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## INTRODUCTION

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# What This Book Is About

**LIFE IS BETTER NOW** than at almost any time in history. More people are richer and fewer people live in dire poverty. Lives are longer and parents no longer routinely watch a quarter of their children die. Yet millions still experience the horrors of destitution and of premature death. The world is hugely unequal.

Inequality is often a *consequence* of progress. Not everyone gets rich at the same time, and not everyone gets immediate access to the latest life-saving measures, whether access to clean water, to vaccines, or to new drugs for preventing heart disease. Inequalities in turn affect progress. This can be good; Indian children see what education can do and go to school too. It can be bad if the winners try to stop others from following them, pulling up the ladders behind them. The newly rich may use their wealth to influence politicians to restrict public education or health care that they themselves do not need.

This book tells stories of how things got better, how and why progress happened, and the subsequent interplay of progress and inequality.

## ***The Great Escape: The Movie***

*The Great Escape*, a famous movie about prisoners of war in World War II, is based on the exploits of Roger Bushell (in the film, Roger Bartlett, played by Richard Attenborough), a South African in the Royal Air Force who was shot down behind German lines, and who repeatedly escaped and was repeatedly recaptured.<sup>1</sup> In his third attempt, as depicted in the film—the Great Escape—250 prisoners escaped with him through tunnels dug from Stalag Luft III. The movie tells the story of how the escape was planned; the ingenuity that went into constructing three tunnels, Tom, Dick, and Harry; and the improvisation and technical skills that went into making civilian clothes and forging papers, all under the eyes of the watchful guards. All but three of the POWs were eventually recaptured, and Bushell himself was executed on direct orders from Hitler. Yet the emphasis of the movie is not on the limited success of this particular escape, but on man's unquenchable desire for freedom, even under impossibly difficult circumstances.

In this book, when I speak of freedom, it is the freedom to live a good life and to do the things that make life worth living. The absence of freedom is poverty, deprivation, and poor health—long the lot of much of humanity, and still the fate of an outrageously high proportion of the world today. I will tell stories of repeated escapes from this kind of prison, how and why they came about, and what happened afterwards. It is a story of material and physiological progress, of people becoming richer and healthier, of escapes from poverty.

A phrase in my subtitle, “the origins of inequality,” comes from thinking about the POWs who did not escape. All of the POWs could have stayed where they were, but instead a few escaped, some died, some were returned to the camp, and some never left. This is in the

nature of most “great escapes”: not everyone can make it, a fact that in no way makes the escape less desirable or less admirable. Yet when we think about the consequences of the escape, we need to think not just about those who were the heroes of the movie, but also about those who were left behind in Stalag Luft III and other camps. Why should we care about them? The movie certainly did not; they are not the heroes and are incidental to the story. There is no movie *The Great Left Behind*.

Yet we *should* think about them. After all, the number of POWs in German camps who did not escape was far greater than the few who did. Perhaps they were actually harmed by the escape, if they were punished or if their privileges were withdrawn. One can imagine that the guards made it even harder to escape than before. Did the escape of their fellow POWs inspire those still in the camps to escape too? They certainly could have learned from the escape techniques developed by the Great Escapees, and they might have been able to avoid their mistakes. Or were they discouraged by the difficulties or by the very limited success of the Great Escape itself? Or perhaps, jealous of the escapees and pessimistic about their own chances, they became unhappy and depressed, making camp conditions even worse.

As with all good movies, there are other interpretations. The success and exhilaration of the escape are all but extinguished by the end of the film; for most of the escapees, their freedom is only temporary. Humanity’s escape from death and deprivation began around 250 years ago, and it goes on to this day. Yet there is nothing to say that it must continue forever, and many threats—climate change, political failures, epidemics, and wars—could bring it to an end. Indeed, there were many pre-modern escapes in which rising living standards were choked off by precisely such forces. We can and should celebrate the successes, but there is no basis for a thoughtless triumphalism.

## Economic Growth and the Origins of Inequality

Many of the great episodes of human progress, including those that are usually described as being entirely good, have left behind them a legacy of inequality. The Industrial Revolution, beginning in Britain in the eighteenth and nineteenth centuries, initiated the economic growth that has been responsible for hundreds of millions of people escaping from material deprivation. The other side of the same Industrial Revolution is what historians call the “Great Divergence,” when Britain, followed a little later by northwestern Europe and North America, pulled away from the rest of the world, creating the enormous gulf between the West and the rest that has not closed to this day.<sup>2</sup> Today’s global inequality was, to a large extent, created by the success of modern economic growth.

We should not think that, prior to the Industrial Revolution, the rest of the world had always been backward and desperately poor. Decades before Columbus, China was advanced and rich enough to send a fleet of enormous ships under Admiral Zheng He—aircraft carriers relative to Columbus’s rowboats—to explore the Indian Ocean.<sup>3</sup> Three hundred years before even that, the city of Kaifeng was a smoke-filled metropolis of a million souls whose belching mills would not have been out of place in Lancashire eight hundred years later. Printers produced millions of books that were cheap enough to be read by people of even modest means.<sup>4</sup> Yet those eras, in China and elsewhere, were not sustained, let alone taken as starting points for ever-increasing prosperity. In 1127, Kaifeng fell to an invasion of tribes from Manchuria who had been rashly employed to help it wage war; if you enlist dangerous allies, you had better make sure they are well paid.<sup>5</sup> Economic growth in Asia kept starting and kept being choked off, by rapacious rulers, by wars, or by both.<sup>6</sup> It is only in the last two hundred and fifty years that long-term and continuing eco-

conomic growth in some parts of the world—but not in others—has led to persistent gaps between countries. Economic growth has been the engine of international income inequality.

The Industrial Revolution and the Great Divergence are among the more benign escapes in history. There are many occasions when progress in one country was at the *expense* of another. The Age of Empire in the sixteenth and seventeenth centuries, which preceded the Industrial Revolution and helped cause it, benefited many in England and Holland, the two countries that did best in the scramble. By 1750, laborers in London and Amsterdam had seen their incomes grow relative to laborers in Delhi, Beijing, Valencia, and Florence; English workers could even afford a few luxuries, such as sugar and tea.<sup>7</sup> Yet those who were conquered and plundered in Asia, Latin America, and the Caribbean were not only harmed at the time but in many cases saddled with economic and political institutions that condemned them to centuries of continuing poverty and inequality.<sup>8</sup>

Today's globalization, like earlier globalizations, has seen growing prosperity alongside growing inequality. Countries that were poor not long ago, like China, India, Korea, and Taiwan, have taken advantage of globalization and grown rapidly, much faster than have today's rich countries. At the same time, they have moved away from still poorer countries, many of them in Africa, creating new inequalities. As some escape, some are left behind. Globalization and new ways of doing things have led to continuing increases in prosperity in rich countries, though the rates of growth have been slower—not only than in the fast-growing poor countries, but also than they used to be in the rich countries themselves. As growth has slowed, gaps between people have widened *within* most countries. A lucky few have made fabulous fortunes and live in a style that would have impressed the greatest kings and emperors of centuries past. Yet the majority of people have seen less improvement in their material prosperity, and in

some countries—the United States among them—people in the middle of the income distribution are no better off than were their parents. They remain, of course, many times better off than still earlier generations; it is not that the escape never happened. Yet many today have good reasons to worry whether their children and grandchildren will look back to the present not as a time of relative scarcity but as a long-lost golden age.

When inequality is the handmaiden of progress, we make a serious mistake if we look only at average progress or, worse still, at progress only among the successes. The Industrial Revolution used to be told as a story of what happened in the leading countries, ignoring the rest of the world—as if nothing was happening there, or as if nothing had *ever* happened there. This not only slighted the majority of mankind but also ignored the unwilling contributions of those who were harmed or, at best, just left behind. We cannot describe the “discovery” of the New World by looking only at its effects on the Old. Within countries, the average rate of progress, such as the rate of growth of national income, cannot tell us whether growth is widely shared—as it was in the United States for a quarter of a century after World War II—or is accruing to a small group of very wealthy people—as has been the case more recently.

I tell the story of material progress, but that story is one of *both* growth and inequality.

## Not Just Income, but Health Too

Progress in health has been as impressive as progress in wealth. In the past century, life expectancy in the rich countries increased by thirty years, and it continues to increase today by two or three years every ten years. Children who would have died before their fifth birthdays now live into old age, and middle-aged adults who once would have

died of heart disease now live to see their grandchildren grow up and go to college. Of all the things that make life worth living, extra years of life are surely among the most precious.

Here too progress has opened up inequalities. The knowledge that cigarette smoking kills has saved millions of lives in the past fifty years, yet it was educated, richer professionals who were the first to quit, opening up a health gap between rich and poor. That germs caused disease was new knowledge around 1900, and professionals and educated people were the first to put that knowledge into practice. We have known for the best part of a century how to use vaccines and antibiotics to stop children from dying, yet around two million children still die every year from vaccine-preventable disease. Rich people are treated in world-class modern medical facilities in São Paulo or Delhi while, a mile or two away, poor children are dying of malnutrition and easily preventable disease. The explanation for why progress should be so uneven differs from case to case; the reason why poor people are more likely to smoke is not the same as the reason why so many poor children are not vaccinated. These accounts are to come, but for now the point is simply that health progress creates gaps in health just as material progress creates gaps in living standards.

These “health inequalities” are one of the great injustices of the world today. When new inventions or new knowledge comes along, *someone* has to be the first to benefit, and the inequalities that come with waiting for a while are a reasonable price to pay. It would be absurd to wish that knowledge about the health effects of smoking had been suppressed so as to prevent new health inequalities. Yet poor people are still more likely to smoke, and the children who are dying today in Africa would not have died in France or the United States even sixty years ago. Why do these inequalities persist, and what can be done about them?



This book is mostly about two topics: material living standards and health. They are not the only things that matter for a good life, but they are important in and of themselves. Looking at health and income together allows us to avoid a mistake that is too common today, when knowledge is specialized and each specialty has its own parochial view of human wellbeing. Economists focus on income, public health scholars focus on mortality and morbidity, and demographers focus on births, deaths, and the size of populations. All of these factors contribute to wellbeing, but none of them *is* wellbeing. The statement is obvious enough, but the problems that arise from it are not so obvious.

Economists—my own tribe—think that people are better off if they have more money—which is fine as far as it goes. So if a few people get a lot more money and most people get little or nothing, but do not lose out, economists will usually argue that the world is a better place. And indeed there is enormous appeal to the idea that, as long as no one gets hurt, better off is better; it is called the Pareto criterion. Yet this idea is completely undermined if wellbeing is defined too narrowly; people have to be better off, or no worse off, in *wellbeing*, not just in material living standards. If those who get rich get favorable political treatment, or undermine the public health or public education systems, so that those who do less well lose out in politics, health, or education, then those who do less well may have gained money but they are *not* better off. One cannot assess society, or justice, using living standards alone. Yet economists routinely and incorrectly apply the Pareto argument to income, ignoring other aspects of wellbeing.

Of course, it is also a mistake to look at health, or at any one *component* of wellbeing, by itself. It is a good thing to improve health services, and to make sure that those who are in medical need are looked after. But we cannot set health priorities without attention to their

cost. Nor should we use longevity as a measure of social progress; life in a longer-lived country is better, but not if the country is a totalitarian dictatorship.

Wellbeing cannot be judged by its average without looking at inequality, and wellbeing cannot be judged by one or more of its parts without looking at the whole. If this book were much longer, and its author knew much more, I would write about other aspects of wellbeing, including freedom, education, autonomy, dignity, and the ability to participate in society. But even thinking about health and income in the same book will free us from the mistakes that come from looking at one or the other alone.

### **How Does Progress Come About?**

There is little doubt that our ancestors would have liked to have what we have now, could they have imagined our world. And there is no reason to think that parents ever become inured to watching their children die; if you doubt me (and it is only one account among many), read Janet Browne's description of the tortures suffered by Charles Darwin when his first two children died.<sup>9</sup> The desire to escape is always there. Yet the desire is not always fulfilled. New knowledge, new inventions, and new ways of doing things are the keys to progress. Sometimes inspiration comes from lone inventors who dream up something quite different from what has gone before. More often, new ways of doing things are by-products of something else; for example, reading spread when Protestants were required to read the Bible for themselves. More often still, the social and economic environment creates innovations in response to need. Wages were high in Britain after its success in the Age of Empire, and those high wages, together with plentiful coal, provided incentives for inventors and manufacturers to come up with the inventions that powered the

Industrial Revolution.<sup>10</sup> The British Enlightenment, with its relentless search for self-improvement, provided fertile intellectual soil in which those inventions were more likely to come about.<sup>11</sup> The cholera epidemics of the nineteenth century were an impetus for crucial discoveries about the germ theory of disease. And the well-funded medical research arising from the HIV/AIDS pandemic of today uncovered the virus and developed medicines that, while not curing the disease, greatly extend the lives of those who are infected. Yet there are also cases in which inspiration never came, in which needs and incentives failed to produce a magic solution, or even a mundane one. Malaria has afflicted human beings for tens of thousands of years, perhaps even for all of human history, and we still have no comprehensive way of preventing or treating it. Necessity may be the mother of invention, but there is nothing that guarantees a successful pregnancy.

Inequality also influences the process of invention, sometimes for good and sometimes for ill. The sufferings of the deprived are a force for finding new ways to close the gaps, if only because the fact that some are not deprived demonstrates that the deprivation need not exist. A good example is the discovery of oral rehydration therapy in the refugee camps of Bangladesh in the 1970s; millions of children suffering from diarrhea have been saved from dehydration and possible death by a cheap and easily made remedy. But it works the other way too. Powerful interests have much to lose from new inventions and new ways of doing things. Economists think of eras of innovation as powering up waves of “creative destruction.” New methods sweep away old methods, destroying the lives and livelihoods of those who were dependent on the old order. Globalization today has hurt many such groups; importing cheaper goods from abroad is like a new way of making them, and woe betide those who earned their livings making such goods at home. Some of those who would lose out, or who

fear that they might be hurt, are politically powerful and can outlaw or slow down the new ideas. The emperors of China, worried about threats to their power from merchants, banned oceangoing voyages in 1430, so that Admiral Zheng He's explorations were an end, not a beginning.<sup>12</sup> Similarly, Francis I, Emperor of Austria, banned railways because of their potential to bring about revolution and threaten his power.<sup>13</sup>

### Why Does Inequality Matter?

Inequality can spur progress or it can inhibit progress. But does it matter in and of itself? There is no general agreement on this: the philosopher and economist Amartya Sen argues that even among the many who believe in some form of equality, there are very different views about *what* it is that ought to be made equal.<sup>14</sup> Some economists and philosophers argue that inequalities of income are unjust, unless they are necessary for some greater end. For example, if a government were to guarantee the same income for all of its citizens, people might decide to work a lot less so that even the very poorest might be worse off than in a world in which some inequality is allowed. Others emphasize equality of opportunity rather than equality of outcomes, though there are many versions of what equality of opportunity means. Yet others see fairness in terms of proportionality: what each person receives should be proportional to what he or she contributes.<sup>15</sup> On this view of fairness, it is easy to conclude that income *equality* is unfair if it involves redistributing from rich to poor.

In this book, the arguments I emphasize are those about what inequality does, whether inequality helps or hurts, and whether it matters what kind of inequality we are talking about. Does society benefit from having very rich people when most are not rich? If not, does society benefit from the rules and institutions that allow some to

get much richer than the rest? Or do the rich harm everyone else—for example by making it difficult for the nonrich to affect how society is run? Are inequalities in health like inequalities in income, or are they somehow different? Are they always unjust, or can they sometimes serve a higher good?

## A Road Map

The aim of the book is to provide an account of wealth and health around the world, focusing on today but also looking back to see how we got to where we are. Chapter 1 is an introductory overview. It gives a snapshot of the world from outer space: a map of where life is good and of where it is not good. It documents a world in which there has been great progress in reducing poverty and lowering the chances of death, but also a world of difference—of huge inequalities in living standards, in life chances, and in wellbeing.

The three chapters of Part I are about health. They look at how the past has shaped our health today, why the hundreds of thousands of years that people spent as hunter-gatherers are relevant for understanding health today, and why the mortality revolution that began in the eighteenth century set patterns that are echoed in contemporary health advances. The move to agriculture, seven to ten thousand years ago, made it possible to grow more food, but it also brought new diseases and new inequalities as hierarchic states replaced egalitarian bands of hunter-gatherers. In England of the eighteenth century, globalization brought new medicines and new treatments that saved many lives—but mostly the lives of those who could afford them. While the new methods eventually lowered death rates for everyone, it was the aristocracy whose life chances first pulled away from those of the common people. By the end of the nineteenth century, the development and acceptance of the germ theory of disease had set the

stage for another explosion of progress as well as for the opening up of another great chasm—this time between the life chances of those who were born in rich countries and the chances of those who were not.

I tell the story of the fight to save the lives of children in the world that was left behind. This is a story of progress, mostly after World War II—a catch-up that would begin to close the chasm that had begun to open in the eighteenth century. It is a story with many great successes, in which antibiotics, pest control, vaccinations, and clean water saved millions of children, and in which life expectancy sometimes increased at (the apparently impossible rate of) several years each year. The chasm in life expectancy between the poor and rich worlds was narrowed, but not closed. There were also terrible setbacks, including a catastrophic man-made famine in China between 1958 and 1961, and the recent HIV/AIDS epidemic that, for several African countries, wiped out three decades of progress against mortality. Even without those disasters, much remains undone; many countries do not have adequate systems for routine health care, many children still die just because they were born in the “wrong” country, and there remain places—most notably but not only in India—where half of the children are seriously malnourished.

One of the (good) reasons why the mortality gap between rich and poor has not closed more rapidly is because mortality has been falling in rich countries too, but in a very different way, benefiting children less and adults more. The final installment of the health story is about mortality decline in rich countries, about how and why the gap in life expectancy between men and women has been closing, about the (huge) role played by cigarette smoking, and about why the fight against heart disease has been so much more successful than the fight against cancer. Once again we see progress coupled with growing health inequalities, just as happened in Britain in the late eighteenth century.

The two chapters of Part II are about material living standards. I start with the United States; although America is indeed exceptional and is often extreme, for example in its degree of income inequality, the forces at work apply to other rich countries too. Economic growth brought new prosperity to Americans after World War II, but growth had been slowing, decade by decade, even before the Great Recession. Postwar growth brought marked reductions in poverty, especially among African-Americans and the elderly, and there was little expansion in inequality. Until the early 1970s, the United States was the very model of a modern major economy. Since then, the story has been one of less growth and greater inequality, the latter driven especially by runaway growth in incomes at the very top of the distribution. As always, there is a good side to this inequality: rewards to education, to innovation, and to creativity are higher than they have ever been. But the United States is also a good example of the dark side, of the political and economic threats to wellbeing that come from plutocracy.

I also look at living standards in the world as a whole. Here is the story of perhaps the greatest escape in all of human history, and certainly the most rapid one: the reduction in global poverty since 1980. Much of it was driven by the performance of the two largest countries in the world, China and India, where recent economic growth has transformed the lives of more than a billion people. That global poverty should have fallen goes against the almost universally accepted doomsday predictions of the 1960s, that the population explosion would doom the world to deprivation and disaster. The world has done much better than the pessimists predicted. Yet a billion or so people *still* live in terrible destitution; while many have escaped, many have been left behind.

Part III consists of a single chapter, an epilogue in which I stop telling stories and argue for what ought to be done—and more impor-

tantly for what ought not to be done. I believe that we—meaning those of us who are fortunate enough to have been born in the “right” countries—have a moral obligation to help reduce poverty and ill health in the world. Those who have escaped—or at least have escaped through the struggles of their predecessors—must help those who are still imprisoned. For many people, that moral duty is fulfilled by foreign aid, through the efforts of national governments (most of whom have official aid agencies), through international organizations like the World Bank or the World Health Organization, or through the thousands of nongovernmental aid organizations that operate nationally and internationally. While some of this aid has clearly done good—and I think the case for assistance to fight disease such as HIV/AIDS or smallpox is strong—I have come to believe that most external aid is doing more harm than good. If it is undermining countries’ chance to grow—as I believe it is—there is no argument for continuing it on the grounds that “we must do something.” The something that we should do is to stop.

The Postscript is a coda that returns to the main themes. It asks whether we can expect the real Great Escape—unlike the movie *The Great Escape*—to have a happy ending.

## Measuring Progress, Measuring Inequality

Whenever it is possible to do so, I support my arguments with data, and almost always with graphs. Progress cannot be coherently discussed without definitions and supporting evidence. Indeed, enlightened government is impossible without the collection of data. States have been counting their populations for thousands of years—the Roman census that sent Mary and Joseph to Bethlehem, Joseph’s city of birth, is a famous example. The U.S. Constitution mandates that there be a census of the population every ten years; without it, a



fair democracy is not possible. Even earlier, in 1639, the colonists in present-day Massachusetts mandated a complete count of births and deaths; without such vital statistics, public health policy is blind.

Not the least of the health problems faced by the poor countries of the world today is the lack of good information on the numbers of people who die, let alone on what causes their deaths. There is no lack of invented and interpolated numbers from international agencies, but it is not always widely understood that these are not an adequate basis for policy or for thinking about or assessing external aid. The need to do something tends to trump the need to understand what needs to be done. And without data, anyone who does anything is free to claim success. As I go along, I will try to explain the basis for my numbers, where they come from and how credible (or incredible) they are. I will also try to make the case that the missing data are a scandal that is not being adequately addressed.

Unless we understand how the numbers are put together, and what they mean, we run the risk of seeing problems where there are none, of missing urgent and addressable needs, of being outraged by fantasies while overlooking real horrors, and of recommending policies that are fundamentally misconceived.

## **National Happiness and National Income**

Much of this book is about material wellbeing, typically measured by income, the amount of money that people have to spend or to save. Money must always be adjusted by the costs of what people buy, but, that done, it is a reasonable indicator of people's ability to buy the things on which material wellbeing depends. Yet many argue that too much attention is given to income. A good life certainly means more than money, but the argument often goes further, to claim that money

does nothing to make people's lives better, at least once basic needs have been met.

Some evidence for this argument comes from happiness surveys that show, it is claimed, that money does little or nothing to make people happy except for those in poverty. If this is correct, and if happiness is the right way to measure wellbeing, then much of my argument would be undercut. So it is good to start out by considering how happiness relates to money. The discussion will also give me the chance to introduce and explain a way of drawing graphs that I will use throughout the book.

Surveys often ask people how their lives are going, for example by reporting how satisfied they are with their lives in general. These data are often referred to as measures of "happiness," though it is easy to think of examples in which unhappy people believe that their lives are going well, or vice versa. Indeed, as we shall see, it is a bad mistake to confuse life satisfaction and happiness; the former is an overall judgment about life that comes from consideration, while the latter is an emotion, a mood, or a feeling, which is part of experiencing life.<sup>16</sup>

The Gallup Organization asks people around the world to rate their lives by imagining a "ladder of life" with eleven steps; the bottom step, 0, is "the worst possible life for you" while 10 is "the best possible life for you." Each respondent is asked to indicate "on which step of the ladder would you say you personally feel you stand at this time?" We can use these data to see how countries do relative to one another and, in particular, whether higher-income countries do better on this measure.

Figure 1 shows the average life evaluation for each country against its national income per head, or more precisely gross domestic product (GDP) per head; it shows the averages for the years 2007 through 2009. Income is measured in U.S. dollars that have been adjusted for

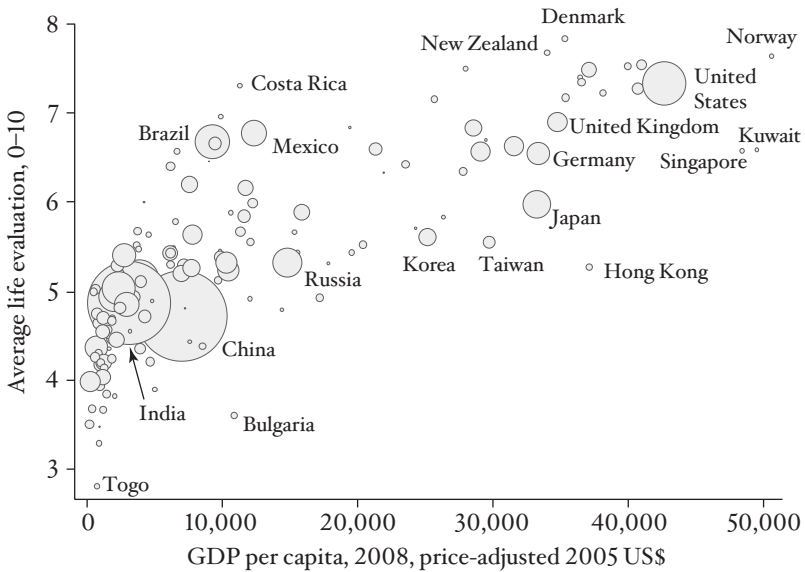


FIGURE 1 Life evaluation and GDP per capita.

differences in price levels between countries; in Chapter 6, I will explain where these numbers come from as well as the considerable reservations that should be attached to them. The circles in the figure have areas proportional to the populations of each country; the two big countries on the left are China and India, and the big country at the top right is the United States. I have marked a few other countries that are particularly interesting.

We can see at once that the people who live in the really poor countries on the left of the figure are generally very dissatisfied with their lives; not only are they poor in income, but they also rate their lives poorly. At the other end of the world, in the United States and the other rich countries, people have high incomes and evaluate their lives highly. The worst country is Togo—one of the poorest countries in the world, where people have very little freedom of any kind—while

the best is Denmark—a rich, free country. The Scandinavian countries regularly outrank the United States in these comparisons, but the average life evaluation in the United States is still among the best in the world. There are lots of exceptions to the rule of income. East Asian countries and former communist countries tend to have low life evaluations—Bulgaria is the most extreme example—while countries in Latin America tend to do relatively well. Income is certainly not the only thing that matters in people’s evaluations of their lives.

If we look at the bottom left of the picture, where the poor countries are, we see that life evaluation rises with national income quite rapidly. After we pass China and India, traveling from bottom left to top right, the rise in life evaluation with income is a bit less steep, and once we get to Brazil and Mexico the life evaluation scores are close to seven out of ten, only a point or so less than those for the really rich countries at the top right. Income matters more among the very poor than among the very rich. Indeed, it is very tempting to look at the picture and conclude that once GDP per capita reaches around \$10,000 a year, more money does nothing to improve people’s lives, and many have made this claim.<sup>17</sup> Yet this claim is false.

To explain why money matters even among the rich countries, we need to redraw Figure 1 in a somewhat different form. When we think about money, we think in dollar terms, but we also think in percentage terms. On the rare occasions when my Princeton colleagues discuss their salaries with one another, they are likely to report that one got a 3 percent increase, while another got 1 percent. Indeed, the dean is more likely to signal his pleasure or displeasure through the size of the percentage increase than through the size of the increase in dollars. While a 1 percent increase means more dollars to someone who earns \$200,000 a year than a 2 percent increase means to someone earning \$50,000 a year, the latter will (correctly)

feel that she has done better in the past year. Percentage changes become the basic unit in these sorts of calculations; 10 percent is the same no matter what the baseline income is.

We can do just this for the data in Figure 1, though the differences between countries are so huge that it makes sense to think, not in terms of percentages, but in terms of the number of times income is quadrupled. Think of \$250 a year as the base; only Zimbabwe and the Democratic Republic of the Congo (DRC) are at or below \$250. Countries such as Uganda, Tanzania, and Kenya are near \$1,000, four times the base; China and India are another fourfold increase over Tanzania and Kenya, near the marker for sixteen times the base. Mexico and Brazil are four times China and India, and the world's richest countries have incomes that are four times larger still; they are 256 times richer than the world's poorest countries. (In Chapter 6 I shall explain why these numbers should only be taken as rough guides.) Instead of using the dollar value of incomes to compare with life evaluations, we can use this scheme of fourfold comparison, marking off units as 4 times, 16 times, 64 times, and 256 times the base, and this is what is done in Figure 2.

Figure 2 contains *exactly the same data* as Figure 1, but income is now plotted on this 1, 4, 16, 64, and 256 scale. I have, however, marked these five points by their original dollar amounts, \$250 through \$64,000 so that the link with income itself is clear. Moving along the horizontal axis from one tick to the next always represents a fourfold increase in income. More generally, equal distances from left to right represent equal percentage increases in income, not equal dollar amounts, as in Figure 1. A scale with this property is known as a *logarithmic* (or log) scale, and we will see it again.

Although the only change is in the labeling of the horizontal axis, Figure 2 looks completely different from Figure 1. The flattening among the rich countries has vanished, and the countries now lie

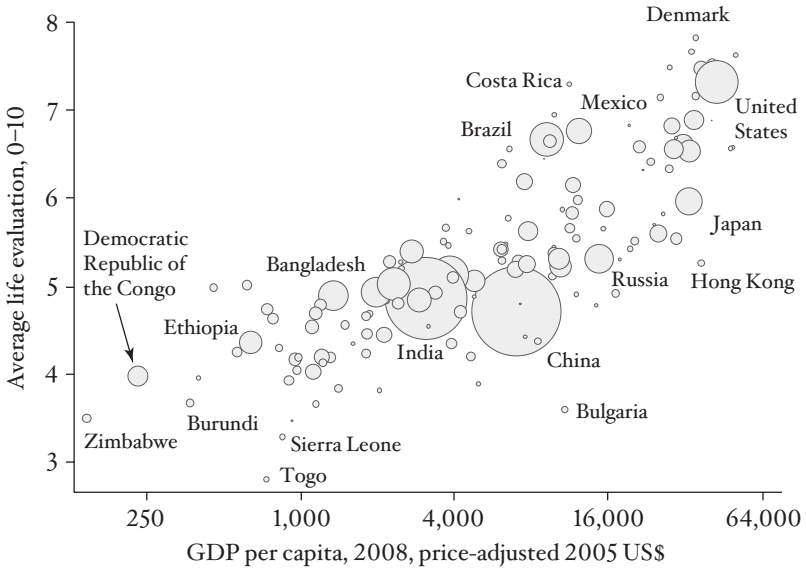


FIGURE 2 Life evaluation and GDP per capita on a log scale.

more or less along a straight line. What this says is that equal *percentage* differences in income produce equal absolute shifts in life evaluation. On average, if we move from one country to another whose per capita income is four times as high, the life evaluation score will move by about one point on a zero to ten scale, and this is true whether we are moving between poor countries or rich ones. And just to remove any misunderstanding: yes, there are lots of exceptions, and lots of countries are higher or lower than we might expect them to be given their national incomes. It is not always true that all rich countries have higher life evaluations than all the countries that are poorer; China and India are two notable examples. But on average over all the countries, rich or poor, a fourfold difference in incomes comes with a one-point increase in the evaluation of life.

Is Figure 1 right, or is Figure 2 right? Both are, just as it is true that the professor who got a 2 percent raise on \$50,000 got a raise of

\$1,000 while the professor who got a 1 percent raise on \$200,000 got \$2,000. The same percentage increase involves more money if we move from India to the United States than if we move from the DRC to India, even though both involve a fourfold shift. Figure 1 tells us that the same *absolute* increase in dollars means less to the life satisfaction of a rich person than to a poor person, while Figure 2 tells us that the same *percentage* increase makes for the same increase in life satisfaction.

Life evaluation scores capture important aspects of life beyond income, and this has led to arguments that we should downplay the importance of income. This is fine if the implication is to consider other aspects of wellbeing, like health or education or the ability to participate in society. It is not fine if the implication is that income is not worth anything, or that income adds nothing to life for those of us who live in countries richer than Mexico. It is even less fine if the argument is that we should focus on life evaluations and ignore everything else. Life evaluation measures are far from perfect. People are not always sure what the questions mean, or how they are expected to answer, and international comparisons can be compromised by national differences in reporting styles. In many places, “mustn’t grumble” or “not so bad” is about as good as anyone would ever claim, but people in other cultures are more exuberant about their feelings and less reticent about their successes. So Figure 2 is important because it shows that focusing on income is not seriously misleading. Richer countries have higher life evaluations, even among the world’s richest countries.

I shall return to measures of happiness and life satisfaction in the next chapter, but my main purpose there is to look more widely at the wellbeing of the world today—at those who have made the Great Escape, and then some, as well as those who are still waiting.

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