, more to the point, too inattentive to all the things that must follow a eureka moment. The US has more Nobel Prizes for science than the UK, Germany, France, Japan, Canada, and Austria combined. But if there were a Nobel Prize for the domestic deployment of technology—even technology that we invented—our legacy wouldn't be so sterling.

Politics should take technology more seriously. Innovation can make impossible problems possible to solve, and policy can make impossible technologies possible to create. The fundamental link between the two is not at the core of the Democratic or Republican agenda. Instead, we are stuck between a progressive movement that is too afraid of growth and a conservative movement that is allergic to government intervention.

## **Building What We Invent**

Making technology useful often means building it at scale. For many decades, however, US policy hasn't taken this lesson as seriously as it should. After World War II, the American approach to innovation has been to throw money at the initial eureka moment, sporadically support its development, and then watch idly as the technological frontier moves to other countries. For too long, America has fallen for the eureka myth and its attending faith in markets alone to solve the problem of scaling new technology. Progress is now, as it has always been, about the combination of invention and implementation. John Arnold, the co-chair of Arnold Ventures philanthropy, put it bluntly: "America has the ability to invent. China has the ability to build. The first country that can figure out how to do both will be the superpower."

The smartest question, then, is not <u>if</u> the government should intervene in markets, but <u>how</u> to do so. Nearly one hundred years ago, the economist John Maynard Keynes offered an elegant answer in his 1926 book *The End of Laissez-Faire*. "The important thing for government is not to do things which individuals are doing already, and to do them a little better or a little worse; but to do those things which at present are not done at all," he wrote. If technological progress requires money or resources that are beyond the scope of any one company, and government does nothing, progress slows down. The highest purpose of a pro-invention government is to make possible what would otherwise be impossible. Government should have a vision of the future, and within that vision it can create space for companies to do what they otherwise cannot, to make possible what is otherwise impossible.

# **Focus Is a Choice**

A regrettable feature of history is that progress often requires the focusing mechanism of disaster. The Federal Reserve was created only after a string of financial disasters, culminating in the Panic of 1907. The tragedy of the Great Depression allowed for the boldness of the New Deal. The Nazi domination of Europe galvanized creation of the Office of Scientific Research and Development. The Soviet Union's successful launch of Sputnik in 1957 moved Washington to create DARPA, which contributed to

invention of the personal computer, GPS, and drone technology. It also pushed the US to expand NASA and eventually launch the Apollo program. Again and again in American history, we seem to be at our very best when things are at their very worst.

This is a depressing thought. One interpretation might be that we are domed to sleepwalk through history until a catastrophe jolts us into action. But there is comfort in the connection between perceived crisis and urgency. If crisis is the ultimate push-and-pull mechanism—both galvanizing action and rewarding success—we must remember that it is always up to us to decide what counts as a crisis.

The US could announce a Warp Speed for heart disease tomorrow, on the theory that the leading cause of death in America is a national crisis. We could announce a full emergency review of federal and local permitting rules for clean energy construction, with the rationale that climate change is a crisis. The US could decide that the major diseases afflicting developing countries, such as malaria, deserve a concerted global coalition to eradicate them within a decade. Even in times without world wars and pandemics, crises abound. Turning them into national priorities is, and has always been, a political choice.

In the last half century, we have made several choices about invention and implementation and science and technology. We have chosen to create a system that rewards caution and punishes outsider thinking and risk in scientific research. We have chosen to embrace a political economy that encourages offshoring the development of American inventions that are key to our national security and flourishing. None of this was inevitable. These policies are the fruits of human decisions.

The serendipity of science is one reason why it's so important to untether research from politics and allow scientists to seek the truth freely without spending half their time deluged by bureaucratic paperwork and paralyzed by fear that their ideas might diverge from the moment's conventional wisdom.

Building, deployment, and implementation require deliberate acts, laws, and policies. They require choices. For too long, the US has been enthralled by the eureka myth—the idea that flashes of individual genius are the most important moments in the history of technology. This mind-set governed our approach to economic growth in the last forty years. In the next generation, the US needs a plan to build what it invents.

## **CONCLUSION—TOWARD ABUNDANCE**

Politics is a way of organizing conflict, and so our attention is naturally drawn to divisions. That is particularly true now, when the divisions are so fundamental. The Democratic and Republican parties do not merely disagree over the details of tax policy. They disagree over the legitimacy of elections, of institutions, of the structure of American government. They are split in their views of speech and history and decency and truth. Distinguished scholars write books considering the nearness of another civil war and wondering whether fascism is resurgent on American soil. The polarization of the 1990s feels quaint against the deep-seated conflicts of the 2020s. These divisions are real. They are dangerous. But behind them is the murky outline of something very different. Perhaps a path out of the morass we're. A new political order.

The term "political order" is the coinage of Gary Gerstle, an American historian and a professor at Cambridge University. Many historians focus on how Republicans and Democrats have fought and

disagreed over the years. Gerstle's work focuses instead on how hidden points of consensus between the parties create distinctive periods of history, which he calls political orders. He defines a political order as "a constellation of ideologies, policies, and constituencies that shape American politics in ways that endure beyond the two-, four-, and six-year election cycles." Two such constellations have extended across the last hundred years of American history, according to Gerstle. The New Deal order rose in the 1930s and collapsed in the 1970s. The neoliberal order rose in the 1970s and declined in the 2010s.

The New Deal order brought the agreement that the federal government must take an active role in managing the American economy and protecting workers. Begun under Franklin Roosevelt, a Democrat, it continued under Dwight Eisenhower, a Republican, who endorsed its basic framework. Rather than rail against big government programs, Eisenhower signed legislation to create the Interstate Highway System. Rather than bemoan welfare, he celebrated its growth. "We want a broader and stronger system of unemployment insurance," Eisenhower said, sounding much more like a Democrat from the 2020s than a Republican of the 1980s.

Why did Eisenhower and the GOP of his era acquiesce to the New Deal order? "It had far less to do with Eisenhower the man than with the geopolitical situation in which the new president and his party had been thrust," Gerstle writes. The Cold War wasn't just an arms race or a military conflict with the Soviet Union. It was a competition over whose philosophy of government would produce the best outcomes for people. Eisenhower needed to prove that "he could take better care of his ordinary citizens than the leaders of Soviet communism could provide for theirs." That meant embracing the policies of Roosevelt and the Democrats, who had succeeded in raising America's living standards after the Great Depression.

In the 19070s, the New Deal order collapsed beneath the weight of crises it could not contain—stagflation and the Vietnam War, most notably. But there was more to it than that. Abroad, the horrors and absurdities of communism became clearer. At home, millions of oppressed Americans marched, sat-in, and organized for rights. A change in values took hold. The promise of collective action lost its luster. Nurturing the dignity and genius of the individual, in the face of regimes that seemed to squelch both, became the reigning ethos.

Policy is downstream of values, and by the 1970s, Washington was a changed place. Jimmy Carter, a Democrat, deregulated large parts of the economy, including the trucking and airline industries. In the 1990s, Ronald Reagan slashed the high tax rates that Harry Truman had imposed and that Dwight Eisenhower had kept. Much of even the liberal legislation of the age—including the major environmental bills we've discussed throughout this book—worked by centering the individual, making it easier for Americans to slow the government by suing it. The Soviet Union collapsed, proving the supremacy of the American model. Bill Clinton emerged as the Eisenhower to Reagan's FDR, cementing the principles of a once-radical presidency into a political order. Clinton said the era of big government was over, and he proved it: he did what Reagan had only promised to do and slashed the federal budget while deregulating the financial and IT sectors.

When the spell of a political order breaks, ideas once regarded as implausible and unacceptable become possible and even inevitable. This happened in the 1930s, when the Great Depression created space for the rise of Roosevelt's social-democrat collectivism. It happened in the 1970s, when an upswing of individualism changed the way people thought about taxing and spending, regulating the economy, and managing our relationship to the environment. It may be happening again.

We are in a rare period in American history, when the decline of one political order makes space for another. The crack-up was decades in the making. It started with the Great Recession, which shattered a broad belief in deregulated markets. The climate crisis revealed how much the profit motive missed. The aftermath of normalizing trade with China proved that the prophets of free trade understood neither China nor America.

Through the 2010s, a slow economic recovery fueled public resentment of inequality, and an affordability crisis gathered steam. In 2020, the pandemic obliterated many Americans' trust in government, or what was left of it. And between 2021 and 2024, inflation brought national attention to our interlocking crises of scarcity, supply, and unaffordability. For years, the boundaries of American politics had felt fixed, even settled. But now they are falling.

"For a political order to triumph, it must have a narrative, a story it tells about the good life," Gerstle says. Today's politics are suffused with cynicism and pessimism about government because "a way of living sold to us as good and achievable is no longer good, or no longer achievable." In 2016, the rise of Bernie Sanders on the left and Donald Trump on the right revealed how many Americans had stopped believing that the life they had been promised was achievable. What both the socialist left and the populist-authoritarian right understood was that the story that had been told by the establishments of both parties, the story that had kept their movements consigned to the margins, had come to its end.

Transitions between orders are provoked by crises that can feel like derangements. As the tectonic plates of American politics shift, once-settled questions reopen, and once-unthinkable answers vie to become a new consensus. One way of understanding the era we're in is as the messy interregnum between political orders; a molten moment when old institutions are failing, traditional elites are flailing, and the public is casting about for a politics that feels like it is of today rather than of yesterday.

## A Fork in the Road: Scarcity or Abundance?

This may be the moment for a politics of abundance. But the arc of history does not always bend toward our beliefs. There is no guarantee that the next political order will align with our values. Its opposite is just as likely.

The politics of scarcity can be seductive. When there is not enough to go around, we look with suspicion on anyone who might take what we have. Right-wing populism seeks power by closing doors, halting change, and venerating the businesses and dominance hierarchies of the past. Scarcity is its handmaiden. So too is the sense that governments today are weak and corrupt and, therefore, that strongmen are needed to see the world clearly and deliver on democracy's failed promises.

Liberals might detest the language that Trump and Vance use to demonize immigrants. But blue America practices its own version of scarcity politics. Zoning regulations in liberal states and cities that restrict housing supply have increased costs far more than the recent influx of immigrants. These restrictions exacerbated an affordability crisis that was harnessed by the right. Thus, the mistakes of liberals contributed to the rise of illiberalism. "The tendency to turn against outsiders in the face of critical shortages is not restricted to a basket of deplorables," Jerusalem Demsas wrote in the *Atlantic*. "It's in all of us. Most people see others as a threat to their resources, whether it's immigrants coming

for housing, yuppies pushing up rents, other students taking slots at all the good schools, or just more people on the road, adding to congestion."

As the chronic housing shortage and affordability crisis destabilized the reigning political order internally, America's greatest external threat has been the rise of China, a superpower that many now fear and even envy. How could they build so much as we struggle to complete even simple projects? As sluggishness and process came to feel like the defining features of American governance, it became common, even at the heights of American power, to hear China's speed and capacity spoke of wistfully.

China has been the great shadow pressure on American politics over the past two decades. The confidence brought by the fall of the Soviet Union has been replaced by a fear that China has learned what we've forgotten. In Washington, a consensus began to crumble. Republicans and Democrats alike had been too complacent about what China's rise meant for American workers and too certain that a richer China would embrace American values. But the blindness was not just about what China was capable of. It was also about what America was losing the capacity to do.

To the surprise of many, Joe Biden, a creature of the Washington establishment as has ever held the presidency, accepted many of Trump's premises. He kept Trump's anti-China tariffs and added more. He barred the export of key technologies to China. Biden even seemed to accept the way that Trump saw China's manufacturing supremacy as an indictment of the American spirit. "Somewhere along the way, we stopped investing in ourselves," Biden said in 2021. "We stopped investing in our people. And we've risked losing our edge as a nation. I don't even think it was conscious, but that's just what happened. And China and the rest of the world are moving to catch up and, in some cases, in certain areas, move ahead."

In his four years in office, Biden put his name to several laws that broke with the anti-build trend of modern politics. With the bipartisan infrastructure bill, he signed the largest authorization of infrastructure spending since the Interstate Highway program of the 1950s. With the CHIPS and Science Act, he announced America's intention to invest billions of dollars in scientific discovery and invention—and tens of billions more to build advanced computer chips within our borders. With the Inflation Reduction Act, the US passed the largest clean energy bill in its history, with record investments in electric vehicles, batteries, solar and wind manufacturing, and next-generation climate technology, such as carbon-removal plants. The core of this agenda—subsidies for computer chips and clean energy, historic investments in infrastructure—used the spur of China to get America building and manufacturing at home again. As in the 1930s, and again in the 1970s, external threats and internal crises are converging and making possible a new kind of politics.