

## The Greatest Story Nobody Knows About

By Steven E. Landsburg

Modern humans first appeared about one hundred thousand years ago. For the next 99,800 years or so, pretty much everyone lived above the subsistence level—on the modern U.S. equivalent of \$400 to \$600 a year. In a few fortunate times and places, it was a bit more than that, but almost never more than about twice as much. There were usually tiny nobilities who lived far better indeed, but numerically those nobilities were quite insignificant. If you'd been born any time before the late eighteenth century, it's astronomically probable that you'd have lived on the equivalent of under \$1000 a year—just like your parents and your grandparents, and just like your children and your grandchildren.

Then, in the late eighteenth century—just a couple of hundred years ago, maybe ten generations—something happened. People started getting richer. And richer and richer still. Per capita income, at least in the West, began to grow at the unprecedented rate of about three-quarters of a percent per year. A couple of decades later, the same thing was happening around the world. After thousands of years of stagnation, life started improving from one year to the next, and before long people started taking improvements for granted. Today we expect our cars, our computers, our medicines, and our entertainment systems to keep dazzling us with something new. But that's not how it was before the Industrial Revolution. That three-quarters of a percent annual growth rate, once it got under way, must have seemed miraculous.

But then it got better. By the twentieth century, per capita real incomes—that is, incomes adjusted for inflation—were growing by 1.5 percent per year, on average, and since 1960—for almost fifty years now—they've been growing by about 2.3 percent. Let me give you an idea of what those growth rates mean to the average American.

If you're a middle-class American earning \$50,000 a year, and you expect your children, twenty-five years from now, to occupy that same modest rung on the economic ladder, then with a 2.3 percent growth rate, they'll be earning the inflation-adjusted equivalent of \$89,000 per year. Their children, another twenty-five years down the line, will earn \$158,000 a year. And if that 2.3 percent growth rate continues, then in fewer than four hundred years, your descendants will earn about \$1 million per day—a little less than Bill Gates's current income, but at least in the ballpark. I want to make clear that these are not some future inflation-ravaged dollars we're talking about; they're the equivalent of a million of *today's* dollars.

If it strikes you as implausible that we could ever generate that kind of wealth, keep in mind that this is a conservative extrapolation of a centuries-old trend. It assumes today's 2.3 percent growth rate will continue unchanged, whereas in fact, growth has been accelerating since it first got underway two hundred years ago. Keep in mind too that every historical advance has seemed wildly implausible until it happened. In the first century AD, Sextus Julius Frontinus wrote that “inventions reached their limit long ago, and I see no hope for further development.”

Against a backdrop like that, the temporary ups and downs of the business cycle seem like a fantastically minor phenomenon. In the 1930s, we had a Great Depression, when income levels fell back to where they'd been about twenty years earlier. For a few years, people had to live the way their parents had always lived—and they considered it almost intolerable. The underlying expectation—that the present is supposed to be better than the past—is a new phenomenon in history. No eighteenth-century politician would have dreamed of asking “Are you better off than you were four years ago?” because it never would have occurred to anyone that they *ought* to be better off than they were four years ago.

Rising income is only part of the story. Not only are we richer than ever before, we also work less and have better-quality products. One hundred years ago, the average American workweek was over sixty hours; today it's under thirty-five. One hundred years ago, only 6 percent of manufacturing workers took vacations; today it's 90 percent. One hundred years ago, men entered the full-time labor force in their early teens; today labor-force participation by young teenagers is essentially zero. One hundred years ago, only 26 percent of male workers retired by age 65; today over 80 percent of 65-year-old males have retired. One hundred years ago, the average housekeeper spent twelve hours a day on laundry, cooking, cleaning, and sewing; today it's about three hours.

Here's a typical laundry day for a housewife in 1900: First, she ports water to the stove, and heats it by burning wood or coal. She cleans the clothes by hand, rinses them, wrings them out (either by hand or with a mechanical wringer), then hangs them to dry and moves on to the oppressive task of ironing using heavy flatirons that are heated continuously on the stove. The whole process takes about eight-and-a-half-hours and she walks over a mile in the process. We know this because the United States government used to hire researchers to follow housewives around and record every step they took.

It wasn't just laundry: At the beginning of the twentieth century, most households had no running water and few had central heating. So routine housework included lugging seven tons of coal and 9,000 gallons of water around the house every year. By 1945, our heroine probably had a washing machine. Now her laundry chores took just two-and-a-half hours instead of eight-and-a-half and instead of walking a mile, she walked just 665 feet. Today, so that you don't have to waste a single moment keeping an eye on your laundry, you can get a washing machine that emails you when it's done.

Today in the United States of America among the very poorest of the poor—those with household incomes under \$15,000 a year—99 percent have refrigerators (83 percent of them frost-free); 64 percent have air-conditioning; 97 percent have color TVs and over two-thirds have cable; 60 percent have washers and dryers. Almost half have personal computers, and most of those have Internet access.

As far as the quality of the goods we buy, try picking up an electronics catalogue from oh, say, 2001 and ask yourself whether there's anything there you'd consider owning. That was the year my friend Ben spent \$600 for a 1.3-megapixel digital camera. It weighed a pound and a half and wrote to a floppy disk! Go ahead and pick up that catalogue, and I guarantee you'll be astonished by how much better products have gotten in just the past few years.

Or, if you prefer, take a product like health care. Would you rather purchase today's health care at today's prices, or the health care of say, 1970 at 1970 prices? I don't know any informed person who would choose 1970, which means that despite all the hype, health care now is a better bargain than it's ever been. Our lives are better and our lives are longer. The probability that a 20-year-old has a living grandmother today is higher than the probability that a 20-year-old had a living mother a hundred years ago.

The moral is that increases in measured income—even the phenomenal increases of the past two centuries—don't accurately reflect improvements in our economic condition. The average middle-class American might have a smaller measured income than the European monarchs of the Middle Ages, but that does not prevent the American from leading a more luxurious life. I suspect that Henry VIII would have traded half his kingdom for modern plumbing, a lifetime supply of penicillin, and access to the Internet.

Will these trends continue? Of course, nobody knows—just as nobody knows whether the earth will be destroyed by an asteroid in ten years. But we can make educated guesses about probabilities. What we do know is that economic growth, despite some minor ups and downs, has continued—and accelerated—pretty much unabated for the past two hundred years. We also know that all that growth was fueled by technological progress. And we can reasonably conjecture that the reason we're not running out of fuel is that technological progress replenishes itself: each new idea makes the next new idea easier to come by.