

SECTION I: THE GREAT BETTERMENT

Chapter 1. Right here, right now.

Not too long ago, President Barack Obama said, “If you had to choose any time in the course of human history to be alive, you’d choose this one. Right here...right now.”¹

In a world suffering from war and rumors of war, environmental destruction, poverty, disease, inequity, and every other form of misery known to man, what was he talking about? What is so special, so desirable, about this time in history?

First of all, we are richer, far richer, than any human population that has ever preceded us. Richer not just in money and goods, but in food, health, longevity, education, culture, safety, and just about everything else that people need and crave.

Second, we are going to continue to get richer. The present state of human achievement is not a brief, shining moment that will all too quickly pass. We are on the verge of the greatest democratization of wealth and well-being that the world has ever known.

How do I know this? Mostly we understand the future by studying the past. Since this is not just an economics book but a picture book, one that tries to convey its message visually, let’s start right away with a picture of income per person in the United States from 1820 to the present and for the whole world from 1870 to the present:

Exhibit 1

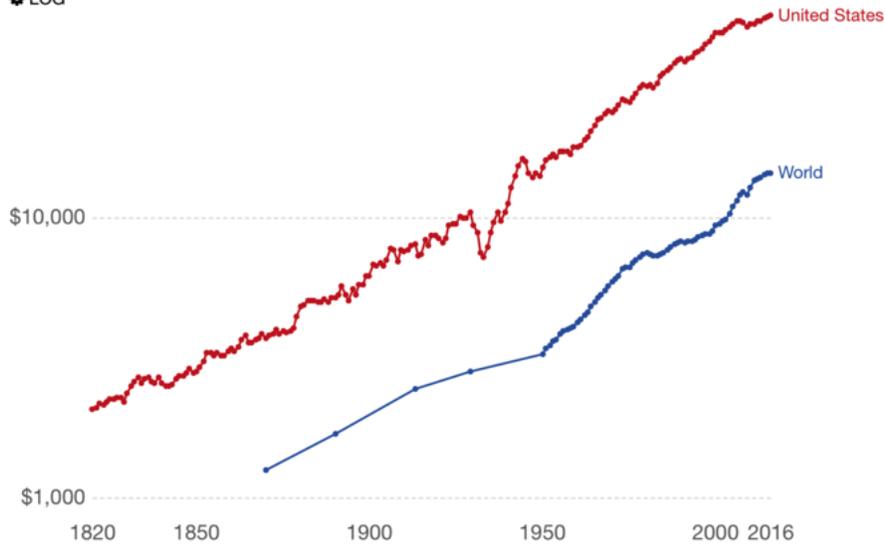
Income per capita, 1820-present (U.S.) and 1870-present (world), in today’s dollars

Obama, Barack. 2016. “Barack Obama: Now is the Greatest Time to be Alive.” *Wired*, October 12, <https://www.wired.com/2016/10/president-obama-guest-edits-wired-essay/>.

GDP per capita

Real GDP per capita is measured using US\$, inflation adjusted at prices of 2011. Multiple benchmarks allow cross-country income comparisons.

LOG



Source: Maddison Project Database (2018)

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Source: <https://ourworldindata.org/economic-growth>

Note: "Today's" dollars are 2011 dollars. To convert to 2018 dollars, multiply by 1.12.

Third, and most importantly, the growth shown for the United States in the top line of Exhibit 1 is finally being experienced by the world at large, including what are historically some of the world's poorest countries. We in the United States are not alone in our prosperity and in the promise of our future. We do not want to be alone. Economic opportunity, cultural achievement, and human betterment are a precious resource to be shared.

This book is concerned with the past, present, and future of the whole world. If I appear to be U.S.-centric, it's because much of the available data come from the United States, and because I am an American. The United Kingdom, where careful records have been kept for longer than in the U.S., is also an important source of information. But these are just examples. The forces that have enriched these countries can enrich anyone, and will.

Looking at Exhibit 1 a little more closely reveals a remarkable fact. In 2016, the average income of all the people in the world was \$14,574.² How far back do you have to go in history to find a year when the average income in the United States was that low? Take a guess. 1800? 1875? 1920?

² Again, in "2011 U.S. dollars" – that is, the income that each person earned in 2016 was equal to what \$14,574 would have bought in the United States in 2011. This number has been adjusted for "purchasing power parity," that is, the differences in the cost of living between various countries. Also, a minor technical point, these numbers are gross domestic product (GDP) *per capita*, not personal income, but the two concepts are very closely related.

It was 1949. The U.S. and its allies had just won World War II, we were enjoying the fruits of a postwar economic boom, and that time in our history is generally remembered fondly. We were the richest country in the world. *Yet the world today is as rich as we in America were then.*

That is what Barack Obama was talking about. While, in the Obama quote, I left out “in America” – he actually said, “right here in America, right now” – I wish he had said, “right here in the world, right now.” While the developed world has been rich for a while, the Great Fact of our time is that the developing world is catching up with us.³ It’s about time.

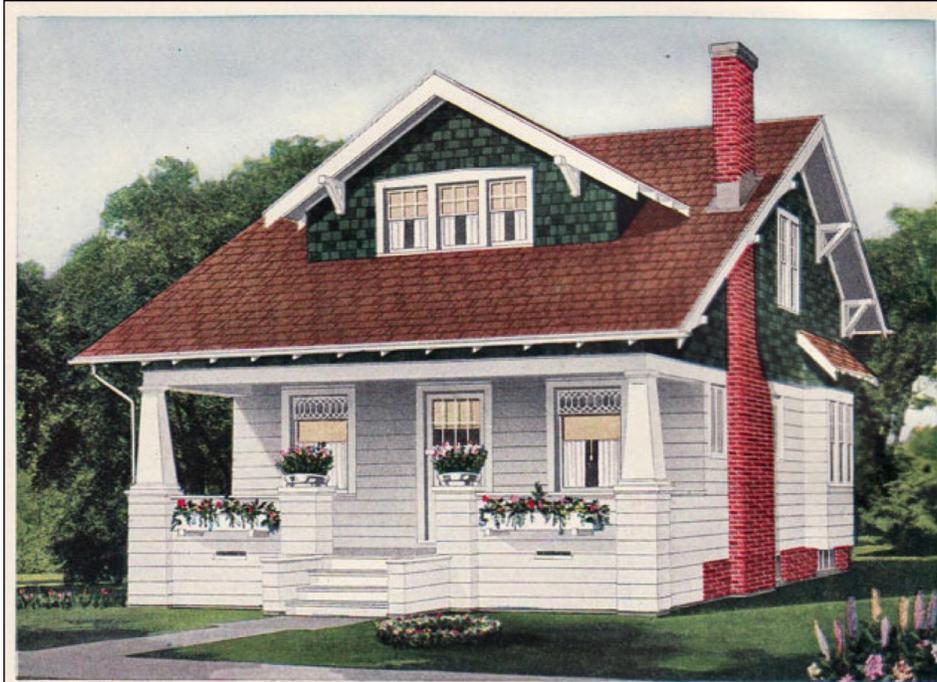
The charming little house

How well did the average American live in 1949, with an income of about \$14,500 in today’s money? One very visible measure of well-being is housing. Exhibit 2 shows a house that a typical American family might have lived in at that time. I did not select a new house, since most people live in houses that have been around a while; the house in the picture was designed and offered for sale in 1923. I also chose a slightly below average-sized house, to bias the illustration against the case I was trying to make.

Exhibit 2

A house that an American of average means in 1949 might have lived in

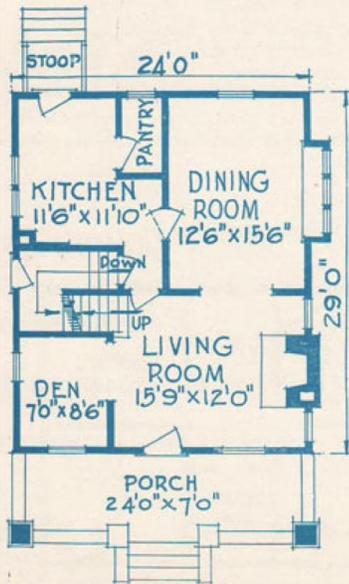
³ I am being a little cute with the use of Deirdre McCloskey’s term, “the Great Fact.” She uses it to refer to the fact of massive overall economic development since about 1800; I use it (at least in this instance) to refer to the catch-up of less developed countries to the more developed ones.



Size 24' 0" x 29' 0"

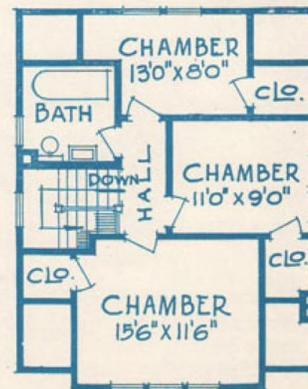
Design 10554-B

6 Rooms, Bath and Den



HERE is a modern home worthy of careful consideration. It offers large space at small cost, is handsome in appearance and very appropriate to any location. It is such homes as this that improves and increases values in the community. The environment of such a pleasant home cannot fail to bring out the best thoughts and deeds.

DIMENSIONS
 Width over all....29 ft.
 Depth over all....46 ft.
 Ceiling height, 1st fl. 9 ft.
 Ceiling height, 2nd fl. 8 ft.
 Height of basement. 7 ft.



*Our homes become
 a credit to yourself
 and your community.*

Source: <http://www.darts-design.com/1920-bungalow-house-plans/brilliant-1920-bungalow-house-plans-c-1923-bungalow-c-l-bowes-forward-gable-bungalow-1920s-house-plan/>

Now, here is what I've called the single most amazing fact in economic history: *the average person in the world lives about this well now.*⁴

It's true that patterns of human settlement have changed. An average (that is to say, moderately comfortable by 1949 American standards) family in a developing country is more likely to live in a high-rise, or in a multi-family unit with less green space around it. Today's average householder might also not live in a home that is quite as charming (but I am showing my old-fashioned, American biases; it's only because of those biases that this house appeals to me). And, today, she would have many useful devices that the 1949 American did not. Finally, she'd have access to all the information and knowledge in the world through her computer or smartphone.

A tale of three authors

This book will fill in the details of how this remarkable story of human betterment came to be true, what the problems and shortcomings are, and what solutions one might consider. I am emphatic about thinking as an economist does: about the existence of limits, the importance of tradeoffs, the power of incentives, and the tyranny of unforeseen consequences.

I rely heavily on researchers and authors who have tread this path already:

- Matt Ridley, who described “how prosperity evolves”;
- the late Hans Rosling, who documented the transition, achieved in different countries at various rates and at various times, from “poor and sick” to “rich and healthy”; and
- Deirdre McCloskey, who teaches that culture and values are forces even more powerful than pure economic calculation in determining human futures.

There are, of course, many other thinkers whom we'll meet along the way. The people who produce ideas worth thinking about are as important as the ideas themselves.

The remainder of this chapter introduces the work of Ridley and Rosling – little pieces of each, since their work is so voluminous. Their ideas are basic to understanding the book's main themes. Their contributions make it clear how *betterment* – McCloskey's term – has been the grand trend of the last 250 years, emerging at first in northwestern Europe and its overseas offshoots and then only quite recently spreading to much of the rest of the world..

⁴ To be more precise, the house is one that an American of statistically average income could have bought in 1949 if he or she had access, then, to what is the statistically average income in the world now; and, in addition, if the family size were identical between the American in 1949 and the buyer with the world average income now.

I'll get to McCloskey later in the book, but her insights were as much an inspiration to me in writing this book as Ridley's and Rosling's, and I wanted to give early mention to all three because of their influence in setting me along this path. In the subsequent sections, we'll begin to explore the idea of *Fewer* – the fact that the population explosion is ending and why it's happening. Then *Richer*, then *Greener*.

Matt Ridley: How prosperity evolves

It's a little surprising for an optimistic book on the future of the human race to start by citing the work of Matt Ridley, more properly 5th Viscount Ridley, member of the House of Lords, banker, and owner of land on which coal is mined.

But Ridley is also one of the world's finest popular science writers, an explainer of complicated things in simple terms (but not too simple). The variety of his interests is revealed by a few of his book titles: *The Origins of Virtue*, *The Evolution of Everything*, and *Genome: The Autobiography of a Species in 23 Chapters*.

For us, the book of Ridley's that is most relevant is *The Rational Optimist: How Prosperity Evolves*.⁵ It's a *tour de force* that explores how ideas "have sex" (examples: carriage + engine = automobile; telephone + computer = internet), creating prosperity out of, well, almost nothing.



Matt Ridley⁶

Although ideas having sex is a headline grabber, Ridley's main point is that prosperity evolves through specialization and trade. This idea is hardly new: it's also

⁵ Ridley, Matt. 2010. *The Rational Optimist: How Prosperity Evolves*. New York: HarperCollins.

⁶ Source: https://www.huffingtonpost.com/climate-nexus/ridleys-wall-street-journ_b_6870770.html. Photo is credited to Associated Press. I'd like to find a better source, since the article is critical of Ridley.

the principal theme of Adam Smith's 1776 book, *The Wealth of Nations*. But Ridley has new ways of explaining old concepts:

In the two hours since I got out of bed I have showered in water heated by North Sea gas, shaved using an American razor running on electricity made from British coal, eaten a slice of bread made from French wheat, spread with New Zealand butter and Spanish marmalade, then brewed a cup of tea using leaves grown in Sri Lanka, dressed myself in clothes of Indian cotton and Australian wool, with shoes of Chinese leather and Malaysian rubber, and read a newspaper made from Finnish wood pulp and Chinese ink...

How does this exotic bounty link back to Adam Smith and specialization? Ridley explains,

More to the point, I have also consumed minuscule fractions of the productive labour of many dozens of people... They were all, though they did not know it, working for me. In exchange for some fraction of my spending, each supplied me with some fraction of their work. They gave me what I wanted just when I wanted it – as if I were the Roi Soleil, Louis XIV, at Versailles in 1700...

But I'm not the Roi Soleil, the Sun King, who had 498 servants at his disposal *just to prepare meals*. How does my life differ from his?

[While Louis XIV]...was the richest of the rich..., the cornucopia that greets you [a person of average means] as you enter the supermarket dwarfs anything that [Louis] ever experienced... beef, chicken, pork, lamb, fish, prawns, scallops, eggs, potatoes, beans, carrots, cabbage, aubergine, kumquats, celeriac, okra, seven kinds of lettuce, cooked in olive, walnut, sunflower or peanut oil and flavoured with cilantro, turmeric, basil or rosemary...

It's not just delicious food, of course. Ridley reminds you that while "you have no woodcutters to bring you logs for the fire, ...the operators of gas rigs in Russia are clamouring to bring you clean central heating." You can select from affordable clothes made "all over Asia." A light switch will bring you the power of a thousand candles. In other words,

[Y]ou have far, far more than 498 servants at your immediate beck and call. Of course, unlike the Sun King's servants, these people work for many other people too, but from your perspective what is the difference? That is the magic that exchange and specialisation have wrought for the human species.

OK, you've gotten the flavor of Matt Ridley's way of thinking; enough for now. You wish your high school history teacher could have explained things like that. But, through technology that began with Gutenberg in the 1450s, he *can* be your history teacher. Now that the Internet exists, he can do so without your lifting a finger. Well, maybe one finger.

Hans Rosling: Poor and sick to rich and healthy

While Matt Ridley is a consummate armchair intellectual, Hans Rosling was a man of action – too much action for his own good, although he did great good for others. A medical doctor, Rosling died in 2017 of a disease he might have contracted while helping the suffering poor in East Africa.⁷ Best known for his startling lectures (distributed as TED talks) on improving health and wealth over time, his posthumous book, *Factfulness*, co-authored with Ola Rosling and Anna Rosling Rönnlund, has become a bestseller.⁸



Hans Rosling⁹

The world in 1800: Mostly poor and sick

As visual as Ridley is literary, Rosling tells his story in pictures (which were, when he presented them, movies). Exhibit 3, Rosling's famous bubble diagram, shows the world in 1800, with the area of each country's bubble drawn in proportion to its population and its location on the grid showing the income (x-axis) and life expectancy (y-axis) in that country. The colors denote geographic areas: Asia (red), Europe (yellow), and so forth.

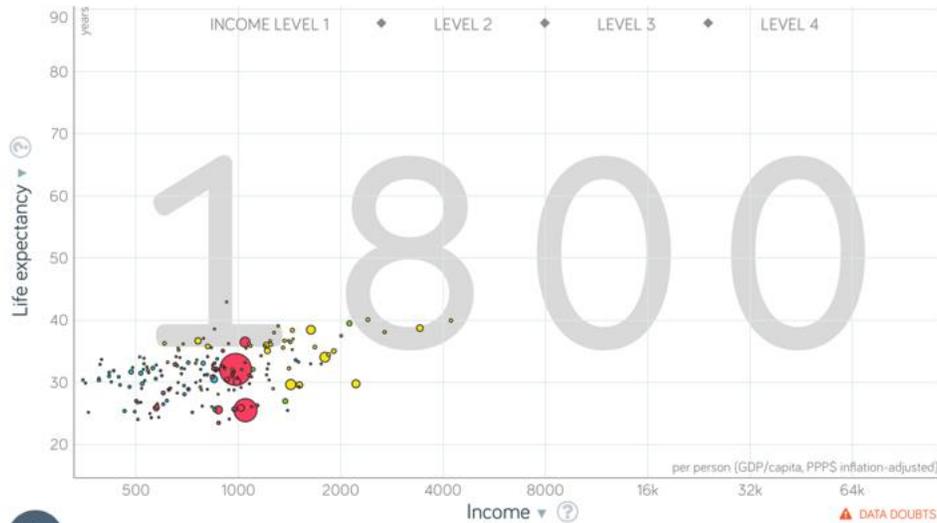
Exhibit 3

The world in 1800: Incomes (in 2011 dollars) and life expectancy at birth

⁷ It is not definitively known whether the hepatitis that apparently led to his death from liver failure and pancreatic cancer at age 68 was contracted through his medical work.

⁸ Rosling, Hans, with Ola Rosling and Anna Rosling Rönnlund. 2018. *Factfulness: Ten Reasons We're Wrong About the World--and Why Things Are Better Than You Think*. New York: Flatiron Books (Macmillan).

⁹ Source: https://www.ted.com/playlists/474/the_best_hans_rosling_talks_yo



Source: gapminder.org, Used by permission. A better design may be available.

Note that all of the countries in the world are squeezed into the lower left corner, with low incomes and short lives. I could have rescaled the diagram to make it easier to read, but the impact of using the same scale for 1800, 1948, and 2018 is very powerful. Few people, if any, dreamed in 1800 that the upper and rightmost reaches of this diagram would be filled with people (actually, bubbles representing people) two centuries later.

As Rosling exclaimed with great emotion in his TED talk, “All the countries were sick and poor!” In 1800, even the richest countries, the U.K. and the Netherlands, had life expectancies of about 40. Of course, infant mortality was responsible for much of the low life expectancy, and a great many people lived beyond 40. But the average person’s life was pretty miserable, even in the more advanced countries.

To illustrate, Nathan Mayer Rothschild (1777-1836), the richest man in the world in the early 1800s, died at 58 of an infection that could have been cured with about a dollar’s worth of penicillin if that substance had been discovered. There were many things that money couldn’t buy.¹⁰

The world in 1948: Maximum inequality, the end of the Great Divergence

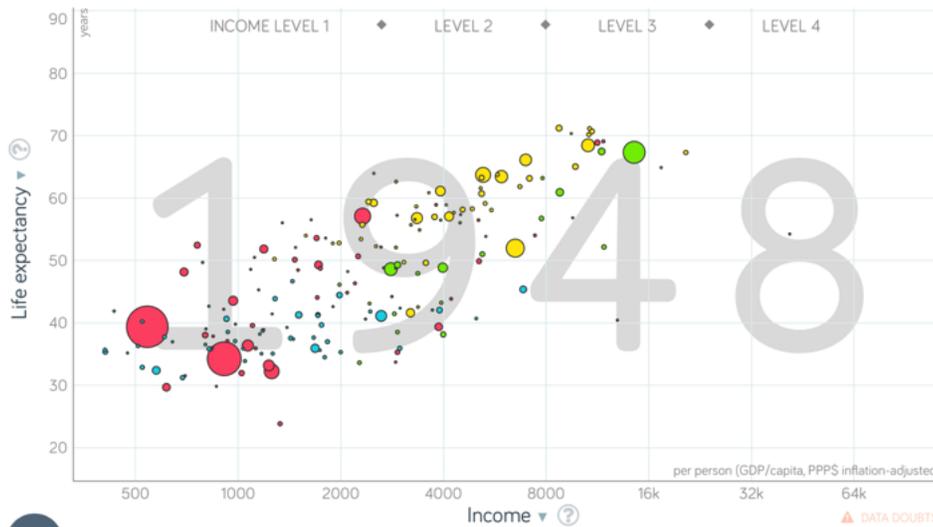
Skip ahead a century and a half, to 1948, which Rosling describes as “a great year.” World War II had finally come to an end, the economy was booming, a number of countries such as India and Israel were newly independent, and, Rosling adds, “I was born.”

¹⁰ Rothschild’s fortune, expressed in today’s money, has been estimated at a quarter trillion dollars – about as much as the net worth of Jeff Bezos, and Warren Buffett combined.

But, as Exhibit 4 shows, 1948 was also roughly the year of peak inequality in the world. The rich world was already pretty rich: the United States is the large green circle way off to the right. In terms of income, the poor world, much larger, had either made modest gains or had actually lost ground. (Life expectancies had risen everywhere.) Astonishingly, China, the largest red bubble, was considerably *poorer* than it had been in 1800, and India, the second largest red bubble, was a little poorer than in 1800. Asia (red) was poorer than Africa (blue). This splitting of the world into rich and poor spheres is sometimes called the Great Divergence.

Exhibit 4

The world in 1948: Some are rich, most are poor

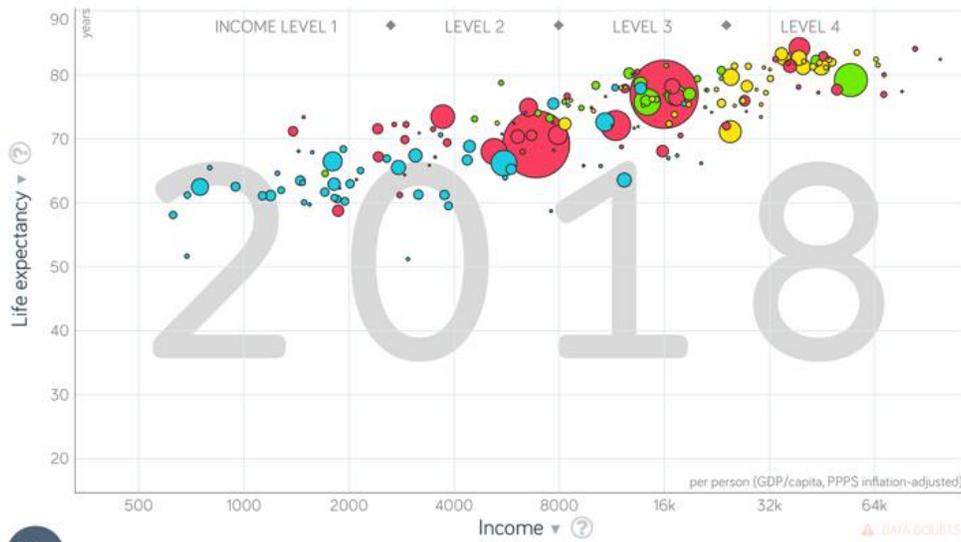


Source: gapminder.org. Used by permission. A better design may be available.

The world in 2018: The Great Convergence finally takes hold

After World War II, the Great Divergence began to reverse. At first, the poor countries that started to get ahead quickly were in southern Europe; then the Asian Tigers and parts of Latin America. But the really big change in the world picture came with the opening of China to market reforms in 1978 and India in 1991-1993. Exhibit 5 is the bubble chart as of today.

Exhibit 5
The world in 2018: Approaching a middle-income world



Source: gapminder.org, Used by permission. A better design may be available.

In Rosling’s TED talk, he practically jumps off the stage as he sees China’s bubble rise rapidly in the last quarter-century – he exclaims that the poor countries are “getting healthier and healthier!” His enthusiasm for the modern period contrasts with his view of World War I and the 1918 influenza epidemic – “what a catastrophe!” – which is revealed as a dramatic, short-lived plunge (not shown here) in length of life.

What does Rosling think of the current state of the world? For the first time in history,

Most people today live in the middle, [although] some Africans were stuck in civil war and some were hit by HIV. But there are huge differences...between the best of countries and the worst of countries. And there are also huge inequalities within countries... Take China – I can split it into provinces. Shanghai...has the same wealth and health as Italy...[but] the rural parts are like Ghana.

And yet, despite the enormous disparities today, we have seen 200 years of remarkable progress. That huge historical gap between the West and the rest is now closing. We have become an entirely new *converging* world. And I see a clear trend into the future: with aid, trade, technology, and peace, it is fully possible that everyone can make it into the healthy, wealthy corner.¹¹

¹¹ Although Rosling produced many TED talks, his best-known one, which really should not be missed, is at <https://www.youtube.com/embed/jbkSRLYSojo>. The quotes are from this talk.

Conclusion

We'll revisit these authors as we document, in the *Richer* section of this book, the improvement over the last 250 years in food, health, wealth, energy, education, technology, safety, and just about every other aspect of life. But first, we explore the key reason why we're so optimistic about the future: *the population explosion is coming to an end*, massively reducing pressure on the environment, the food supply, and our living space. The next section, *Fewer*, explores this unique hinge event in the world's history.