Abundance

ALSO BY EZRA KLEIN

Why We're Polarized

ALSO BY DEREK THOMPSON

Hit Makers:
The Science of Popularity in an Age of Distraction

On Work:
Money, Meaning, Identity

Abundance

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and Derek Thompson

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Authors' Note

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Abundance

Introduction
Beyond Scarcity

YOU OPEN YOUR EYES AT DAWN AND TURN IN THE COOL BEDSHEETS. A few feet above your head, affixed to the top of the roof, a layer of solar panels blinks in the morning sun. Their power mixes with electricity pulled from several clean energy sources—towering wind turbines to the east, small nuclear power plants to the north, deep geothermal wells to the south. Forty years ago, your parents cooled their bedrooms with joules dredged out of coal mines and oil pits. They mined rocks and burned them, coating their lungs in the byproducts. They encased their world—your world—in a chemical heat trap. Today, that seems barbaric. You live in a cocoon of energy so clean it barely leaves a carbon trace and so cheap you can scarcely find it on your monthly bill.

The year is 2050.

You walk to the kitchen to turn on the sink. Water from the ocean pours out of the faucet. It's fresh and clear, piped from a desalination plant. These facilities use microbial membranes to squeeze out the

ocean salt. Today, they provide more than half of the country's fresh used water. Previously overtaxed rivers, such as the Colorado, have surged back now that we don't rely on them to irrigate our farms and fill our coffee mugs. In Phoenix and Las Vegas, previously parched cities are erupting in green foliage.

You open the refrigerator. In the fruit and vegetable drawer are apples, tomatoes, and an eggplant, shipped from the nearest farm, mere miles away. These crops don't grow horizontally, across fields. They grow vertically on tiered shelves inside a tall greenhouse. Banks of LED lights deliver the photons the plants need in precisely timed increments. These skyscraper farms spare countless acres for forests and parks. As for the chicken and beef, much of it comes from cellular meat facilities, which grow animal cells to make chicken breasts and rib eye steaks—no live animals needed, which means no confinement and slaughter. Once prohibitively expensive, cultivated meat scaled with the help of plentiful electricity. When your parents were young, nearly 25 percent of all global land was used to raise livestock for human consumption. That is unimaginable now. Much of that land has rewilded.

Out the window and across the street, an autonomous drone is dropping off the latest shipment of star pills. Several years ago, daily medications that reduced overeating, cured addiction, and slowed cellular aging were considered miracle drugs for the rich, especially when we discovered that key molecules were best synthesized in the zero-gravity conditions of space. But these days, automated factories thrum in low orbit. Cheap rocketry conveys the medicine down to earth, where it's saved millions of lives and billions of healthy years.

Outside, the air is clean and humming with the purr of electric machines all around you. Electric cars and trucks glide down the road, quiet as a light breeze and mostly self-driving. Children and

adult commuters follow on electric bikes and scooters, some personally owned and some belonging to subscription networks run by the city. Another last-mile delivery drone descends from canopy level, pauses over a neighbor's yard like a hummingbird, and drops off a package. These e-bots now deliver a sizable chunk of online orders, reducing the drudgery of much human delivery work.

Your micro-earpiece pings: a voice text from a friend and his family, on their way to the airport for another weekend vacation. Across the economy, the combination of artificial intelligence, labor rights, and economic reforms have reduced poverty and shortened the workweek. Thanks to higher productivity from AI, most people can complete what used to be a full week of work in a few days, which has expanded the number of holidays, long weekends, and vacations. Less work has not meant less pay. AI is built on the collective knowledge of humanity, and so its profits are shared. Your friends are flying from New York to London. The trip will take them just over two hours. Modern jetliners now routinely reach Mach 2—twice the speed of sound—using a mix of traditional and green synthetic fuels that release far less carbon into the air.

The world has changed. Not just the virtual world, that dance of pixels on our screens. The physical world, too: its houses, its energy, its infrastructure, its medicines, its hard tech. How different this era is from the opening decades of the twenty-first century, which unspooled a string of braided crises. A housing crisis. A financial crisis. A pandemic. A climate crisis. Political crises. For years, we accepted homelessness and poverty and untreated disease and declining life expectancy. For years, we knew what we needed to build to alleviate the scarcities so many faced and create the opportunities so many wanted, and we simply didn't build it. For years, we failed to invent and implement technology that would make the world cleaner,

healthier, and richer. For years, we constrained our ability to solve the most important problems.

Why?

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.

We say that we want to save the planet from climate change. But in practice, many Americans are dead set against the clean energy revolution, with even liberal states shutting down zero-carbon nuclear plants and protesting solar power projects. We say that housing is a human right. But our richest cities have made it excruciatingly difficult to build new homes. We say we want better health care, better medicine, and more cures for terrible diseases. But we tolerate a system of research, funding, and regulation that pulls scientists away from their most promising work, denying millions of people the discoveries that might extend or improve their lives.

Sometimes these blockages reflect differences of beliefs or interests. A thousand square acres of solar panels can be a godsend to the city they power and a blight to the community they abut. A seven-story affordable apartment building in San Francisco means homes for those who would otherwise live hours from their work

even as it blocks views and clogs parking for those who lived there before.

Other 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

At the heart of economics is supply and demand. Supply is how much there is of something. Demand is how much of that thing

people want. Economies balance when supply and demand meet and derange when they part. Too much demand chasing too little supply causes shortages, price increases, and rationing. Too much supply pooling around too little demand brings gluts, layoffs, and depressions. Supply and demand are linked. At least, they are in the real world. In our politics, they have been cleaved. Democrats and Republicans divvied them up.

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.[1] This led, in part, to decades of Republican promises that cutting taxes on the rich would encourage the nation's dispirited John Galts 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, as George H. W. Bush said, "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. It's as if the nonsense of phrenology made it sordid for doctors to treat disorders of the brain.

But the conservative agenda did something else, too: it cast production as a function of unfettered markets. Supply-side economics was about getting the government out of the private sector's way. Cutting taxes so people would work more. Cutting regulations so companies would produce more. But what of the places where society needed a supply of something that the market could not, or would not, provide on its own?

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. When Americans in 1978 heard that "government cannot solve our problems, it can't set our goals, it cannot define our vision," the words didn't come from Ronald Reagan. They came from President Jimmy Carter, a Democrat, in his State of the Union address.[2] This was a preview of things to come. In 1996, the next Democratic president, Bill Clinton, announced that "the era of big government is over."[3] The notion that the US government cannot solve America's problems was not unilaterally produced by Reagan and the GOP. It was coproduced by both parties and reinforced by their leaders.

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 buy 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. Countless taxpayer dollars were spent on health insurance, housing vouchers, and infrastructure without an equally energetic focus—sometimes without any focus at all—on what all that money was actually buying and building.

This reflected a faith in the market that was, in its way, no less touching than that offered by 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. Cries that government was stifling production or innovation typically fell on deaf ears. A blind spot emerged. Political movements consider solutions where they know to look for problems. Democrats learned to look for opportunities to subsidize. They gave little thought to the difficulties of production.

The problem is that if you subsidize demand for something that is scarce, you'll raise prices or force rationing.[4] 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 pricey appointments. This leads to the standard Republican riposte: *Just don't subsidize demand*. 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. If virtual-reality headsets are expensive, well, so be it. It is not a public policy problem if most households cannot afford a VR headset. 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 like building a ladder to try to reach an elevator that is racing ever upward.

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.[5] 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.[6] In 1970, the average annual 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.[7] Child care for an infant and a four-year-old costs, on average, $36,008 in Massachusetts, $28,420 in California, and $28,338 in Minnesota.[8]

An uncanny economy has emerged in which a secure, middle-class lifestyle receded for many, but the material trappings of middle-class success became affordable to most. In the 1960s, it was possible to attend a four-year college debt-free but impossible to purchase a flat-screen television. By the 2020s, the reality was close to the reverse.

We papered over the affordability crisis[9] with low prices for consumer goods, soaring asset values that kept richer Americans happy, and mountains of debt: housing debt and student-loan debt and medical debt that kept the working class semi-afloat. This makes some sense of the last few decades of our economic debates: a crisis of housing debt, a huge new program to subsidize health insurance costs, debates about making college free and forgiving student loans, endless rounds of tax cuts, proposal after proposal for the government to pay for child care and preschool, a bubble in crypto that attracted so many investors in part because it seemed like a rocket ship into wealth that anyone could ride.

But then came inflation. For years, the central problem in the American economy was demand. We both reported on the financial crisis, and every conversation with Obama administration economists was about how to persuade employers to hire and consumers

to spend. The 2009 stimulus was too small, and while we avoided a second Great Depression, we sank into an achingly slow recovery. Democrats carried those lessons into the COVID pandemic. They met the crisis with overwhelming fiscal force, joining with the Trump administration to pass the $2.2 trillion CARES Act and then adding the $1.9 trillion American Rescue Plan Act and the trillion-dollar infrastructure bill on top. Democrats made clear that they preferred the risks of a hot economy, like inflation, to the threat of mass joblessness.

They succeeded. But solving the crisis of the pandemic economy created a new crisis for the post-pandemic economy: too much demand. Supply chains that had been battered by the pandemic and Russia's invasion of Ukraine began to break. Inflation returned with a vengeance. The conversations we had with the Biden administration's economists were different from the conversations with the Obama administration's economists, even when they were the same people. They needed companies to make more goods and make them faster. They needed more chips so there could be more cars and computers. They needed ports to clear more shipments and Pfizer to make more antiviral pills and shipping companies to hire more truckers and schools to upgrade their ventilation systems. They needed more supply and, if they could not get that, less demand.

"If car prices are too high right now, there are two solutions," Biden said. "You increase the supply of cars by making more of them, or you reduce demand for cars by making Americans poorer. That's the choice."[10]

By 2024, the surge in prices had slowed. Inflation, as economists measure it, had eased. But the broader affordability crisis that predated the bout of inflation persisted. The fear that we did not or would not have enough of what we needed settled heavily on politics.

Policymakers began to rethink globalization, warning that we could not depend on critical exports from China if conflict or crisis came between our nations. Governors and mayors focused their attention on housing supply as homeless encampments spread across their streets. The Inflation Reduction Act began the work of building the green infrastructure necessary to migrate our economy to clean energy. The CHIPS and Science Act dangled tens of billions of dollars to restart semiconductor manufacturing in America. Whether these policies will work remains to be seen. That these policies represent a break with recent decades of American politics is undeniable.

Politics is not just about the problems we have. It's about the problems we see. 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 cliché 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.

Dig within the equations that power modern economics and

you'll find that growth comes from one of a few places. An economy can grow because it adds more people. It can grow because it adds more land or natural resources. But 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 new processes must be encoded into new technologies. All this is grouped under the sterile label of productivity: 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.

Imagine going to sleep in 1875 in New York City and waking up thirty years later. As you shut your eyes, there is no electric lighting, Coca-Cola, basketball, or aspirin. There are no cars or "sneakers." The tallest building in Manhattan is a church. When you wake up in 1905, the city has been remade with towering steel-skeleton buildings called "skyscrapers." The streets are filled with novelty: automobiles powered by new internal combustion engines, people riding bicycles in rubber-soled shoes—all recent innovations. The Sears catalog, the cardboard box, and aspirin are new arrivals. People have enjoyed their first sip of Coca-Cola and their first bite of what we now call an American hamburger. The Wright brothers have flown the first airplane. When you passed into slumber, nobody had taken a picture with a Kodak camera or used a machine that made motion pictures, or bought a device to play recorded music. By 1905, we have the first commercial versions of all three—the simple box camera, the cinematograph, and the phonograph.

Now imagine dozing off for another thirty-year nap between 1990 and 2020. You would wonder at the dazzling ingenuity that we funneled into our smartphones and computers. But the physical

world would feel much the same. This is reflected in the productivity statistics, which record a slowing of change as the twentieth century wore on. This is not just a problem for our economy. It is a crisis for our politics. 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 had.

Our era features too little utopian thinking, but one worthy exception is Aaron Bastani's *Fully Automated Luxury Communism*, a leftist tract that puts the technologies in development right now—artificial intelligence, renewable energy, asteroid mining, plant- and cell-based meats, and gene editing—at the center of a post-work, post-scarcity vision.[11] "What if everything could change?" he asks. "What if, more than simply meeting the great challenges of our time—from climate change to inequality and ageing—we went far beyond them, putting today's problems behind us like we did before with large predators and, for the most part, illness? What if, rather than having no sense of a different future, we decided history hadn't actually begun?"[12]

It is routine in politics to imagine a just present and work backward to the social insurance programs that would get us there. It is equally important to imagine a just—even a delightful—future and work backward to the technological advances that would hasten its arrival. Bastani's vision is bracing because it insists that those of us who believe in a fairer, gentler, more sustainable world have a stake in bringing forward the technologies that will make that world possible. That is a political question as much as a technological one: those same technologies could become accelerators of inequality and despair if they're not embedded in just policies and institutions. What Bastani sees is that the world we want requires

more than redistribution. We aspire to more than parceling out the present.

New technologies create new possibilities and allow us to solve once-impossible problems. In a world where many of the countries with the largest greenhouse gas emissions are middle-income nations, like China and India,[13] the only way for humanity to limit climate change while fighting poverty is to invent our way to clean energy that is plentiful and cheap and then spend enough to deploy it. The only reason we have even the barest hope of avoiding catastrophic warming is that the cost of solar power has fallen by 89 percent and onshore wind costs by almost 70 percent in ten years.[14] California's decision to ban the sale of new gas-powered cars after 2035[15] would be unthinkable without the rapid advances in battery technology.

Much that we need for the world we want we already know how to build. But much that we need for the world we want still needs to be invented and improved. Green hydrogen and cement. Nuclear fusion. Treatments for the terminal cancers that overwhelm today's therapies and the shadowy autoimmune diseases that baffle today's doctors. AI that molds itself to the needs of children who learn and think differently. Markets will, we hope, 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.

But let us not be naïve. It is childish to declare government the problem. It is just as childish to declare government the solution. Government can be either the problem or the solution, and it is often both. By some counts, nuclear power is safer than wind

and cleaner than solar. It is inarguably safer than burning coal and petrol. And yet the US—facing a crisis of global warming—has almost stopped building nuclear power reactors and plants entirely. Between 1973 and 2024, the country started and finished only three new nuclear reactors. And it has shut down more nuclear plants than it's opened in most of our lifetimes.[16] That is not a failure of the private market to responsibly bear risk but of the federal government to properly weigh risk.

To take technology seriously as a force for change is to take it seriously as infused with values and, yes, politics. The relationship is bidirectional. It is not just that the politics we have will affect the technologies we develop. The technologies we develop will shape the politics we come to have. A world where renewable energy is plentiful and cheap permits a politics that is different than a world where it is scarce and pricey. A world where modular construction has brought down the cost of building opens different possibilities for state and local budgets.

In 1985, the great technology critic Neil Postman wrote, "to be unaware that a technology comes equipped with a program for social change, to maintain that technology is neutral, to make the assumption that technology is always a friend to culture is, at this late hour, stupidity plain and simple."[17] The corollary is also true: to have no program to harness technology in service of social change is its own form of blindness.

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 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 broad left.

One reason for that is we don't see ourselves as effective messengers to the right. There are people seeking complementary reforms in that coalition, such as James Pethokoukis, author of *The Conservative Futurist*; the economist Tyler Cowen, who has called for a "State Capacity Libertarianism";[18] and the array of policy experts organized in the Niskanen Center. We wish them well.

But we focus on the left for larger reasons. This book is motivated in no small part by our belief that we need to decarbonize the global economy to head off the threat of climate change. To the extent that the right simply does not believe this—and in America, at least, it does not—it strikes us as naïve to describe the policies that would help Republicans build green infrastructure faster. It is folly to expect a coalition that does not share our goals to do the work to achieve them. It is more interesting to ask, as we will, why it is often easier to build renewable energy in red states than in blue states despite Republican opposition to the cause of climate change.

Then there is the anger any liberal should feel when looking at the states and cities 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.[19] Every statewide elected official in California is a Democrat.[20] 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: *Vote for us, and we will govern the country the way we govern California!* Instead, conservatives are able to say: *Vote for them, and they will govern the country the way they govern California!* 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.[21] As a result, it is losing hundreds of thousands of people every year to Texas and Arizona.[22] 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 Moe 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."[23]

In the 2024 election, Donald Trump won by shifting almost every part of America to the right. But the signal Democrats should fear most is that the shift was largest in blue states and blue cities—the

places where voters were most exposed to the day-to-day realities of liberal governance. Nearly every county in California moved toward Trump,[24] with Los Angeles County shifting eleven points toward the GOP. In and around the "Blue Wall" states, Philadelphia County shifted four points right, Wayne County (Detroit) shifted nine points right, and Cook County (Chicago) shifted eight points right. In the New York City metro area, New York County (Manhattan) shifted nine points right, Kings County (Brooklyn) shifted twelve points right, Queens County shifted twenty-one points right, and Bronx County shifted twenty-two points right.[25]

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.[26] 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.[27]

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.[28] 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. 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: abundance. 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.

The abundance we envision is not indiscriminate. It is not an omnidirectional moreness. We take inspiration from *People of Plenty*, the historian David M. Potter's brilliant 1954 book on how abundance shaped American thought and culture. "If abundance is to be properly understood, it must not be visualized in terms of a storehouse of fixed and universally recognizable assets, reposing on shelves until humanity, by a process of removal, strips all the shelves bare." Abundance, he said, is "a physical and cultural factor, involving the interplay between man, himself a geological force, and nature."[29]

The kind of abundance we seek differs from the kind of abundance our generation has seen. Potter wrote of the way America was being "reoriented to convert the producer's culture into a consumer's culture," and the rupture deepened in the decades that followed.[30] American policy has been focused on enacting what the historian Lizabeth Cohen calls "A Consumers' Republic."[31] It has

been remarkably successful. Catastrophically successful. We have a startling abundance of the goods that fill a house and a shortage of what's needed to build a good life. We call for a correction. We are interested in production more than consumption. We believe what we can build is more important than what we can buy.

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.

Let's begin.

1

Grow

"GO WEST, YOUNG MAN, GO WEST. THERE IS HEALTH IN THE COUNTRY, and room away from our crowds of idlers and imbeciles."

It is not clear if Horace Greeley, the newspaper editor and liberal presidential candidate, ever uttered the advice so famously attributed to him. What is clear is that he never followed it. Greeley was born in 1811 to a poor family in rural Amherst, New Hampshire.[1] He did not seek his fortune in the vast expanse of the American West. He made his way to New York City in 1831. It was there, in the teeming center of urban American life, that he built his wealth and his name, founding the *New-York Tribune*, winning election to Congress, and losing the presidency to Ulysses S. Grant.

The tension between Greeley's life and his legacy echoes that of the country he loved. Americans have long lionized the frontier. But our futures have largely been made in our cities. That we preferred the romance of the West to the math of the tenements is no new fact. "We often forget that the country as a whole offered

abundance in the form of fuel resources, mineral resources, bumper crops, industrial capacity, and the like, and provided the city as a locus for the transformation of this abundance into mobility," Potter reminded his readers in *People of Plenty*. "More Americans have changed their status by moving to the city than have done so by moving to the frontier."[2]

But this is not the story America told itself. The western expanse lingered in our mind as the true guarantor of our prosperity. Its settlement inflicted a kind of psychic trauma. Europe had cities, too. What America had was open—often stolen—land. Without that, wouldn't we, too, fall into stagnation? The fear held well into the twentieth century, emerging as a partial explanation for the Great Depression. Senator Lewis Schwellenbach, a New Dealer who would serve as President Harry Truman's secretary of labor, warned that "so long as we had an undeveloped West—new lands—new resources—new opportunities—we had no cause to worry."[3] But those days were over. Alvin Hansen, an influential economist, offered a more sophisticated version of this view. "We are more or less through the heavy task of equipping the continent with giant capital expenditures," he said.[4] The Depression, in this telling, heralded a new normal: a mature America could not expect the torrid growth of an expanding America.

But economies are not bounded by land. Ideas, and the technologies and companies and products they power, draw the outer borders of growth. The land that matters most is the land that aids in the fiery creation of the new. That land is in the heart of our cities, not at the edge of our settlements. And that land reveals the problem America faces now. A young family can still follow Horace Greeley's advice and find a cheap home in the rural West. What they typically cannot do is follow Horace Greeley's example and

build a life in Manhattan, where the median home now sells for $1.1 million. Or in San Francisco, where the median home sells for $1.3 million. Or in Los Angeles, where the asking price hovers around $1 million. Or in Seattle, where the median home is over $900,000. Or in Boston, where it's $830,000.

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. That is the story of the pricey, blue cities listed above. America used to be adept at building homes. In 1950, the US Census Bureau reported that America had added 8.5 million units in the previous decade, even with the interruption of a world war. "This is the greatest numerical growth on record," the authors announced.[5] But in the late 1970s, home construction started to fall behind the pace of population growth. New permits per capita declined in the 1980s and again in the 1990s. After the Great Recession, the housing market crashed, and home construction in the 2010s was obliterated. Today, the average number of dwellings per thousand people in the developed world is about 470, according to the OECD (Organisation for Economic Co-operation and Development). France and Italy have nearly 600. Japan and Germany have about 500. The US has only about 425.[6] Where did all the houses go? The answer is that they were never built at all.

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.[7] But that understates the problem. Housing costs are highest in the superstar cities that now drive the economy. Millions endure multi-hour commutes, or far worse jobs, in order to live in a far-flung city where they can afford a home. These choices are missed in raw estimates of

affordability, but they are a drag on the economy and an anchor on people's lives.[8]

To immerse yourself in analyses of American housing is to drown in data. But sometimes a number stands out. Here is one: The economist Ed Glaeser calculates that, prior to the 1980s, wages in New York City were unusually high even after correcting for the local cost of living.[9] The city had its problems, but most people would make more money by moving there. But that flipped. By the year 2000, moving to New York meant, for most people, taking an effective pay cut. That's not because paychecks have shrunk but because housing costs have risen. People now pay to live there; they aren't paid to live there.

"If New York City is a business, it isn't Wal-Mart, it isn't trying to be the lowest-priced product in the market," Michael Bloomberg, then mayor of New York City, said in 2003. "It's a high-end product, maybe even a luxury product."[10] New York was once where you went to make your fortune; it is now where you go to spend it.

Comments like Bloomberg's are common: if you cannot afford to live in the city, don't. Every so often, social media will convulse over some urbanite claiming they can't afford a middle-class lifestyle on $450,000 a year or some similarly princely sum. A common retort, even among self-styled progressives, is that they opted out of a middle-class lifestyle the moment they opted into an apartment on the Upper West Side. They chose to spend their money on an unattainable luxury, no different than if they'd purchased a speedboat or begun collecting pricey art.

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 so feared in the nineteenth: we are closing the American frontier.

Why Cities Matter Now More Than Ever

A capsule history of the past few centuries of transportation and communication technology might simply say this: we fought distance, and we won. In 1800, it took a month and a half to travel from New York City to Chicago. In 1830, it took three weeks. In 1850, it took two days. Today, a flight takes two to three hours. The telegraph and the telephone and email and teleconferencing made further mockery of space. It is now faster to FaceTime family across the continent than to rouse a neighbor across the street.

What are cities, at their most elemental? "Cities are the absence of physical space between people and companies," writes Ed Glaeser in *Triumph of the City*. They are the ancient answer to the difficulties of distance. But technology eroded their obvious advantages. Cities should have languished. They have, so often, been expected to languish. But they have stubbornly refused to accept their fate. Instead, they thrived, attaining a centrality in modernity they didn't possess even in antiquity. This, Glaeser writes, is "the central paradox of the modern metropolis—proximity has become ever more valuable as the cost of connecting across long distances has fallen."[11]

In *The New Geography of Jobs*, Enrico Moretti, an economist at the University of California at Berkeley, explains why. A century ago, the American economy produced primarily physical goods.

Now we make ideas and services. Some of those are encoded into physical goods, but even then, production often happens elsewhere. The iPhone made Apple, based in Cupertino, California, into the most valuable company in the world even though two-thirds of the phones are assembled in Foxconn factories in Shenzhen, China.[12] Microsoft and Alphabet mostly sell bits of intangible code. Tesla's value lies in the software and battery advances that have taken electric vehicles from the automotive equivalent of granola to the sleek, fast cars of the future.

We do not trade in the fallacious belief that manufacturing and innovation are distant domains. Taiwan started out manufacturing commodity semiconductor chips that Intel cared little about. Over time, its lead in production allowed it to develop advanced chips that American companies cannot yet replicate and that American policymakers fear falling into Chinese hands. America lost its primacy in semiconductor innovation because much is learned in the making of things—a theme to which we'll return. The economic frontier is where new discoveries allow for the making of new things that can be sold to ever more people.

The rising returns to innovation are a result of the same technological forces that should have decimated the city. As distance collapsed, markets expanded. It was once difficult to expand your business to another region. Shipping was costly, and communication was challenging. That gave local producers a modest advantage. The factory nearby might not be best, but it was close, and that often made its products cheaper. Today it is routine for many businesses to sell across state lines and national borders. Goods that can be produced anywhere can also be purchased anywhere. Omnipresence is yet easier for digital products, where all that's needed is a download or the quick flash of an advertisement across

a browser screen. Less than half of Apple's revenue comes from North America.[13] Slightly more than half of Alphabet's revenue is international.[14] The same holds for Tesla.[15]

Cities are engines of creativity because we create in community. We are spurred by competition. We need to find the colleagues and the friends and the competitors and the antagonists who unlock our genius and add their own. "Americans who live in metropolitan areas with more than a million residents are, on average, more than 50 percent more productive than Americans who live in smaller metropolitan areas," Glaeser writes. "These relationships are the same even when we take into account the education, experience, and industry of workers. They're even the same if we take individual workers' IQs into account."[16]

This is not a dumb gift of density. Jamming a mass of people into a chosen place will not allow you to re-create what other groups of people have achieved elsewhere, as the Soviet Union found out again and again. Cities are not interchangeable. What each offers is a specific gift of the ecosystems of people and practice it has nurtured. Once deep communities of interest and industry form, they are difficult to dislodge, and they prove nearly impossible to replicate.

New York leads the world in finance. San Francisco and Silicon Valley lead the world in technology. New York has tried hard to take Silicon Valley's crown. But if you look for multibillion-dollar technology companies in New York, you will find few of them. Where New York City has seen technological success is where code serves finance: Bloomberg is a multibillion-dollar technology business built around providing data to financial firms. Banks like Goldman Sachs and JPMorgan Chase now employ thousands of software engineers.[17] The same is true, in reverse, in San Francisco. There are

successful banks and investment firms, but they mostly serve technology companies.

The result is that even global businesses are rooted in local phenomena. Take the rise of generative AI companies. Outside China, the industry is concentrated within a few square miles along the California coast. OpenAI is not far from Anthropic, which is a quick drive to Google, which is located near Meta. The sole exception is DeepMind, which is based in London, but sold itself to Google in part because it needed the computing expertise their Silicon Valley–based engineers provided.

Why doesn't Toronto or Atlanta or New York or Barcelona or Los Angeles or Berlin have a major entrant in the industry? Why not build your AI behemoth in Maui or Bali? These companies are feeding digital data to algorithms running on off-site server farms. In theory, this arrangement should be possible anywhere. In practice, the frontier of ideas is best breached by people who know each other well and work with each other closely and who move between different companies with different cultures and specialties smoothly. Those much-mocked Bay Area parties where young AI engineers gather in group houses to ingest psychedelics and contemplate the singularity matter.

"Companies appear to locate in absolutely the worst places," Moretti writes. "They pick very expensive areas—the Bostons, San Franciscos, and New Yorks of the world. With sky-high wages and office rents, these are among the costliest places in America to operate a business. We would expect these cities to be unattractive for firms, especially those that compete globally."[18] But they're not. It's the firms that locate outside these cities that struggle. The money you save in rent doesn't make up for the talent and knowledge that dissipate over distance.

Walmart is famously frugal, maintaining its headquarters in Bentonville, Arkansas, and insisting top executives locate there, too. But when it wanted to enter into e-commerce, it didn't pile software engineers into a new wing of its headquarters. "Instead it chose Brisbane, California, just 7 miles from downtown San Francisco, one of the most expensive labor markets in the world," Moretti notes.[19]

Walmart saw what many tech executives see. If you want the best software products, you need to locate amid the best software engineers. Those engineers aren't cheap to hire. But if a few dozen or a few hundred of them can build you an e-commerce platform that you will use for millions or billions in sales, it'd be foolish to locate elsewhere. Walmart now trails only Amazon in annual online sales.

Some thought that the dislocations of the pandemic, combined with the rise of videoconferencing, would finally sever the link between place and innovation. It's undeniable that white-collar employees are more likely to work remotely, and some have used this opportunity to move to smaller and cheaper cities while clocking in for firms based many miles away. But America's superstar cities still draw many of the country's most talented workers. While remote and hybrid work have stabilized at a much higher level than before COVID, it is notable that in August 2023, the videoconferencing company Zoom announced that they were demanding employees be in the office at least a few days each week. Eric Yuan, Zoom's CEO, explained that it was too hard to build trust without nearness. "Trust is a foundation for everything. Without trust, we will be slow."[20]

Zoom was no outlier. Amazon and Meta and JPMorgan Chase and Alphabet and Tesla and Pfizer and almost every other major

company one could name had, by mid-2023, announced a plan for employees to return to the office for at least a few days a week. Remote work is a powerful force. But the centripetal power of the city is stronger. "To defeat the human need for face-to-face contact, our technological marvels would need to defeat millions of years of human evolution that has made us into machines for learning from the people next to us," Glaeser writes."[21]

This resolves the paradox of the metropolis: We vanquished distance for shipping and sales. But innovation thrives amid closeness. Which is to say: it thrives in cities. And because it thrives in cities, so does much else. It's in missing how much else that we made a terrible mistake.

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 or an economically strained life, but his children, too, will be deprived of the awesome possibilities of the city their father works to safeguard.

Most jobs aren't in firms like Google and Goldman Sachs. About two-thirds of the jobs in the American economy are in the local service sector, and that number has been steadily growing for fifty years. These are hairstylists and DMV employees and nurses

and line cooks and retail workers and real estate agents.[22] They don't see the kinds of wild productivity improvements that tradable goods do because, while one software programmer can write code for a million users, one line cook cannot make food for a million mouths.

But these jobs pay better in dynamic cities. Those Googlers have money to spend. And the consequences here ring out across generations. As the economist Raj Chetty and his team have covered in several papers, upward mobility is in structural decline in the US. In 1940, a child born into an American household had a 92 percent chance of making more money than her parents. But a child born in the 1980s has just a 50 percent chance of surpassing their parents' income.[23] In forty years, the American dream went from being a widespread reality to a coin toss.[24]

Mobility, Chetty found, is a product of place. A child born poor in San Jose has three times the likelihood of ending up wealthy as a child born poor in Charlotte. Among children who moved from a more economically stagnant zip code to a richer neighborhood, Chetty finds that the likelihood of better outcomes improves steadily with every extra year the child spends in their new city, with the kids who moved earliest faring best.[25]

Chetty's team also found that children who moved to a high-innovation area when they were young are much likelier to patent inventions of their own when they matured. The effect was specific to the specialty of the place: "Children who grow up in a neighborhood or family with a high innovation rate in a specific technology class are more likely to patent in exactly the same class," they write.[26]

But that depends on their parents being able to move to high-innovation areas. In the past, higher incomes would attract them.

In the present, sky-high cost of living repels them. A 2017 study by Peter Ganong and Daniel Shoag reveals the scale of what's lost when housing prices gate cities to working-class migrants. From 1880 to 1980, the income gap between residents of different states closed steadily each year. Today, that convergence has dissolved almost entirely.[27] Ganong and Shoag estimate that America's midcentury mobility accounted for more than a third of its midcentury drop in income inequality.[28] Now it is gone. This is the quiet destruction of an ancient path to opportunity.

Consider the fortunes of janitors and lawyers, Ganong and Shoag write. Janitors and lawyers have long made more money working in New York than in the Deep South. As a result, many 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.[29] 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 *away* 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.[30] 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.

In much of San Francisco, you can't walk twenty feet without seeing a multicolored sign declaring that Black Lives Matter, Kindness Is Everything, and No Human Being Is Illegal. Those signs sit in yards zoned for single families, in communities that organize against efforts to add the new homes that would bring those values closer to reality. San Francisco's Black population has fallen in every Census count since 1970. Poorer families—disproportionately nonwhite and immigrant—are pushed into long commutes, overcrowded housing, and street homelessness.

Texas has been the single largest beneficiary of California's housing crisis. And that is, in part, because Texas is California's mirror image on housing. The Austin metro area led the nation in housing permits in 2022, permitting 18 new homes for every 1,000