People, Not Ratios

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By Ryan Young and Iain Murray

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Executive Summary

The debate over income inequality became especially heated following the English-language publication of French economist Thomas Piketty's bestselling book, *Capital in the Twenty-First Century.* The controversy has generated more heat than light. This paper seeks to clarify common points of confusion in the inequality debate and expose the fundamentals behind the ideological tussle. For all sides of the inequality debate, the overarching goal should be to reduce global poverty.

The paper begins with an analysis of Piketty's book and some of his policy proposals, including a global tax on capital, and his argument that capitalism has built-in increasing inequality because rates of return on capital tend to outstrip overall economic growth. But for all Piketty's concern about mathematical disparities between rich and poor, he never asks some obvious questions:

- How are the poor actually doing?
- Is their economic situation improving over time?
- What policies can make the world's poor better off over time?

Contra Piketty, the mathematical ratio between a society's highest and lowest income and wealth strata is less important than the actual living standard for people living at the economic bottom. In other words, *relative* poverty reduction should take a backseat to *absolute* poverty reduction. People, not ratios, are most important. Since the current debate is almost exclusively about relative and not absolute living standards, we conclude that most poverty activists are asking—and answering—the wrong questions. Their misguided focus harms the poor.

Many inequality activists believe that in order for some people to have more, others must have less. But a brief tour of economic history over the last century shows that the modern economy is emphatically not a zero-sum game.

According to a host of data, poor people around the world today are living better than ever before, though much work remains until everyone has enough to live with comfort and dignity. According to data from the economic historian Angus Maddison, from 1910 to 2003, the world saw more than a quadrupling of per capita income, even as global population increased by three and a half times, from 1.8 billion to 6.3 billion.

There is more wealth today, and more wealth *per person*. In China, the government's gradual loosening of economic control has allowed 680 million people to escape the absolute poverty standard of $1.25 a day—the largest reduction of poverty in history.

Increasing wealth has led to the democratization of good health. In the United States during the 20th century, average life expectancy increased by 30 years, while infant mortality dropped by 90 percent.

In addition to better health, poor people today have more, better, and cheaper consumer goods than their parents or grandparents did. And while the price of formal schooling has gone up significantly, schooling and education are not the same thing, and today the latter is affordable to all. In the developed and parts of the developing world, nearly everyone has inexpensive

or even free access to books, documentaries, college-level lectures, and other intellectual riches to a degree never before seen in history.

In almost every area of life, the poor in the United States and many places around the world have seen their standard of living improve more during the last century than in the last several millennia combined. There is much left to do, but much has also already been accomplished.

The paper concludes with a limited defense of inequality, which Piketty and many like-minded inequality scholars might mostly agree with. Piketty's aversion to *ancien régime* status societies, in which hereditary kings and nobles have more rights and privileges than others is justified, as is his defense of "a just inequality based on merit, education, and the social utility of elites."

However, Piketty's prescription to address what he sees as "a more worrisome inequality, based more clearly on vast wealth" focuses on tempering large fortunes and inherited wealth rather an on tackling absolute poverty.

A companion paper applies this paper's "people, not ratios" approach to a concrete policy agenda to help the poor. Planks of the agenda include a stable price system, affordable energy, easy access to capital, occupational licensing reform, and regulatory reform.

Introduction

The debate over income inequality became especially heated following the English-language publication of French economist Thomas Piketty's bestselling book, *Capital in the Twenty-First Century*.[2] To date, this controversy has generated more heat than light. This paper seeks to clarify common points of confusion in the inequality debate and expose the fundamentals behind the ideological tussle.

Contra Piketty, the mathematical ratio between a society's highest and lowest income and wealth strata is less important than the actual living standard for people living at the economic bottom. In other words, *relative* poverty reduction should take a backseat to *absolute* poverty reduction. Since the current debate is almost exclusively about relative and not absolute living standards, we conclude that most poverty activists are asking—and answering—the wrong questions. Their misguided focus harms the poor.

All sides have the same goal—ending poverty. Their differences lie in how to achieve that goal. We argue that focusing on absolute poverty reduction leads to policies better suited to helping people escape poverty than the current emphasis on relative poverty. In a companion paper, we argue that two popular poverty eradication policies—high minimum wages and extensive collective bargaining—are ineffective tools for reducing income inequality and, more importantly, for raising the poor's living standards over time. The poor are better served by other policies. These include an environment favorable to innovation, entrepreneurship, and enterprise; a stable, predictable, and honest price system; easy access to affordable energy and capital; and a more transparent and accountable regulatory system. For this paper, we confine ourselves to properly framing the inequality debate.

A note about terminology: It is common to talk about income as being *distributed*. It is not. George Mason University economist Donald J. Boudreaux notes, "Income in market economies is not a pie that is first produced and then distributed."[3] Instead, "the 'distribution' of income is merely a summary statistic of one among gazillions of unintended consequences springing from a hugely complex and ongoing decision-making process involving hundreds of millions of consumers and producers."[4] This paper will therefore forgo the conventional phrase "distribution" in favor of accurate terms such as wealth and income ratios, inequalities, and disparities.

Relative *poverty reduction should take a backseat to* absolute *poverty reduction.*

Capital in the Twenty-First Century

Thomas Piketty has taught at the Massachusetts Institute of Technology

Capital's various translations sold a combined 1.5 million copies as of January 2015. This is impressive for a 600-page book consisting mostly of data analysis.

and the Paris School of Economics, where he is currently a professor. For more than 15 years, Piketty, along with numerous coauthors, has collected massive amounts of data on economic inequality around the world. His 2013 book, *Capital in the Twenty-First Century*, compiles much of that data, and concludes that economic inequality in Europe and America is rising to levels not seen in 100 years.

Capital was well-received in France. The English translation became a publishing sensation in America, reaching the number-one spot on Amazon.com and selling more than 80,000 hardcover copies and 12,000 e-books in two months. Harvard University Press estimated in April 2014 that *Capital's* total sales would quickly surpass 200,000 copies after just a few more months.[5] This turned out to be an understatement. All told, *Capital's* various translations had sold a combined 1.5 million copies by January 2015.[6] This is impressive for a 600-page book consisting mostly of data analysis. In the process, Piketty sparked a national conversation in America about economic inequality that could lead to a number of public policy changes.

The broad pattern Piketty traces in *Capital* is that before World War I, income inequality was very high in America, and especially in Europe. The Gini coefficient, a widely used measure of inequality, ranges from 0 at absolute equality to 1 at absolute inequality. Piketty's research finds that "Belle Époque Europe exhibited a Gini coefficient of 0.85, not far from absolute inequality."[7]

The 20th century's first-half tumult changed that dramatically. Piketty writes: "[T]he two world wars, and the public policies that followed from them, played a central role in reducing inequalities in the 20th century."[8] Since war and depression destroy wealth, they reduced inequality not by lifting up the poor, but by destroying *ancién regime* fortunes. "In this respect, it was indeed the two world wars that wiped the slate clean in the 20th century and created the illusion that capitalism had been overcome."[9]

Income inequality gradually increased in the postwar decades, with the rise sharpening in the 1970s and 1980s, to the point where today it is nearing pre-war levels. America, in particular, has rapidly growing inequality compared to the United Kingdom or France.

Piketty also argues that growing inequality contributed to the 2008 financial crisis: "In my view, there is absolutely no doubt that the increase of inequality in United States contributed to the nation's financial instability. The reason is simple: one consequence of increasing inequality was virtual stagnation of the purchasing power of the lower and middle classes in the

United States, which inevitably made it more likely that modest households would take on debt."

The Global Tax on Capital

For obvious reasons, Piketty rejects a war-and-depression strategy to fight inequality. Instead, he proposes more peaceful policies that would flatten income levels, but not infrastructure and human life.

While Piketty endorses the standard suite of redistributive policies common to most social democratic governments, his foremost policy proposal is a global tax on capital. Currently, most countries tax the annual *flow* of an individual's income, not the *stock* of wealth that individuals build up over time. A means-tested annual tax on these stocks of wealth would prevent large fortunes from building up, take down existing large family fortunes over time, and reduce the number of people living solely or mostly on inherited wealth. Piketty argues for a global capital tax instead of separate national capital taxes in each country to make it difficult for capital owners to avoid payment by fleeing to tax havens.

There is a moral dimension that is ignored both in Piketty's proposal and in the inequality debate more widely. A targeted reduction in relative poverty—whether achieved through a global capital tax or other means—comes at the price of more absolute poverty over a longer period of time than would otherwise be the case. The morality of such a tradeoff is questionable at best.

While a global tax on capital would very likely flatten income disparities, it would also impede wealth creation. Taxing capital would reduce incentives for capital formation and investment. Innovators would find it more difficult to find financing for their ideas. More importantly, consumers on all steps of the economic ladder would be denied life-improving inventions, efficiencies, and conveniences. The capital tax would actively harm the poor by slowing the ongoing increase in living standards that began about 200 years ago.[10] This would make absolute poverty eradication even more difficult than it already is.

Another moral question is the immediate need for tackling absolute poverty. When it comes to reducing poverty, time is money, and dignity. It is a moral imperative for public policies to maximize long-run economic growth. Even a few tenths of a percentage point difference in annual economic growth rates can add up to huge differences in living standards over time. For example, suppose two neighboring countries start with identical $1,000 per capita annual incomes. The first country grows 2.5 percent per year. After a century, its per capita annual income will have

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Some of the returns from r *are spent on consumption goods. That means* r *overstates how much wealth actually goes into capital owners' coffers for reinvestment.*

grown nearly 12-fold, to $11,813. Its neighbor, with 2 percent annual growth, after a century will have an annual per capita income of $7,245, barely 60 percent as much. Those extra tenths of a percent in the first country's growth rate have a huge long-run impact on human well-being.

Capitalism's Great Contradiction? *r>g*

What is the source of modern capitalism's seemingly built-in tendency to increase economic inequality over time? Piketty argues that over the long run, aggregate rates of return from capital exceed the economy's growth rate. This perpetually increases wealth concentration among owners of capital. Piketty expresses this with the equation $r>g$, where r is the rate of return on capital, and g is the economic growth rate. This does much to explain why economic inequality was so high before World War I. Most capital was held by a few hands that reaped most of the benefits. Depression and the two world wars then lopped off a number of large, inherited fortunes. But because the old $r>g$ pattern remained intact, inequality has since grown until the present day, with no end in sight.

There are a number of reasons to be skeptical of $r>g$'s power over inequality.

First, some of the returns from r are spent on consumption goods. That means r overstates how much wealth actually goes into capital owners' coffers for reinvestment. "Every bit of consumption pushes down the growth rate of capital," George Mason University economist Garrett Jones writes in his review of *Capital*.[11]

Jones's insight highlights what we call the Smaug fallacy, after the dragon in *The Hobbit* who sleeps on a pile of gold under the Lonely Mountain.[12] Other readers may recall Scrooge McDuck diving into his treasure vault and swimming in coins. Smaug and McDuck do absolutely nothing with their gold besides hoard it.[13] Almost nobody in the real world does anything of the sort. Real people spend at least some money each year on consumer goods—food, clothing, housing, cars, education, leisure, you name it—regardless of whether the money comes from investments rather than on-the-job income.

As for what people do not spend, they tend to deposit much of that into banks, which do not sit idly, Smaug-like on this capital. They make loans to businesses, home buyers, and governments, and find other ways to circulate it through the economy in ways the original capital owners could never even imagine. In a way, putting your spare cash in a bank vault is taking advantage of outsourcing and division of labor.[14]

Additionally, more than half of Americans put some of their savings into stocks, bonds, and other financial instruments. Rather than sitting idle underneath a sleeping dragon, this wealth circulates throughout the economy. It enables entrepreneurs to launch startups and existing companies to hire more workers, replace and improve machinery, and advertise to make themselves better known to potential customers.

The Smaug fallacy misses a simple truth: Saved wealth is not hoarded. Rather, it helps to make more wealth creation possible for more people, especially the poor.[15] Say's law, named for the 19th-century French economist Jean-Baptiste Say, turns out to be true: Abundance makes more abundance possible.[16] If the goal is to raise living standards for the poor, a high *r* value is usually better than a low *r* value.

Charles Dickens' Ebeneezer Scrooge is similarly ill-thought of for his penny-pinching ways. In fact, Scrooge should be considered a progressive hero, not a villain. It may sound odd, but recall that a fundamental fact of the world economy is scarcity: There is only so much stuff to go around at any given time. By today's standards, Dickensian London was a hotbed of scarcity. Even the richest of the rich had little or no electricity, sanitation, air conditioning, or other modern conveniences we now take for granted. With so little to go around, Scrooge's self-deprivation is a gift to everyone else.[17]

The fact that Scrooge uses as few resources as possible—very few candles and logs for light and heat, light meals, spare and unostentatious clothing, and so on—means two things. One is that Scrooge is free to invest his additional savings from frugality into ventures that will create value for other people—most of them poorer than himself. The second is that Scrooge's miserly ways leave more supplies left over for other people to consume immediately. Every apple Scrooge does not eat is an apple left available for somebody else (Tiny Tim, perhaps?) and at a lower price. Scrooge's choice to not compete with other people over these rival goods helps to keep their prices down, which helps poor people who must spend a greater share of their income on necessities, including electricity, heating, food, shelter, and clothing.

Of course, most real-life people are neither Smaug nor Scrooge. How do their spending habits affect inequality? Voluntary transactions cause gains from trade (even when accounting for mistakes, which are the exception, not the rule). Consumers will only buy something if they expect to gain more value than they give up to buy it. And the people who make that good will only sell it if they also expect to gain from the exchange.

Consumption benefits far more people than just the consumer or seller. When a wealthy capital owner spends down

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some of his savings, the people who make and sell whatever he buys become wealthier precisely as the capital owner's capital stock declines. This reduces inequality. And gains from trade make all parties better off, including the poor.

The bottom line: Wealth is a good thing, and more of it is better. Wealth is the key to poverty eradication—by definition. At almost every possible Gini coefficient position, increasing the amount of wealth benefits far more people than just the wealthy. This holds true for whatever proportion in which wealth is spent or saved. Poverty was humanity's default state for 100,000 years or more, and requires no explanation. It is *wealth*, and its deliberate creation, that needs to be understood, studied, and maximized for as many people as possible.[18]

The second reason r is less pernicious than Piketty argues is that investment yields diminishing returns. Piketty acknowledges this in Chapter 6 of *Capital*, in a section titled, "Too Much Capital Kills the Return on Capital."[19] As the most profitable investment opportunities are filled, remaining uses for additional capital become less and less lucrative at the margin. This not only lowers the value of r with each additional investment, it continually reduces the incentive for capital owners to make further investments, pushing them instead towards consumption, which itself reduces r.[20]

Third, capital investments depreciate. Machines need to be replaced as they wear out or become obsolete. Employees turn over, retire, and need occasional retraining. The larger a nation's existing capital stock, the more its capital owners must invest and reinvest simply to stay in place.

Fourth, there are substitutes for capital investment. Financing is not free for entrepreneurs, and the higher the interest rate they must pay to investors, the stronger incentive they have to find less expensive substitutes for capital, such as using more labor and less machinery, scaling back growth plans, or simply deciding to remain small.

Fifth, r's increase in recent years is largely due to quickly rising housing prices, a point notably highlighted in a Brookings Institution paper by MIT graduate student Matthew Rognlie. "Overall, the net capital share has increased since 1948, but when disaggregated this increase comes entirely from the housing sector."[21] Rognlie highlights why thinking in aggregates is often a bad idea. The individual components making up those aggregates can be very different from each other. Most people use houses as consumer goods—a place to live—not an investment. For most people, the goal is not to make money from buying a house, but to have a roof over one's head. Houses do not pay regular dividends or interest payments the way stocks and bonds do. If most of r's growth comes from higher housing prices, then a higher *r* value has little impact on living standard inequality.[22]

A dynamic economy does have one *r*-increasing feature that seems to have little place in Piketty's analysis: innovation. If an investor invests in a startup that goes on to produce a world-changing product like Ford's Model T or Apple's iPhone, those investors will enjoy a very high rate of return—at least until other entrepreneurs enter the market and compete away those super-high returns, bringing *r* back to normal. Other investors and companies, from horse-and-buggy companies to BlackBerry maker Research in Motion, will see losses as the creative destruction process selects against them. But whatever the ups and downs of *r* for different investors and companies, consumers are the ones who ultimately benefit from better transportation, phones, and whatever other innovations entrepreneurs can cook up—after all, they are the ones choosing one product over another. This creative destruction process is one of the primary drivers behind *g*.[23]

As for *g*, measurement problems create a significant problem for accurately quantifying economic growth and living standards. GDP growth, the dominant metric of choice, is a poor measure of *g*, as a veritable cottage industry of recent literature points out.[24] GDP fails to capture both producer and consumer surplus. GDP measures the flow of new wealth created each year, but ignores the stock of existing wealth that is at the very heart of Piketty's discussion of inequality.

Moreover, because GDP is measured in currency, innovations that make goods better and cheaper—or even free of charge, as in many cases online—actually lower the GDP statistic precisely as consumers become wealthier. Similarly, many products tend to improve in quality over time, even as their prices remain stable or decline. This biases GDP downward as well.

GDP also faces upward pressures, further compromising its accuracy. One upward pressure on GDP growth is government spending, especially on fiscal stimulus projects. The trouble is that government spending does not create real economic growth, but merely reallocates money extracted through taxation.[25] Another upward GDP pressure is rebuilding after natural disasters.[26] A construction boom following Japan's terrible tsunami in 2011 caused a surge in GDP, which caused some economists to cheer. But all that time, effort, and money was spent simply trying to get back what people already had before. Quite simply, it is better to build than to rebuild. GDP does a better job measuring money spent than it does value created, let alone the amount of wealth people have at their disposal.

Whatever the ups and downs of r *for different investors and companies, consumers are the ones who ultimately benefit from better transportation, phones, and whatever other innovations entrepreneurs can cook up.*

Piketty's Data Controversy

Piketty's data quality was called into question shortly after *Capital*'s popularity exploded. The *Financial Times*' Chris Giles alleged, "[S]ome of [Piketty's] data are cherry-picked or constructed without an original source."[27] *The Economist* came to Piketty's defense,[28] and Piketty himself disputes the allegations.[29] More recently, Philip Magness of the Institute for Humane Studies at George Mason University and Robert Murphy of the Institute for Energy Research have published a paper substantiating the accusations. Piketty's defense of "sloppiness," they argue, cannot be accepted as all of his errors point the same way. This non-random pattern is likely the result of ideological bias.[30]

The dispute remains unresolved as of this writing. We bring it up to emphasize that our assessment of Piketty's analysis has nothing to do with whether his data are right or wrong. Whether Piketty or his critics eventually come out on top, this paper's analysis and conclusions are unaffected.

Even acknowledging these upward biases, GDP as a whole systematically understates the actual growth in human prosperity that *g* aspires to capture. So long as GDP is the unit of measure, *g* is a poor measurement of how people are faring over time. The real-world value of *g* is closer to *r*, which, again, has its own set of downward-pressuring factors. The great contradiction of capitalism turns out to be far less potent than Piketty accounts for.

The Fundamental Problem with Piketty's Analysis

One assumes Piketty's overarching goal is to reduce global poverty. But for all his concern about mathematical disparities between rich and poor, he never asks some obvious questions. These include:

- How are the poor actually doing?
- Is their economic situation improving over time?
- What policies can make the world's poor better off over time?

There are two kinds of poverty, *relative* poverty and *absolute* poverty. The difference between the two can be the difference between caring about statistics and caring about people. Relative poverty activists are upset by large income differences. In the more extreme ideological cases, they remain upset even if the lower earner has an objectively high standard of living. At this point, their primary concern becomes aesthetics—that is, appearances—not human well-being. By contrast, those concerned about absolute poverty care less about mathematical income ratios than about the real-life living conditions of the least well-off—in particular, with how to raise living standards for people in poverty. The proper humanitarian focus is on *people*, not ratios.

Capital focuses almost exclusively on relative poverty and statistics. If one's goal is to improve people's living standards, this focus is morally questionable, as economic historian Deirdre McCloskey highlights. "Ethically speaking, the true liberal should care only about whether the poorest among us are moving closer to having enough to live with dignity and to participate in a democracy," she writes. "What does not matter ethically are the routine historical ups and downs of the Gini coefficient, a measure of inequality, or the excesses of the 1 percent of the 1 percent, of a sort one could have seen three centuries ago in Versailles."[31] Or as the comedian Louis C.K. put it, "The only time you should look in your neighbor's bowl is to make sure that they have enough. You don't look in your neighbor's bowl to see if you have as much as them."[32]

Piketty's book contains extensive analysis of various wealth and income deciles, centiles, and even the top 1 percent of the top 1 percent. Numerous U-shaped curves show how the mathematical ratios between rich and poor have evolved since the 19th century. This is all well and good as far as analysis goes, but it has little to do with lifting people out of poverty. Piketty's focus is a luxury good, and might become a more appropriate use of finite academic and political capital once absolute poverty becomes a thing of the past. But relative poverty will never die, giving eternal job security to Piketty-style analysts.

Piketty comes close to acknowledging this point, but ultimately never does. The final section of *Capital*'s last chapter, tantalizingly titled "The Interests of the Least Well-Off," actually says very little about the least well-off, much like the professor one of us knew at university who could somehow talk for two hours about socialism without ever mentioning the working class.[33] After brief discussions of different historiographical approaches to studying the French Revolution and the scholarly difficulties of data collection on 19th century wealth and income disparities, the section—and the book—ends: "Refusing to deal with numbers rarely serves the interests of the least well-off."[34] We agree. But so, we argue, does refusing to deal with the least well-off themselves.

Piketty, in a rare moment of attention to the poor earlier in the book, sounds a note of pessimism, observing that "the poorer half of the population are as poor today as they were in the past, with barely 5 percent of total wealth in 2010, just as in 1910."[35] Again: ratios, ratios, ratios. He further argues that "all the middle class managed to get its hands on was a few crumbs[.]"[36]

Let us look at those crumbs in absolute, not relative terms. What were people's living conditions like a century ago? What are they like today? And how can they improve in the future?

The section titled "The Interests of the Least Well-Off," actually says very little about the least well-off.

Crumbs or Loaves

There are more crumbs today then there were in 1910, or at any other point in history. Both hard data and a cursory glance around attest to modern abundance. So why is Piketty's pessimism so widely shared? Deirdre McCloskey, in her lengthy review of *Capital*, observes:

> Admittedly, such pessimism sells. For reasons I have never understood, people like to hear that the world is going to hell, and become huffy and scornful when some idiotic optimist intrudes on their pleasure. Yet Pessimism has consistently been a poor guide to the modern economic world.[37]

The modern economy is emphatically not a zero-sum game.

Many inequality activists believe that in order for some people to have more, others must have less. A brief tour of economic progress over the last century shows that the modern economy is emphatically not a zero-sum game. There is much left to do to in the fight to end poverty, but the progress already made over the last century is considerable. This is simultaneously a reason to celebrate, and a reason to double down.

The late economic historian Angus Maddison made it his life's work to assemble data on economic conditions throughout human history. One of his representative works is ambitiously titled *Contours of the World Economy, 1-2030 AD*.[38] There are obvious caveats to data on times and places that lack reliable statistics, but Maddison's work remains extremely useful for debunking economic pessimism. Maddison estimated that in 1913 the average person in the world had an annual income of $2,759 in today's dollars, or $7.56 a day.[39] By 2003, the last year for which he assembled data, the world's average person had an annual income of $11,779, or $32.27 a day. This is more than a quadrupling of per capita income, even as the world's population itself increased by three and a half times, from 1.8 billion to 6.3 billion.

The difference in the developed world is even more pronounced than the global average. The average American's income went from $22.54 a day in 1903 to $143.81 a day in 2003, according to Maddison's data.[40] The average Western European's income went from $17.12 a day in 1913 to $98.61 a day in 2003.[41] This buys much more than crumbs.

The most dramatic rises occurred in East Asia, which until the 1950s and 1960s was one of the world's poorest regions. The Asian Tigers, despite some recent growth hiccups, are among today's wealthiest economies. The average person in Japan went from earning $9.51 a day in 1950 to $105.08 a day in 2003. Over that same time, the average South Korean went from $4.23 a day to $77.91 a day, and the average Hong Kong resident from $10.99 a day to $119.35 a day—higher than the average Western European.

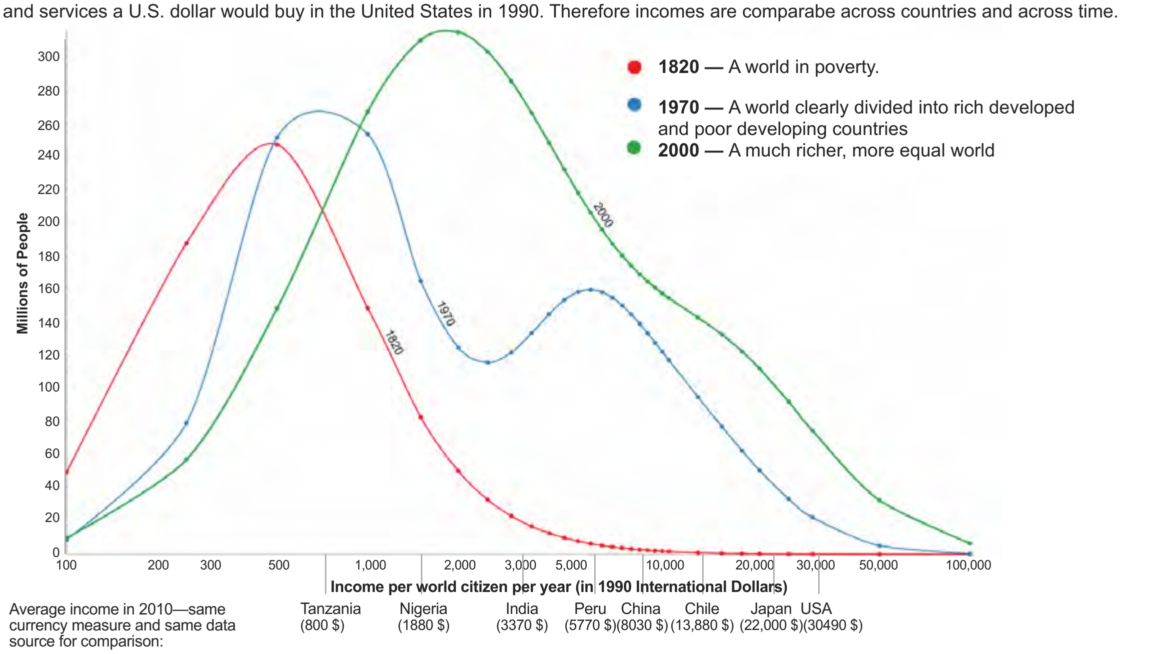
China and India, newcomers to economic liberalization, are just now starting to bloom. China has gone from $2.22 a day in 1950 to $23.77 a day in 2003, with many city dwellers now enjoying living standards comparable to those in Europe and the United States. The process did not begin in earnest until 1978, when Deng Xiaoping began the slow and still ongoing process of freeing China from its Maoist legacy. In the ensuing three decades, the Chinese government's gradual loosening of economic control has allowed 680 million people to escape the absolute poverty standard of $1.25 a day—the largest reduction of poverty in history.[42] China still has a long way to go, especially in the areas of human rights and political freedom. This liberalization process must continue, or else absolute poverty eradication in China will die at the hands of an extractive government.[43]

India's "license *raj*," the excessively bureaucratic state under Indira Gandhi and her Congress Party followers, has significantly eroded over the last two decades, to the benefit of that country's poor. In 1993, after several decades of socialist and social democratic policies, the average Indian was living on $1.03 a day, according to World Bank data.[44] Just 20 years later, that had nearly quintupled, to $4.97 a day.[45] Much poverty remains in India as of this writing, but economic liberalization is enabling rapid catch-up growth, and hundreds of millions of poor people are already benefiting from it. Today, Indians are finding it easier than their parents ever did to make a living or start a business, on their own terms.

The world as a whole "only" quadrupled its per-person income over the last century, while the developed world far outpaced that. But that does not mean the developing world stagnated during that time. On the other hand, implementing policies primarily aimed at ending relative poverty, such as a global tax on capital, rather than absolute poverty would consign the developing world to economic stagnation for a long time.

The World Income Distribution in 1830, 1970, and 2000 — by Max Roser

The yearly income of all world citizens is measured in International Dollars. This is a currency that woud buy a comparable amount of goods and services a U.S. dollar would buy in the United States in 1990. Therefore incomes are comparabe across countries and across time.



Data source: www.Clio.Intfra.eu via van Zanden et al. (2014) — *How was life*?, OECD.
The interactive data visualisation is available at OurWorldinData.org. There you find the raw data and more visualisations on this topic.

Chart 2 of 'What on Earth is going on — 100 charts that show how living standards around the world are changing'. Published on www.MaxRoser.com and licensed under CC-BY-SA.

Everyone, not just the rich, is enjoying better living conditions than ever before.

This Great Fact is well illustrated by Figure 1, a graph produced by economist Max Roser that shows world income distribution in 1820, 1970, and 2000. The distribution clearly shows that 1820 was a world in poverty, and 1970 was a world with a "rich north" and "poor south." By 2000 there was a much richer, more equal world.

Wealthier is Healthier

There is more to the story. The crumbs Piketty describes are not just more numerous now, they are of better quality. Science journalist Matt Ridley writes:

> Even farm labourers' income rose during the industrial revolution. As for inequality, in terms of both physical stature and number of surviving children, the gap narrowed between the richest and the poorest during industrialisation. That could not have happened if economic inequality increased.[48]

It is one thing for rich children to have low infant mortality rates, or to be well-nourished enough to grow taller than their parents. When poor children are seeing low and declining infant mortality rates, and are taller, healthier, and have a longer life expectancy than their parents, people at the economic bottom are clearly sharing in the benefits of prosperity.

Everyone, not just the rich, is enjoying better living conditions than ever before. In 1900, the average American had a life expectancy at birth of 47 years. It was 77 years in 2000.[49] From 1900 to 1950, the average American became three inches taller.[50] The U.S. infant mortality rate declined more than 90 percent over the 20th century, thanks to improved health care for rich and poor alike. In 1915, 100 per 1,000 live births did not make it. By 2000, infant mortality in the U.S. had declined to seven per 1,000 live births.[51] Even if the entire top 1 percent lived to be 100 years old, were seven feet tall, and had zero infant mortality, they would not be able to bias average life expectancy upwards by 30 years, height upwards by three inches, and infant mortality downwards by 90 percent. Increasing wealth has led to the democratization of good health. This is what mass prosperity looks like.

Up from Subsistence

Consumer goods are another indicator that the poor are doing better in absolute terms than ever before. Other advances such as electricity, air conditioning, sanitation, heated water, automobiles, and more have gone from luxuries for the rich to necessities for everyone.[52] To illustrate, consider the astounding growth in information and entertainment options now available to the average consumer.

- In 1920, 35 percent of house-holds had a telephone. In 2000, it was nearly 95 percent.[53] Today's smartphones are also far more versatile than the old Ma Bell standard issue telephone and can be used almost anywhere.

- Radios were in 39 percent of households in 1930, and 99 percent in 2000. Today's listeners can purchase inexpensive satellite radio subscriptions with access to far more channels than traditional AM and FM dials can offer.
- Only 9 percent of households had televisions in 1950, versus 98 percent in 2000. Today's televisions are also larger, and in color. High-definition flat screen sets have recently become affordable to middle and working class households.
- As with radio, television programming options have also improved. Just 2 percent of households had cable in 1965, with a dozen channels at [54] By 2000, 68 percent of households had cable, and the number of channels climbed well into the hundreds. Satellite television, which literally sends down signals from space, is similarly affordable. On-demand and DVR technology enable viewers to watch their favorite programming on their own schedule, not the networks'. Increasing numbers are "cutting the cord," dispensing with scheduled television and TVs altogether and relying instead on Internet-based streaming services, saving large sums of money as they do so. We have come a long way from the days of three networks and often spotty over-the-air reception.

Just like entertainment services, most goods are becoming cheaper over time. Inflation does what it can to hide this, but the economists W. Michael Cox and Richard Alm have an inflation-proof method for determining the cost of goods over time: "The real price of whatever we buy is how long we have to work to earn the money for it," they write.[55] Today, it takes fewer hours of work to afford both needs and wants, even for the poor. Just getting by is a lot easier now than it was just a generation or two ago. In 1920, poor households spent three quarters of their money on necessities like food, clothing, and shelter. By 1950, it was a little more than half of their money. By 1995, it was a little more than a third, and the figure continues to fall, leaving more money left over to spend on other things.[56]

When a household needs to spend less on necessities, its members have more left over to spend on other things. Cox and Alm's book was published in 1999, and a lot has happened in the

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intervening years, so it is useful to compare their findings with some updated figures. The results bode well for the poor.

- In 1900, a half-gallon of milk cost 56 minutes of work at the average wage. Today, it costs 21 minutes at the minimum wage, and 4 minutes at the average wage—and this is despite a U.S. government program that artificially inflates the cost of milk.[57]
- A one-pound loaf of bread cost 16 minutes in 1910 at the average wage, and 12 minutes at the minimum wage in 2013.[58] A pair of Levi's jeans cost nine hours and 42 minutes in 1900 at the average wage, and two hours and 45 minutes today at minimum wage.[59]
- In the 1880s, it cost an inflation-adjusted 40 cents to light the equivalent of a 100-watt bulb for 10 hours. By 1999, that same amount of light cost one tenth of one cent. Today's light is 99 percent cheaper, even after accounting for more expensive bulbs and fixtures. New compact fluorescent and LED light technologies will push the price of light further downward as they mature.[60]

Economist Gregory Clark wrote in his book *A Farewell to Alms*: "[T]he biggest beneficiary of the Industrial Revolution has so far been the unskilled. There have been benefits aplenty for the typically wealthy owners of land or capital, and for the educated. But industrialized economies saved their best gifts for the poorest."[61] The economist Joseph Schumpeter had the same insight as far back as 1949: "The capitalist achievement does not typically consist in providing more silk stockings for queens but in bringing them within the reach of factory girls in return for steadily decreasing amounts of effort."[62]

Intellectual Riches

One of the most famous quotes attributed to Mark Twain is, "I have never let my schooling interfere with my education."[63] A good education is now so inexpensive that anyone who cares to, regardless of socioeconomic status, can immerse themselves in the worlds of science, history, literature, psychology, philosophy, music, economics, and any other discipline that enriches one's understanding of the world.

Today, basic schooling is available at an affordable price to the world's poorest for the first time in history. In his book *The Beautiful Tree*, Newcastle University professor James Tooley documents how he discovered low-cost schooling in the slums of Hyderabad in India.[64] His subsequent research in India, Ghana, Nigeria, Kenya, and China revealed that the majority of children in the poorest areas of India and the African countries actually attend low-cost private schools. The poorest of the poor are generally given scholarships. Moreover, Tooley's tests of over 24,000 children revealed that after controlling for confounding variables the children at these low-cost private schools significantly outperform those at government schools. His research reveals that education has become available to the poorest children on the planet in spite of, not because of, government intervention.

Across the world and in other ways, the life of the mind is also entering a golden age open to anyone who wants to take advantage. University of Minnesota archaeology professor Peter Wells describes what book lovers had available to them in the past:

> The most prominent scholar of this period was Bede, a man of Anglo-Saxon origins who was born in northern England about 672 and died in 735. At the age of seven he entered the monastery that was based at the neighboring sites of Wearmouth and Jarrow, in Northumbria, just at the time that this monastic complex was reaching its apex of cultural achievement. The library at the monastery contained some five hundred books, making it one of the most extensive in Europe at the time.[65]

Readers today have inexpensive access to literally millions of books, not just through public and university libraries, but brick-and-mortar bookstores and online sellers such as Amazon. For example, for $79.00, or less than 11 hours of work at the $7.25 an hour federal minimum wage, you can buy a Kindle e-reader, which can hold more books than Bede read in his lifetime. It fits in one's hand.[66] Many classic works of literature, drama, history, and philosophy can be downloaded onto it for free. Newer works are easily affordable, typically costing an hour or two of minimum-wage work each.

If a child has a question about the world, an answer is often just a Google search away—even if that child lives in a poor household.

Search engines and e-books have made learning faster, easier, cheaper, and more accessible for everyone, even compared to 20 years ago. Curious people no longer have to journey to a library (let alone a monastery), fumble through a card catalog, and navigate the non-intuitive Dewey decimal or Library of Congress system to find what they are looking for. If a child has a question about the world, an answer is often just a Google search away—even if that child lives in a poor household.

Many universities now stream and archive audio and video of their professors' lectures online, with free

There will always be differences between income deciles—but the individuals comprising those deciles change over time.

access to everyone. Companies such as Coursera even offer tests, discussions, and other materials for those who follow along with their online broadcasts of university classes. Companies such as The Great Courses package their own proprietary semester-length college-level lecture courses, professionally produced and taught by college professors in almost every discipline, available for prices amounting to a day or two's minimum wage work.

For visual learners, high-quality documentaries with stunning cinematography, computer graphics, and professional narration make nature, cosmology, and other subjects come alive for experts and lay readers of all classes.[67]

Ignoring Individuals

Piketty has one more serious analytical problem: his focus on groups and aggregates instead of flesh-and-blood individuals. This is a common flaw in economics, and it commonly leads to incorrect conclusions. In his Nobel Prize lecture, economist James M. Buchanan observed, "Regardless of the possible complexity of the processes or institutional structures from which outcomes emerge, the economist focuses on individual choices."[68] Put plainly, economists should study people, not groups of people. Studying real people instead of statistical groups profoundly changes anyone's understanding of inequality.

There will always be differences between income deciles—but the individuals comprising those deciles change over time. This is a very important point Piketty and others miss.

Young people typically earn less than more experienced workers. Roughly half of all minimum wage earners are under age 25, despite such young earners making up only about one-fifth of the workforce.[69] Wherever they eventually end up, most individuals earn a pittance when they begin their working life. It is not until workers gain skills and experience that they can command higher wages. It is common for someone to start out as a teenager working a retail or food service job and move several steps up the economic ladder by middle age.

Economists Gerald Auten and Geoffrey Gee found that, among people over 25 between 1987 and 2005, "roughly half of taxpayers who began in the bottom income quintile moved up to a higher income group by the end of each [ten-year] period."[70]

A Limited Defense of Inequality

We conclude our analysis of *Capital* and inequality with a limited defense of inequality, much of which we believe Piketty would agree with. We heartily join Piketty's opposition to *ancién regime* societies based on hereditary status. In the bad old days, king, clergy, and peasant were all treated fundamentally differently from each other, both by law and by long-prevailing social norms. This kind of self-perpetuating inequality is incompatible with a free society and dignity for the poor.

One of classical liberalism's crowning achievements is its replacing of old status societies with contract societies.[71] In this sense, capitalism has done as much to reduce the gap between rich and poor as it has to lift up the poor in absolute terms. In a modern liberal society, rich and poor have equal rights, and deal with each other as equals before the law.

How radical was this change? Consider how Isaac Newton's funeral looked through French eyes in 1727, near the height of Bourbon absolutism:

> Lost in the crowd that surged into Westminster Abbey for the funeral of the author of the *Principia Mathematica*, Voltaire was thunderstruck. Even in death, Newton's impact on the Frenchman was immense. Having come from a nation where aristocracy and clergy held a monopoly on power and privilege, Voltaire marveled at a society where a scientist was buried with the honors of a king.

Just as Isaac Newton's life set many landmarks in the history of science, his funeral was, unwittingly, a landmark event in the history of equality.

For much of human history, hereditary social stratification was a seemingly permanent part of the social landscape. It did not begin to disappear in earnest until around the time the Industrial Revolution began. A key to the process was getting people to honor and value people like Isaac Newton, whose nobility was by deed and not birth. Today, many of the world's poorest, least free, and least equal countries more closely resemble the old status societies than modern liberal contract societies. They are the last remnants of a dying social order. Successful poverty eradication requires the continuing replacement of status with contract—in other words, in valuing people like Isaac Newton more highly than the dictator and his relatives and cronies.[73]

A different form of inequality is far older, predating even the invention of agriculture. Moreover, it persists today in every classroom, factory, and office. This is the inequality we defend, and we believe Piketty might mostly agree with us. It is inequality based on merit. The anthropologist Brian Fagan describes an early form of merit inequality:

One of classical liberalism's crowning achievements is its replacing of old status societies with contract societies.

A monomaniacal focus on relative poverty, which is not at all unique to Piketty, has led to misguided public policy proposals.

> Nicole Pigeot spent months rejoining flakes and cores from five clusters of flint debris from about 14,500 years ago. The flint nodules that displayed the fewest errors lay closest to the hearths, where, presumably, the most skilled stoneworkers sat. Progressively less-skilled practitioners worked at increasing distances from the warmth. Those at the edge were unskilled indeed.[74]

This seating arrangement improved the group's quality of life by giving toolmakers a powerful incentive to make the best tools they could. The incentive structure created by merit inequality is the very foundation of progress and modernity. Similar customs prevail today, though they substitute high grades, peer approval, and high wages and salaries for a seat closer to the fire.

Piketty somewhat defends merit inequality in *Capital*, comparing "a just inequality based on merit, education, and the social utility of elites" to "a more worrisome inequality, based more clearly on vast wealth," though he focuses more on tempering some of merit inequality's other long-run effects, such as large fortunes and inherited wealth.[75] Because of the unintentional harm such levelling would have on living conditions for the poor, we must part company with Piketty on those issues.

Conclusion

The debate over economic inequality has focused on the wrong questions. Widespread misunderstanding of the difference between relative and absolute poverty means that one of the most important new works on economic inequality virtually ignores the poor. In *Capital*, Piketty is so focused on mathematical ratios between high and low incomes that he forgets to take a look at what living standards are actually like for people at the low end, and how to raise them over time.

A monomaniacal focus on relative poverty, which is not at all unique to Piketty, has led to misguided public policy proposals. Piketty's proposed global tax on capital would do nothing to relieve absolute poverty. It would also slow down or even stop its steady eradication. We consider this a moral issue, and capital tax supporters are on the wrong side of it.

For the first time in human history, it is possible to end global poverty altogether. The fight to do so will be one of the 21st century's defining issues. To win that fight, policy makers will need to recognize relative poverty's insignificance compared to absolute poverty. Focusing on inequality instead of wealth creation actively harms the poor.

The way to end absolute poverty is not to smooth out income ratios with redistribution, wage controls, and extensive regulation, but to free people to innovate, and honor the entrepreneurial spirit. There is "a certain propensity in human nature to truck, barter, and exchange,"[76] which makes each person better off over time—but only when they're allowed to cooperate and exchange. As Competitive Enterprise Institute founder Fred Smith likes to say, you don't have to teach grass to grow; you just need to move the rocks off of it. That makes economic rock removal among the world's most pressing matters, and the proper focus of everyone who wants to help the poor.

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14 For much more on how saved capital is constantly put to active use, and functions as a form of voluntary income redistribution, see John Tamny, *Popular Economics: What the Rolling Stones, Downton Abbey, and LeBron James Can Teach You about Economics*, (Washington, D.C.: Regnery, 2015).

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16 Say's law is routinely misinterpreted as "supply creates its own demand." Say had in mind a social construct, not such a solitary one. If you work hard and create a lot of stuff, you have a lot more to offer to your trading partners than if you had created less value. Similarly, the more stuff your trading partners make, the more they will have to offer you for trade, and so on. Wealth makes more wealth creation possible. Say's law tells a story of cooperation and exchange, not the popular fallacy of cynical and selfish consumer manipulation by producers. It is easy to paint economics as the study of selfishness, but its academic classification as a *social science*—the study of how people get along with each other peacefully in society (or not)—is more accurate.

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18 The full title of Adam Smith's most famous book was deliberate. Popularly known as *The Wealth of Nations*, the full title is *An Inquiry into the Nature and Causes of the Wealth of Nations*.

19 Piketty, pp. 215-217.

20 This is how diminishing marginal returns operate in a standard perfect competition model. The real world does not work nearly so smoothly, but the general trend holds, holding aside exogenous factors such as innovation.

21 Matthew Rognlie, "Deciphering the Fall and Rise in the Net Capital Share," Brookings Institution Papers on Economic Activity, March 2015, p. 1, http://www.brookings.edu/~/media/projects/bpea/spring-2015/2015a_rognlie.pdf.

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