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THE SATURDAY ESSAY

## The Enlightenment Is Working

Don't listen to the gloom-sayers. The world has improved by every measure of human flourishing over the past two centuries, and the progress continues, writes Steven Pinker.

*By Steven Pinker*

For all their disagreements, the left and the right concur on one thing: The world is getting worse. Whether the decline is visible in inequality, racism and pollution, or in terrorism, crime and moral decay, both sides see profound failings in modernity and a deepening crisis in the West. They look back to various golden ages when America was great, blue-collar workers thrived in unionized jobs, and people found meaning in religion, family, community and nature.

Such gloominess is decidedly un-American. The U.S. was founded on the Enlightenment ideal that human ingenuity and benevolence could be channeled by institutions and result in progress. This concept may feel naive as we confront our biggest predicaments, but we can only understand where we are if we know how far we've come.

You can always fool yourself into seeing a decline if you compare rose-tinted images of the past with bleeding headlines of the present. What do the trajectories of the nation and world look like when we measure human well-being over time with a constant yardstick? Let's look at the numbers (most of which can be found on websites such as OurWorldinData, HumanProgress and Gapminder).

Consider the U.S. just three decades ago. Our annual homicide rate was 8.5 per 100,000.

Eleven percent of us fell below the poverty line (as measured by consumption). And we spewed 20 million tons of sulfur dioxide and 34.5 million tons of particulate matter into the atmosphere.

Fast forward to the most recent numbers available today. The homicide rate is 5.3 (a blip up from 4.4 in 2014). Three percent of us fall below the consumption poverty line. And we emit four million tons of sulfur dioxide and 20.6 million tons of particulates, despite generating more wealth and driving more miles.

Globally, the 30-year scorecard also favors the present. In 1988, 23 wars raged, killing people at a rate of 3.4 per 100,000; today it's 12 wars killing 1.2 per 100,000. The number of nuclear weapons has fallen from 60,780 to 10,325. In 1988, the world had just 45 democracies, embracing two billion people; today it has 103, embracing 4.1 billion. That year saw 46 oil spills; 2016, just five. And 37% of the population lived in extreme poverty, barely able to feed themselves, compared with 9.6% today. True, 2016 was a bad year for terrorism in Western Europe, with 238 deaths. But 1988 was even worse, with 440.

The headway made around the turn of the millennium is not a fluke. It's a continuation of a process set in motion by the Enlightenment in the late 18th century that has brought improvements in every measure of human flourishing.

Start with the most precious resource, life. Through most of human history, continuing into the 19th century, a newborn was expected to live around 30 years. In the two centuries since, life expectancy across the world has risen to 71, and in the developed world to 81.

When the Enlightenment began, a third of the children born in the richest parts of the world died before their fifth birthday; today, that fate befalls 6% of the children in the poorest parts. In those countries, infectious diseases are in steady decline, and many will soon follow smallpox into extinction.

The poor may not always be with us. The world is about a hundred times wealthier today than it was two centuries ago, and the prosperity is becoming more evenly distributed across countries and people. Within the lifetimes of most readers, the rate of extreme poverty could approach zero. Catastrophic famine, never far away in the past, has vanished from all but the most remote and war-ravaged regions, and undernourishment is in steady decline.

Our ancestors replaced dogma, tradition and authority with reason, debate and institutions of truth-seeking. Within developed countries, inequality is rising, but real poverty is not. A century ago, the richest countries devoted 1% of their wealth to children, the poor, the sick and the aged; today they spend almost a quarter of it. Most of their poor today are fed, clothed and sheltered and have luxuries like smartphones and air conditioning that used to be unavailable to anyone, rich or poor. Poverty among racial minorities has fallen, and poverty among the elderly has plunged.

The world is giving peace a chance. During most of the history of nations and empires, war was the natural state of affairs, and peace a mere interlude between wars. Today war between countries is obsolescent, and war within countries is absent from five-sixths of

the world. The proportion of people killed annually in wars is about a quarter of what it was in the mid-1980s, a sixth of what it was in the early 1970s, and a 16th of what it was in the early 1950s.

In most times and places, homicides kill far more people than wars. But homicide rates have been falling as well and not just in the U.S. People in the rest of the world are now seven-tenths as likely to be murdered as they were two dozen years ago. Deaths from terrorism, terrifying as they may be, amount to a rounding error.

Life has been getting safer in every other way. Over the past century, Americans have become 96% less likely to be killed in an auto accident, 88% less likely to be mowed down on the sidewalk, 99% less likely to die in a plane crash, 59% less likely to fall to their deaths, 92% less likely to die by fire, 90% less likely to drown, 92% less likely to be asphyxiated, and 95% less likely to be killed on the job. Life in other rich countries is even safer, and life in poorer countries will get safer as they get richer.

Despite backsliding in countries like Russia, Turkey and Venezuela, the long-term trend in governance is toward democracy and human rights. Two centuries ago a handful of countries, embracing 1% of the world's people, were democratic; today, more than half of the world's countries, embracing 55% of its people, are.

Not long ago half the world's countries had laws that discriminated against racial minorities; today more countries have policies that favor their minorities than policies that discriminate against them. At the turn of the 20th century, women could vote in just one country; today they can vote in every country where men can vote save one (Vatican City). Laws that criminalize homosexuality continue to be stricken down, and attitudes toward minorities, women and gay people are becoming steadily more tolerant, particularly among the young, a portent of the world's future. Violence against women, children and minorities is in long-term decline, as is the exploitation of children for their labor.

As people are getting healthier, richer, safer and freer, they are also becoming more knowledgeable and smarter. Two centuries ago, 12% of the world could read and write; today 85% can. Literacy and education will soon be universal, for girls as well as for boys. The schooling, together with health and wealth, is literally making us smarter—by 30 IQ points, or two standard deviations above our ancestors.

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People are putting their longer, healthier, safer, freer, richer and wiser lives to good use. Americans work 22 fewer hours a week than they did in the late 19th century and lose 43 fewer hours to housework. They have more opportunities to use their leisure to travel, spend time with children, connect with loved ones and sample the world's cuisine,

knowledge and culture.

Thanks to these gifts, people in a majority of countries have become happier. Even Americans, who take their good fortune for granted and have stagnated in happiness, call themselves “pretty happy” or happier. And despite the panic about “kids today” (heard in every era), younger generations are less unhappy, lonely, drug-addicted and suicidal than their Boomer parents.

As societies become wealthier and better educated, they raise their sights to the entire planet. Since the dawn of the environmental movement in the 1970s, the world has emitted fewer pollutants, cleared fewer forests, spilled less oil, set aside more preserves, extinguished fewer species, saved the ozone layer and may have peaked in its consumption of oil, farmland, timber, cars and perhaps even coal.

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To what do we owe this progress? Does the universe contain a historical dialectic or are bending toward justice? The answer is less mysterious: The Enlightenment is working. Our ancestors replaced dogma, tradition and authority with reason, debate and institutions of truth-seeking. They replaced superstition and magic with science. And they shifted their values from the glory of the tribe, nation, race, class or faith toward universal human flourishing.

These developments have been gradual and uneven, with many backtracks and zigzags. But the happy developments of the last two centuries are the cumulative gifts of the brainchildren they spawned.

- Disease was decimated by vaccines, sanitation, antibiotics and other advances in medicine and public health, driven by the germ theory of disease and our understanding of evolution, physiology and genetics.
- Famine was stanching by crop rotation, synthetic fertilizer, the replacement of muscle by machinery and the selective breeding of vigorous hybrids.
- Poverty was slashed by education, markets, global trade and cheaper food and clothing, together with social programs that support the young, old, sick and unlucky.
- Violent crime was tamed by a replacement of the code of vendetta by the rule of law, by fairer judicial systems and, most recently, by data-driven policing.
- Everyday hazards were blunted by safety regulations and engineering, driven by an increasing valuation of human life. A similar combination of regulation and technology is ramping down pollution.
- Oppression and discrimination may persist in some places by brute force, but they start to corrode when educated, mobile and connected people exchange ideas and are forced to justify their practices.
- War is being marginalized by the spread of democracy (which inhibits leaders from

turning their youth into cannon fodder), global commerce (which makes trade more profitable than plunder), peacekeeping forces (which separate belligerents and extinguish flare-ups) and competent governments (which outcompete insurgents for the allegiance of their citizens). Also driving war down are norms against conquest, enforced by the international community with shaming, sanctions and occasionally armed intervention.

\* \* \*The evidence for progress raises many questions.

Isn't it good to be pessimistic, many activists ask—to rake the muck, afflict the comfortable, speak truth to power? The answer is no: It's good to be accurate. We must be aware of suffering and injustice where they occur, but we must also be aware of how they can be reduced. Indiscriminate pessimism can lead to fatalism: to wondering why we should throw time and money at a hopeless cause. And it can lead to radicalism: to calls to smash the machine, drain the swamp or empower a charismatic tyrant.

Is progress inevitable? Of course not! Solutions create new problems, which must be solved in their turn. We can always be blindsided by nasty surprises, such as the two World Wars, the 1960s crime boom and the AIDS and opioid epidemics.

And the greatest global challenges remain unsolved. This does not mean they are unsolvable. In 2015 the world's nations came to a historic agreement on climate change in Paris, and pathways to decarbonization, including carbon pricing and zero-emission technologies, have been laid out. Since the closing days of World War II, nuclear weapons have not been used in almost 73 years of saber-rattling (including standoffs with the half-mad despots Stalin and Mao), and the New Start treaty between the U.S. and Russia, capping nuclear arsenals, went into full effect just this week.

On these matters, the policies of President Donald Trump—denial of climate change, planned withdrawal from the Paris accord, provocation of North Korea, nuclear arms expansion—are alarming. But continued progress is in the interests of the rest of the world, and numerous states, countries, corporations, political actors and sectors of the military are pushing back against the intemperate plans of the administration. More from ReviewOlder Entrepreneurs Do It Better

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How should we think about future progress? We must not sit back and wait for problems to solve themselves, nor pace the streets with a sandwich board proclaiming that the end of the world is nigh. The advances of the past are no guarantee that progress will continue; they are a reminder of what we have to lose. Progress is a gift of the ideals of the Enlightenment and will continue to the extent that we rededicate ourselves to those ideals.

Are the ideals of the Enlightenment too tepid to engage our animal spirits? Is the conquest of disease, famine, poverty, violence and ignorance ... boring? Do people need to believe in magic, a father in the sky, a strong chief to protect the tribe, myths of heroic

ancestors?

I don't think so. Secular liberal democracies are the happiest and healthiest places on earth, and the favorite destinations of people who vote with their feet. And once you appreciate that the Enlightenment project of applying knowledge and sympathy to enhance human flourishing can succeed, it's hard to imagine anything more heroic and glorious.

Mr. Pinker is Johnstone Professor of Psychology at Harvard University. This essay is adapted from his new book, "Enlightenment Now: The Case for Reason, Science, Humanism and Progress," which will be published by Viking on Feb. 13.