

BOOK SUMMARY

Enlightenment Now

by Steven Pinker

The world is not falling apart. By almost every measure it has never been better, and reason, science and humanism are why.

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Key ideas

1. **Count, don't guess.** News reports what happens, not what doesn't. Only numbers over time show whether things are getting better.
2. **Poverty is the default.** In a world ruled by entropy and evolution, what needs explaining is not poverty but wealth.
3. **Progress has causes.** Gains come from people applying knowledge to problems, so they must be understood to be sustained.
4. **Problems are solvable.** Climate change and nuclear weapons are real dangers, best treated as problems to solve rather than doom to await.
5. **We use reason.** Every argument against reason already relies on it. The fix for our biases is better norms and institutions.



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Preface

Steven Pinker opens with a provocation. He quotes a grim account of modern America, one of mothers and children trapped in poverty, failing schools, and crime, gangs and drugs framed as an “outright war” that is “expanding and metastasizing.” Then he declares that this bleak picture of the world is not slightly wrong but flat-earth wrong. The book, he says, is not really about Donald Trump. It was conceived before Trump announced his candidacy, and Pinker hopes it will outlast his time in office.

The deeper target is a set of ideas shared by intellectuals and ordinary people on both the left and the right: pessimism about where the world is heading, cynicism about the institutions of modern life, and an inability to imagine a higher purpose outside religion. Against this, Pinker promises a different picture, grounded in fact and inspired by the four ideals of the Enlightenment: reason, science, humanism and progress. These ideals are timeless, he argues, but they have never mattered more than they do right now.

The preface also shows how the book was built. Pinker borrows the sociologist Robert Merton’s scientific virtues of communalism, universalism, disinterestedness and organized skepticism, and thanks the data scientists who shared their work. He singles out Max Roser of Our World in Data, Marian Tupy of HumanProgress, and Ola and Hans Rosling of Gapminder. Sources range from the World Bank and the World Values Survey to the Uppsala Conflict Data Program and Google Trends. The message is clear before the first chapter begins: the case for progress will rest on long runs of hard numbers, not on mood.

Dare to Understand!

Part I begins with a question a student once asked Pinker after a lecture on the brain: “Why should I live?” His answer was that by asking, she was already committed to reason, and reason reveals many purposes: learning, discovery, beauty, love, and helping others flourish. He later realized he had been channeling ideals formed two centuries earlier. Those ideals need defending because people take their gifts for granted. Long lives, abundant food, antibiotics, peace and free speech are human achievements, not cosmic birthrights, and countries can slide back into war, scarcity and ignorance.

Pinker defines the Enlightenment through Immanuel Kant’s 1784 essay, which called it humankind’s emergence from its “self-incurred immaturity,” its lazy and cowardly submission to the dogmas of religious or political authority. Kant’s motto was “Dare to understand!” Pinker pairs this with the physicist David Deutsch’s modern version: problems are inevitable because knowledge is always incomplete, but problems are soluble. The movement grew out of the Scientific Revolution, was provoked by exploration and the carnage of the wars of religion, and spread through the easy movement of people and ideas.

Four themes unite the Enlightenment. Reason comes first and is nonnegotiable, because anyone who argues for anything has already committed to it. Science refined reason, turning a world of witches, omens and unicorn horns into one that could be tested and understood, including a science of human nature itself. Humanism put the well-being of individual men, women and children above the glory of tribe, nation or religion, and fueled a humanitarian revolution against slavery, despotism and cruel punishment. Progress followed: institutions could be improved by testing what works and keeping it.

Pinker adds two practical fruits of this thinking. Adam Smith showed that wealth comes from networks of specialists trading the fruits of their ingenuity, and that commerce makes societies gentler, since buying is cheaper than stealing. Kant treated war as a practical problem to be solved through republics, trade and a federation of states. Pinker insists this is not worship of the philosophes, some of whom were racists, sexists or slaveholders. What matters is the integrity of the ideas, not the personalities behind them.

Entro, Evo, Info

Three scientific ideas unknown to the Enlightenment anchor the rest of the book. The first is entropy. The Second Law of Thermodynamics says that in an isolated system, disorder never decreases, simply because there are vastly more ways for things to be disordered than ordered. Wind, waves and children will scatter a sandcastle; rust never sleeps. As the Texas politician Sam Rayburn put it, any jackass can kick down a barn, but it takes a carpenter to build one. From this vantage point, the purpose of life and mind is to deploy energy and knowledge to push back the tide of entropy.

The second idea is evolution. Organs like the human ear look engineered but were not designed. Once replicating matter arose, copying errors occasionally produced better replicators, and these accumulated into the appearance of purpose. Living things are open systems that capture energy from the sun or from food to keep themselves orderly. A grim consequence follows: because animals must take energy from other organisms, nature is an arms race of shells, spines, venom and teeth. The third idea is information, a reduction in entropy that lets patterns in one system, like a brain or a genome, correlate with the world.

Information explains how physical brains can know things and pursue goals. Human ancestors specialized in a cognitive niche of mental models, cooperation and language. Energy channeled by knowledge became the elixir that holds entropy at bay: farming multiplied calories, the Axial Age flowered when energy capture rose, and the Industrial Revolution launched a Great Escape from poverty and early death. The first lesson of these ideas is that misfortune may be no one's fault. The universe does not care about our desires, so poverty needs no explanation. What needs explaining, as Adam Smith saw, is wealth.

Human nature, shaped for ancient environments, also carries bugs. People are naturally innumerate, generalize from tiny samples, reason by stereotype, and act as intuitive lawyers rather than intuitive scientists. Yet the mind can also think abstractly and combine ideas without limit, and language pools those ideas across communities. From such communities come norms like giving reasons and testing beliefs against the world, and institutions like science, markets and democracy. A community of less than fully rational thinkers can still cultivate rational thoughts.

Counter-Enlightenments

Who could be against reason, science, humanism or progress? Pinker says the answer is more people than we think. Since the 1960s trust in modern institutions has sunk, and new populist movements are tribalist, authoritarian, contemptuous of experts and nostalgic. This disdain is not just a grassroots phenomenon; it has a long pedigree in elite culture. Pinker rejects the charge that the Enlightenment is a Western invention unsuited to others. Where an idea was born says nothing about its merit, and reasoning humans everywhere have voiced these ideals. His sharper reply is that the West has never fully embraced them either.

The Enlightenment was quickly followed by a Romantic counter-movement. Thinkers like Rousseau, Herder and Schelling denied that reason could be separated from emotion or individuals from their culture, and celebrated heroic struggle over problem-solving. Pinker lists several rival creeds that recur through the book. Religious faith believes without good reason and clashes with humanism when it ranks souls above lives. Nationalism treats the nation as a superorganism whose glory trumps its citizens. On the left, romantic environmentalism treats the ecosystem as a transcendent entity, and both left and right ideologies have become secular religions with sacred beliefs and demons.

Declinism adds a further twist. One version fears Promethean technology, from nuclear weapons to artificial intelligence. Another condemns modern life for being too safe and pleasant, a soul-deadening consumerist existence, and quietly admires Nietzsche's ruthless warrior heroes instead. Finally, Pinker describes the literary Second Culture, recalling F. R. Leavis's savage attack on C. P. Snow for daring to rank rising living standards alongside great literature. Today that culture dismisses science as mere technique or just another narrative. Because a defense of these ideals would mean nothing if humanity were no better off than in the Dark Ages, the case must begin with evidence of progress.

Progressophobia

Part II opens with a diagnosis. Intellectuals, especially self-described progressives, hate not the fruits of progress but the idea of it. Believers in progress are mocked as Pollyannas or Panglosses, though Pinker points out that Voltaire's Pangloss was really a pessimist who insisted this was the best of all possible worlds. Ordinary people show an Optimism Gap: they rate their own lives and communities well but believe their country and the world are declining. From 1992 to 2015, as violent crime plummeted, most Americans told pollsters it was rising.

Two forces drive this gloom. The first is the nature of news. Journalists never report live from a country where war has not broken out, and bad things happen fast while good things unfold slowly. The second is the Availability heuristic described by Amos Tversky and Daniel Kahneman: we judge how likely something is by how easily examples come to mind. People rank tornadoes, which kill about fifty Americans a year, above asthma, which kills over four thousand. Sentiment analysis shows the news itself has grown more negative since the 1960s.

Pinker's remedy is to count: how many people are poor, sick, killed or oppressed, as a share of the total, and is that number rising or falling? He answers common objections. Progress is not a steady escalator; it wiggles and lurches. A decline is not a disappearance. Declines have causes, which we must understand to sustain them. He also names deeper biases: bad is stronger than good, memory softens past pain, and critics who predict the worst are hailed as prophets. Finally he defines progress simply: life, health, sustenance, prosperity, peace, safety, freedom, knowledge and happiness are better than their opposites, and all can be measured.

Life

Global life expectancy in 2015 was 71.4 years, yet most people guess far lower. For most of history, it hovered around thirty. Hunter-gatherers averaged about 32.5 years, and in the mid-18th century Europeans and Americans lived about 35. Beginning in the 19th century, humanity entered what the economist Angus Deaton calls the Great Escape. The gains are spreading fastest in the poorest regions: Kenya's life expectancy rose almost ten years between 2003 and 2013, and an African born today can expect to live as long as someone born in the Americas in 1950.

Child and maternal deaths show the same arc. Well into the 19th century, a quarter to a third of Swedish children died before age five, and even Charles Darwin lost three children. Today there is no country where child mortality is not lower than in 1950. Global child mortality fell from 18 to 4 percent, and roughly a million more children survived last year than would have fifteen years earlier. Maternal mortality in Europe fell three-hundredfold. Pinker notes a demographic twist: when fewer children die, parents have fewer of them, which defused the feared population bomb.

Adults are living longer too, at every age, and the extra years are mostly healthy; dementia rates among older Americans fell by a quarter between 2000 and 2012. Pinker is skeptical, though, of Silicon Valley promises of immortality. Medical progress is more Sisyphus than Singularity, with steady gains alongside failed miracle drugs, and evolution and entropy work against endless life. His verdict borrows Stein's Law, that things that can't go on forever don't, with Davies's Corollary: they can go on much longer than you think.

Health

Longer lives are the spoils of a war against infectious disease. Wealth once offered no protection: the richest man in the world, Nathan Meyer Rothschild, died of an infected abscess in 1836, and two American presidents died of septic shock and cholera. The tide turned with vaccination in the late 18th century and germ theory in the 19th. Handwashing, mosquito control, sewers and chlorinated water saved billions. John Snow traced cholera to a contaminated water pump, and Ignaz Semmelweis and Joseph Lister taught doctors to stop carrying death on their hands.

Pinker laments that the heroes of medicine are forgotten. He lists scientists credited with saving enormous numbers of lives, including Abel Wolman and Linn Enslow for chlorinating water, William Foege for the smallpox eradication strategy, and Maurice Hilleman for eight vaccines, together accounting for more than five billion lives. His favorite sentence in English is Wikipedia's past tense: smallpox was a disease. It killed 300 million people in the 20th century before its last case in 1977, and the eradication cost about \$312 million. Guinea worm fell from 3.5 million cases in 1986 to 25 in 2016, and malaria deaths fell 60 percent in fifteen years.

Three forces drove this: economic development, an expanding circle of sympathy, and above all science. Following Deaton, Pinker stresses that knowledge, not income, is the ultimate cause of well-being, and much of it is cheap: boiling water, bed nets, iodine, oral rehydration. Bad ideas can undo it, as when conspiracy theories claim that vaccines sterilize girls or cause autism.

Sustenance

Famine haunted most of history. Premodern Europe starved every few decades, and 18th-century French diets were as poor in calories as Rwanda's in 1965. Hungry peasants dreamed of Cockaigne, a mythical land of pastry streets and roasting pigs. The developed world now lives there; as Chris Rock put it, this is the first society where poor people are fat. The developing world is catching up: China averages 3,100 calories a day, undernourishment in poor countries fell from 35 to 13 percent in 45 years, and famine has largely vanished outside a few parts of Africa, even as the world added nearly five billion people.

Thomas Malthus argued that population would always outrun food, and his heirs in the 1960s predicted mass starvation by the 1980s, even urging that aid be cut and pressing coercive sterilization. Both of Malthus's curves failed. Population growth slows as children survive and people grow richer. Food supply grew with knowledge: crop rotation and machines, then the Haber-Bosch process for making fertilizer from air, credited with saving about 2.7 billion lives. Norman Borlaug's Green Revolution wheat turned famine-prone countries into grain exporters, and between 1961 and 2009 food output rose 300 percent while farmland grew only 12 percent.

Pinker defends genetically engineered crops, backed by every major scientific body, and criticizes opposition rooted in a sacred idea of naturalness; Africa, he argues, suffers most from it. He also stresses that famines are political as much as agricultural. Of seventy million people killed in major 20th-century famines, 80 percent died under Communist regimes, through Stalin's collectivization, Mao's Great Leap Forward and similar disasters.

Wealth

The economist Peter Bauer said poverty has no causes; wealth has causes. History, written by the affluent, romanticizes past eras that were in fact desperate. Pinker names the lump fallacy, the belief that wealth is a fixed pile to be divided, and credits the Enlightenment with seeing that wealth is created. Gross World Product barely grew for two millennia, then exploded, rising about a hundredfold since 1820. Even these numbers understate progress, since many goods, from antibiotics to smartphones, could not be bought at any price two centuries ago.

Three innovations launched the escape. Science was applied to material life. Institutions like the rule of law, property rights and banks let strangers trade. And values shifted toward what Deirdre McCloskey calls bourgeois virtue, as commerce came to seem honorable rather than base. The Great Escape then became a Great Convergence. In 1800 about 95 percent of humanity lived in extreme poverty; today about 10 percent does, and the global income distribution has changed from two humps to one. Max Roser notes that newspapers could have run the headline that extreme poverty fell by 137,000 people since yesterday every day for 25 years.

The UN goal of halving extreme poverty was met five years early. Pinker lists the causes, drawing on Steven Radelet: the retreat of communism and intrusive socialism, better leaders, the end of the Cold War, globalization, and above all science and technology. Mobile phones let Indian fishermen find the best prices at sea. He defends factory work against romantic critics; wherever poor people could, they left the fields for factories, and women gained wages and independence. Progress means keeping the benefits of industrialization while shedding its cruelties.

Inequality

Inequality became an obsession in rich countries after 2009, and Pinker concedes that it has genuinely risen in the West since about 1980. His central claim is that inequality itself is not a basic component of well-being. He tells the Soviet joke about Igor, who is granted a wish and asks that his neighbor Boris's goat die. Following the philosopher Harry Frankfurt, what matters morally is that everyone has enough, not that everyone has the same. The lump fallacy again causes confusion: when the pie grows, the poor can gain even as the rich gain faster, and a fortune like J. K. Rowling's can come from voluntary purchases that leave everyone better off.

Pinker challenges claims that inequality causes every social ill. A study of 200,000 people in 68 societies found that inequality has no effect on happiness in developed countries and, in developing countries, even signals opportunity. Research also suggests people object to unfairness, not inequality. Historically, the great leveling of the 20th century came mostly from catastrophe: war, revolution, state collapse and plague, which Walter Scheidel calls the four horsemen of leveling. Modern societies found a gentler tool in social spending, which rose from about 1.5 percent of GDP to a median of 22 percent.

Global inequality has actually been falling since about 1980 as poorer countries grew. Within rich countries, the statistics mislead: people move between income brackets over their lives, transfers raise disposable incomes, and poverty measured by consumption fell about 90 percent in America since 1960. Most poor American households now have things the Vanderbilts lacked. Pinker acknowledges real problems, from stagnant wages to the despair of less-educated white Americans, and suggests targeted solutions, possibly including a universal basic income, rather than attacks on the Gini index.

The Environment

Is progress sustainable? Pinker credits the environmental movement with real achievements but criticizes what he calls greenism, a quasi-religious ideology that treats Earth as a pure maiden defiled by human greed and sometimes speaks of humanity as a cancer. He favors ecomodernism instead. Its premises: some pollution is an unavoidable result of entropy, and preindustrial peoples were no stewards of nature, hunting large animals to extinction and burning forests. Industrialization has been good for humanity. And technology can improve the tradeoff between prosperity and damage, as richer countries demand and afford cleaner air.

The prophecies of the 1970s failed because they assumed nothing would change. Population growth peaked in 1962 and is falling. Paul Ehrlich lost his bet with Julian Simon that metals would grow scarcer. People do not need resources as such; they need ways to eat, travel and light their homes, and they meet those needs with ideas. Since 1970 the United States has cut five major air pollutants by almost two-thirds while its economy boomed. Forests, rivers and wildlife have recovered, oil spills have plummeted, protected land has expanded, and treaties banned the chemicals destroying the ozone layer. Dematerialization means a single smartphone replaces dozens of devices.

Climate change is the exception Pinker treats as genuinely alarming. Carbon dioxide has risen from about 270 to over 400 parts per million, and warming of 4°C must not be allowed to happen. He rejects both denial and the climate justice left, which uses the crisis to attack markets and opposes carbon taxes. Personal sacrifice will not solve it, because emissions are a tragedy of the commons and poor countries need abundant energy to escape poverty.

The answer is deep decarbonization: carbon pricing, which economists across the spectrum endorse, and a major expansion of nuclear power, which per unit of electricity kills a tiny fraction of the people coal does. New reactor designs, carbon capture and research into geoengineering can help. The Paris Agreement is a start. Pinker calls for conditional optimism: the problem is solvable if we keep investing in prosperity, smart regulation and science.

Peace

Headlines about Syria and ISIS convinced many that violence was returning. The data say otherwise. Great powers, once almost always at war, have not fought each other since Korea. Wars between states are nearly obsolete, and the Western Hemisphere became free of armed political conflict after Colombia's 2016 peace deal. Battle deaths fell from almost 300 per 100,000 people a year during World War II to under 0.5 in the 2000s, rising only to about 1.2 in 2016, mostly because of Syria. The refugee crisis, too, is smaller than those after India's partition or World War II.

Genocides show a similar sawtooth decline from their postwar peaks in Cambodia, Bangladesh and Rwanda. Pinker names the forces for peace: trade, democracy, deterrence, peacekeeping, and above all the outlawing of war. Proposed by Kant, codified in the mocked 1928 Kellogg-Briand Pact and enforced after 1945, the norm against conquest has meant that nearly every acre seized since then has been returned. Russia's annexation of Crimea broke the rule, but an imperfectly enforced law is better than none.

Values changed as well. In the 19th century, writers praised war as ennobling, the foundation of the arts, and life itself. Romantic nationalism and declinism, especially in Germany, fed this militarism. Only after two world wars did the romance drain away. Pinker concludes that war may be one more obstacle, like pestilence and hunger, that an enlightened species can overcome.

Safety

We live in the safest time in history, yet no one won a Nobel Prize for inventing the highway guard rail. Homicide kills far more people than war, and Norbert Elias's *Civilizing Process* explains its long decline: kings suppressed feuding, police and courts arrived, and a culture of honor gave way to a culture of dignity. Progress can reverse, as in the 1960s to 1990s crime boom. Pinker rejects root-causism, noting that crime soared in the booming 1960s and fell during times of rising inequality and recession. Global homicide can be halved in thirty years because it is concentrated in a few countries, cities, blocks and people, and high rates can fall fast.

What works is legitimate, fair and predictable law enforcement, focused deterrence aimed at hot spots and the few people who do most shooting, cognitive behavioral therapy, and reducing opportunities for crime. Drug prohibition fuels violence because illegal dealers cannot call the police. Popular ideas like gun buybacks, scared straight programs and three-strikes laws show little effect.

Accidents tell an even quieter story. Pinker changed his mind about whether life used to be cheap after seeing that American traffic deaths fell sixfold between 1950 and 2009. Better cars, safer roads and campaigns against drunk driving saved about 650,000 lives since 1980. Air travel became a hundredfold safer. Deaths from falls, fires, drowning and workplace accidents plunged, and natural disasters kill far fewer as countries grow rich. The one rising curve is poisoning, which turns out to be drug overdoses driven by the opioid epidemic. As societies grow richer, they spend more ingenuity on saving lives.

Terrorism

Terrorism combines great dread with small harm. In 2015 it killed 44 Americans, compared with 15,696 homicides and 35,398 traffic deaths. Americans were more likely to die from bee stings, hot tap water or lightning. Even in Western Europe's bad year of 2015, a person was far more likely to die in a car crash. Most terrorist deaths occur in war zones like Iraq, Afghanistan and Nigeria. Western Europe suffered more terrorism in the 1970s and 1980s, from groups like the IRA and ETA, than it does today.

Why the panic? Attacks strike people in settings anyone can imagine, the media give them saturation coverage, and deliberate malice disturbs us more than accidents. Research by Adam Lankford finds that many attackers are resentful loners seeking fame. Terrorism is theater, not military strategy, and studies of hundreds of movements show none achieved their strategic goals. It only works as theater because modern states have made political violence so rare.

The greatest harm comes from overreaction, as in the invasions after 9/11. Pinker recommends securing weapons of mass destruction, fighting violent ideologies with better ones, and a media policy of not naming or showing attackers while reporting everything else. Terrorist movements have always burned out, and ISIS almost certainly will too.

Democracy

For five thousand years people have tried to steer between the violence of anarchy and the violence of tyranny. Chaos, Pinker notes, is deadlier than tyranny. Democracy threads the needle, and it brings faster growth, fewer wars and genocides, healthier citizens and virtually no famines. After three waves of democratization, the number of democracies grew from 31 in 1971 to 103 in 2015. Two-thirds of humanity now lives in free or relatively free societies, compared with one percent in 1816, and four-fifths of the rest live in China.

Talk of a democratic recession, he argues, is driven by the headline fallacy: crackdowns make news while gradual liberalization does not. Democracy also works despite ignorant and inconsistent voters. Following Karl Popper, its value lies in removing bad leaders without bloodshed, and following John Mueller, in the freedom to complain through protests, petitions and a free press. Human rights scores, adjusted for ever more vigilant watchdogs, have improved across the globe.

The death penalty shows moral progress in action. Once applied to hundreds of crimes, it has been abolished country by country and lingers in Europe only in Belarus. The United States is an outlier because its judges and prosecutors must win elections, but even there executions are falling, disrupted by DNA exonerations, drug shortages, high costs and court rulings. The principle that life is sacred has spread through institutions until the practice is falling apart piece by piece.

Equal Rights

Racism, sexism and homophobia have been rampant in most cultures throughout history, yet recent milestones include an African American president and a Supreme Court ruling for same-sex marriage. Progress erases its tracks, and many progressives come to believe society is as bigoted as ever, which would mean their own movements achieved nothing. Google search data, a kind of digital truth serum, show searches for racist, sexist and homophobic jokes declining steadily, even through Trump's rise. Surveys show each generation is more tolerant than the one before.

African American poverty fell from 55 percent in 1960 to 27.6 percent in 2011, and the life expectancy gap with whites shrank from 17.6 years to under 3. Hate crimes have trended downward, and rape and domestic violence have fallen to a quarter or less of their peaks. Women now make up 47 percent of the American workforce. Worldwide, women can vote everywhere men can except Vatican City, and eight more countries decriminalized homosexuality in six years.

The World Values Survey shows people in every culture zone moving toward emancipative values, favoring freedom over conformity, as their lives grow more secure. Young people keep these values as they age, and the best predictor is a country's level of knowledge. Children, too, are safer. Violence against American children has fallen, corporal punishment is banned in more than half the world's countries, and child labor has halved in a dozen years.

Knowledge

Education does more than raise incomes, provided it is secular and rational. Educated people are less racist, sexist and authoritarian, value free speech, and vote and volunteer more. Literacy was once an elite privilege; today it stands at 83 percent worldwide and 91 percent among young adults. In 1820 over 80 percent of the world was unschooled; today over 80 percent has basic education. Girls, once excluded, now learn to read at the same rate as boys worldwide, a shift embodied by Malala Yousafzai, shot by the Taliban for going to school.

The Flynn effect adds a surprise: IQ scores have risen about three points per decade for more than a century across the world. Better nutrition and health explain part of it, but the biggest gains are in abstract reasoning: classifying concepts, analyzing relationships and thinking within hypothetical rules. Schooling that stresses understanding over rote learning, and a culture full of maps, spreadsheets and analytic ideas, encourage this mindset.

Pinker argues that the rise matters. Higher IQ predicts better jobs, health and achievement, and a country's average IQ predicts later growth in wealth and longevity. Abstract thinking may even sharpen the moral sense, helping people step outside themselves and ask what would happen if everyone acted the same way. Taken together, the correlated gains in health, wealth and knowledge point to a single hidden factor that already has a name: progress.

Quality of Life

Critics say that more wealth and health just trap people in a rat race of consumerism and empty entertainment. Pinker hears snobbery in this, noting that the critics enjoy fine wine and foreign travel themselves. Drawing on Amartya Sen and Martha Nussbaum, he measures quality of life by what people are able to do. Time is the first measure. In 1870 Western Europeans worked about 66 hours a week; by 2000 they worked 28 fewer. Retirement, once rare, is now normal, and older Americans are less likely than average to be poor.

Household technology freed time too, especially for women. An American worker in 1919 needed 1,800 hours of wages to buy a refrigerator; in 2014, fewer than 24. Weekly housework fell from 58 hours to 15.5 and laundry from 11.5 hours to 1.5. Light, once precious, has become almost free: an hour of reading light that took six hours of work in 1800 took half a second in 1994. Leisure time has grown, and parents spend more time with their children than a century ago.

Modern life also enriches experience. Cheap phone and video calls keep families close, and airfares have fallen by more than half since the 1970s. Grocery stores carry tens of thousands of items, and food courts offer the world's cuisines. Anyone online can reach Wikipedia, free courses and nearly all the art and music ever made. Pinker argues this makes ours the greatest era for culture, because we can reach the genius of every age.

Happiness

If life has improved so much, why aren't we happier? Louis C.K. mocked people who complain about flight delays while sitting in a chair in the sky. Pinker first defends objective goods: life, health and freedom are worth having even if their owners fail to appreciate them, and the dead cannot be surveyed. He then separates happiness, a balance of good and bad feelings, from meaning, which involves struggle and giving. Progress cannot deliver endless bliss, but lives can grow ever more meaningful.

The data are brighter than the mood. Most people everywhere say they are fairly or very happy. The Easterlin paradox, the claim that wealth does not raise happiness, does not survive better data: Betsey Stevenson and Justin Wolfers found that richer people, richer countries and countries growing richer are all happier, with diminishing returns. Happiness rose in 45 of 52 countries between 1981 and 2007. The United States lags its wealth, though African Americans and young people have grown happier.

Claims of epidemics of loneliness, suicide and depression also fail the fact-check. Americans keep as many friends as in the 1970s, and student loneliness declined through 2011. Suicide was more common a century ago. Apparent rises in depression reflect faulty memory, greater willingness to seek help and broader diagnoses, and anxiety has not increased since 1990.

Some unease is real, and Pinker sees it as the price of freedom. The great novels depict people fleeing suffocating villages and traditions, and modern people must manage expanded responsibilities without comforting certainties. Negative news raises anxiety. Fewer Americans say they are very happy, but more say life is exciting. For Pinker, this is part of what Kant called emerging from immaturity.

Existential Threats

Pessimists say we are cheerfully hurtling toward catastrophe. Pinker argues that apocalyptic thinking has costs. False alarms like the missile gap and Saddam Hussein's supposed nuclear program led to arms races and war. Lists of exotic risks dilute attention to real ones like climate change and nuclear war. Worst of all, doom breeds fatalism, and a quarter of Australian children believe the world will end before they grow up. The Y2K bug, which Pinker watched pass without incident, shows how easily techno-apocalypse can be imagined.

Technology is our best defense against extinction, not its cause. Asteroids, supervolcanoes and pandemics threatened every past civilization, and most civilizations that died lacked the knowledge to save themselves. Pinker doubts that superintelligent AI will enslave us, because intelligence does not imply a drive to dominate, and today's systems are idiot savants. Lone hackers and bioterrorists face a sliver of a sliver problem: few people want mass murder, fewer can pull it off, and germs make poor weapons because deadliness and contagion trade off.

Nuclear war is the one real threat. Yet fear-mongering has backfired, and the Doomsday Clock has cried wolf for decades. No nuclear weapon has been used since Nagasaki, only nine countries have them, and arsenals are far smaller than in 1986. Pinker urges taking missiles off hair-trigger alert, adopting a policy of no first use, and continuing step-by-step disarmament. If the annual risk falls from 1 percent to 0.01 percent, the chance of a catastrophe-free century rises from under 37 percent to 99 percent.

The Future of Progress

Pinker sums up. Since the late 18th century, life expectancy has risen from 30 to 71, the world has grown about a hundred times richer, extreme poverty has fallen from almost 90 percent to under 10, literacy has risen from 12 to 83 percent, and democracy covers two-thirds of humanity. Then he reads the same facts from the bad end: hundreds of millions still in extreme poverty, dozens of wars and thousands of nuclear warheads. Progress is not utopia. But gains compound, science is flourishing, and customs like slavery and dueling are gone for good.

Two storm clouds threaten this future. The first is economic stagnation. Global growth has slowed by more than half since the early 1970s, and some economists think the great inventions are behind us. Pinker replies that slow growth is still growth, poor countries can keep catching up, and new technologies take time to pay off. He lists coming advances in nuclear energy, batteries, water purification, crops, medicine and education, and notes that GDP misses the value of free digital goods.

The second is authoritarian populism, which rejects experts, minorities and the marketplace of ideas, and which Pinker sees threatening every area of progress. Yet presidents face courts, legislatures and markets, and populism's base is older, less educated and shrinking; its support falls off sharply among younger voters. The media and intellectuals helped it rise by painting their societies as hopeless. Real progress comes from messy, steady reform, and like Hans Rosling, Pinker calls himself a possibilist.

Reason

Part III defends the three core ideals against enemies that include, surprisingly, parts of mainstream intellectual culture. As Keynes noted, ideas rule the world. Irrationalism comes in many forms: Romantic feeling, faith, postmodern claims that reason is a mask for power, and pop psychology claiming humans are hopelessly irrational. All these refute themselves, because arguing for them already assumes reason. As Thomas Nagel showed, the claim that everything is subjective cannot even be stated coherently. We do not believe in reason; we use it.

The biases catalogued by Kahneman and others do not overturn the Enlightenment, whose thinkers knew humans were crooked timber and designed institutions to compensate. The San hunters of the Kalahari reason like scientists as they track animals, challenging elders with evidence. Why, then, do people deny evolution or climate change? Dan Kahan's research shows that such beliefs are badges of tribal identity. Scientific knowledge barely predicts them; politics does. Numerate people solve a math problem correctly about skin cream but botch the same numbers when they concern gun control. Kahan calls this the Tragedy of the Belief Commons.

Pinker argues that no ideology owns the story of progress. The right romanticizes a brutal past; the left disdains the markets that ended mass poverty; libertarians forget that thriving countries combine markets with social spending. Philip Tetlock found that famous experts with Big Ideas predict no better than chance. Superforecasters reason in probabilities, start from base rates, update in steps and admit errors.

The talk of a post-truth era is overblown, given the rise of fact-checking. Debiasing training works when it is active and applied across contexts, and so do norms like arguing both sides and adversarial collaboration. Most fields, from medicine to policing, are becoming more rational. The exception is politics, which Pinker says should be depoliticized by choosing messengers carefully and separating facts from loaded remedies.

Science

Science would be humanity's proudest boast. The laws of physics behind everyday life are fully known, genomes reveal our deep history, and smallpox is gone. Yet science is resented, not only by politicians who dispute climate change or mock research grants, but also by many humanities intellectuals, who see it invading their territory. As Chekhov said, there is no national science just as there is no national multiplication table.

Pinker clears away misconceptions about so-called scientism. Endorsing science does not mean trusting scientists, who use peer review precisely because, as Richard Feynman said, you are the easiest person to fool. It does not mean handing them power or treating every hypothesis as true. Its two core ideals are that the world is intelligible and that we must let the world tell us whether our ideas are right. These leave little room for fate, karma or answered prayers, and they point toward humanism.

The charge that science caused racism, eugenics and the Holocaust is bad history. Scientific racism grew from Arthur de Gobineau, a writer and amateur historian, and Nazi race theorists rejected Darwin. Herbert Spencer's Social Darwinism predated Darwin's book, and eugenics was championed by progressives. Pinker also criticizes the stigma this breeds, from misleading teaching about Tuskegee to bioethics bureaucracy that delays lifesaving research.

Quantitative thinking saves lives. Since Paul Meehl's work, simple formulas have beaten expert judgment. Data show that peacekeeping works and that nonviolent resistance movements succeed far more often than violent ones. Pinker urges the struggling humanities to embrace consilience with science, as archaeology, linguistics and philosophy of mind already have, and to use the new digital humanities.

Humanism

Knowledge is neutral; the same science yields vaccines and bioweapons. Humanism supplies the goal: maximizing the flourishing of humans and other sentient beings. It rests on impartiality, the insight behind the Golden Rule and the social contract, and on the evolved needs of beings who must resist entropy and live together. Pinker defends its utilitarian flavor, noting that utilitarian arguments helped end slavery, cruel punishment and the persecution of gay people. The Universal Declaration of Human Rights, passed without opposition in 1948, shows people of different faiths agreeing on rights without agreeing on why.

Humanism's first rival is theistic morality. Pinker finds no good argument for God. The fine-tuning of physical constants may be explained by deeper physics or a multiverse, and the hard problem of consciousness is no evidence for a soul. Plato's Euthyphro dilemma shows morality cannot rest on divine command. Secularization is spreading, and irreligious societies such as Denmark and New Zealand are among the best places to live. He argues that literal belief in antihumanistic scripture helps explain illiberalism in parts of the Muslim world, while praising Muslim reformers and the tolerant history of Islamic civilization.

The second rival is romantic heroism, embodied by Nietzsche, who scorned the masses and celebrated conquest. Pinker traces this spirit through the fascination of many intellectuals with dictators and into today's authoritarian populism and theoconservatism. He rejects the claim that nationalism is an innate need. People belong to many groups at once, the nation-state is a recent invention, and great cultures have always been cosmopolitan crossroads.

Pinker closes with advice and a story. An anecdote is not a trend, and pessimism is not profundity. Born into a pitiless universe and made of crooked timber, humans have used reason, sympathy and institutions to live longer, suffer less and learn more. This story, he insists, is true, and it belongs to everyone capable of reason.

About Steven Pinker

Steven Pinker is a cognitive psychologist and one of the best known public intellectuals writing about science and human nature. He is a professor of psychology at Harvard University, and he previously taught at MIT. He was born in Montreal, Canada, in 1954, and in *Enlightenment Now* he mentions his grandfather working at a cheese counter in a Montreal market into the 1950s.

His early books dealt with language and cognition, including *Language Learnability and Language Development*, *Learnability and Cognition*, *The Language Instinct* and *Words and Rules*. He then turned to the mind and human nature in *How the Mind Works*, *The Blank Slate* and *The Stuff of Thought*, and wrote a writing guide, *The Sense of Style*. *The Better Angels of Our Nature*, published in 2011, argued that violence has declined over history and laid the groundwork for *Enlightenment Now*.

Enlightenment Now was published in 2018. Pinker built it with the help of data projects such as *Our World in Data*, *HumanProgress* and *Gapminder*, and in the preface he singles out Hans Rosling, who died in 2017, as an inspiration. Bill Gates called it his new favorite book. Pinker later extended its argument about reasoning in *Rationality*, published in 2021.

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