

Figure 1. U.S. income distribution scaled to the height of a human.

figures, then you are in the top 20 percent, and you are four inches up the yardstick.

The big concentration on the left reveals that almost the entire population is huddled together near the bottom. The hair-thin line reaching upward shows that the number of people whose earnings reach into the millions becomes a tiny sliver. There is no

Average Household Income, 1967–2015

in 2015 dollars, by percentile

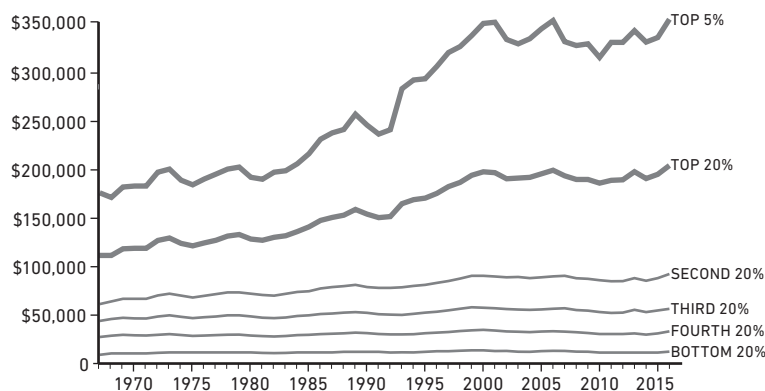


Figure 2. Average household income (2015 dollars), 1967–2015, by percentile. From U.S. Census.

middle class, for that matter, who have barely budged, either), as the well-known aphorism clearly states that the rich get richer while the poor get poorer. That's also the message most people gather from news headlines about America's growing inequality. We hear almost daily about growing economic anxiety, about an increasing sense of desperation and diminished hopes for the future. In one recent poll, half of Americans under thirty said the American dream was dead. That anxiety is real, and one of the aims of this book is to fully understand it. But in terms of inflation-adjusted income, the poorest fifth are right where we left them in 1967.

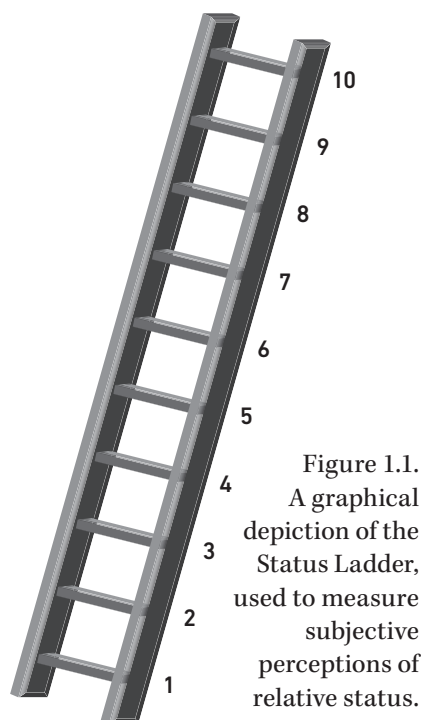
While the poor may not in fact be getting poorer, a striking aspect of inequality is that even standing in place feels like falling behind if other people around you are moving ahead. Have you ever been on a stationary train when a train next to you departs? It feels for all the world as if you are suddenly moving in the opposite direction. As the upper classes have become steadily richer, both the middle class and those living in poverty have felt poorer

is true that, on average, people with higher incomes, more education, and more prestigious jobs do rate themselves higher on the ladder. But the effect is relatively small. In a sample of, say, a thousand people, some will rate themselves at the top, others will rate themselves at the bottom, and many will be in between. But only about 20 percent of their self-evaluation is based on income, education, and job status.

This surprisingly small relationship between traditional markers of status and how it is perceived subjectively means that there are a lot of people who are by objective standards affluent and yet rate themselves on the lower rungs. Similarly, many people who are objectively poor rate themselves high up the ladder.

A standard economic analysis would argue that people's own conceptions of themselves are effectively airy nothings, mere noises that flit around like the sound of static between radio stations. If subjective perceptions do not align with objectively measurable quantities like money, then so much the worse for those perceptions. Certainly, money *is* part of the story, but it's not the whole story, and not even the main character.

We have to take subjective perceptions of status seriously, because they reveal so much about people's fates. If you place yourself on a lower rung, then you are more likely in the coming



have to examine how the human mind judges value in the most fundamental ways.

Take a look at the checkerboard tiles in Figure 2.1 below. It would be impossible for me to convince you that the gray square labeled A is identical in brightness to the square labeled B. And yet, it is. Spend a few minutes reasoning with your eyeballs, squinting and slanting any way you wish, and you will not be able to make the illusion go away. Your brain is doing exactly what a good visual system ought to do, which is to take context into account. Because your brain knows that objects look darker when they are in shadow than in the light, it compensates for the shadow cast by the cylinder by saying, “If B looks this bright in shadow, it must be much brighter in reality.”

The reason psychologists are fascinated by visual illusions is that they enable us to catch an occasional glimpse of the clever tricks our minds use by experiencing the clash between what we know to be true and how things seem to us. In the case of the checkerboard illusion, our perception is biased, and we make an error. But the bias exists for a good reason: In real life, objects really *do* look darker in shadow, so a visual system built to account for that fact will end up perceiving things more accurately in the wild.

Figure 2.1. Perception is relative to context. That's why square B looks lighter than square A. Illusion created by Edward Adelson.

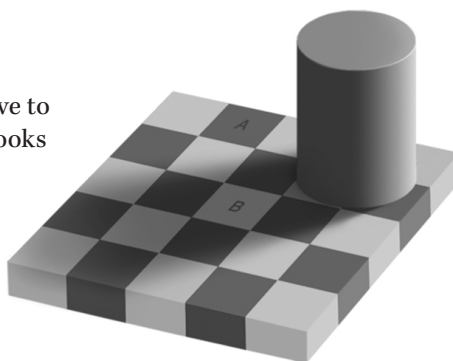




Figure 2.2. Index of health and social problems is not strongly associated with average income in developed nations. Adapted from Wilkinson and Pickett (2009).

One striking thing about this graph is that three countries rank high above the others—the United States, the United Kingdom, and Portugal—even though they are high, middle, and low on average income. On the bottom you can see a mirror image, with Sweden, Japan, and Norway strikingly low on social problems despite their wide range of incomes. Clearly, these patterns pose a challenge to any simple theory that argues that poverty causes social problems, or that character flaws cause social problems and poverty.

Next, Wilkinson and Pickett looked at the data in a different way. Instead of plotting the social problems index against average income, they plotted it against income inequality. Inequality was measured by taking the share of income going to the richest 20 percent of each country and dividing by the share going to the poorest 20 percent. For the most equal countries, like Sweden

and Japan, that ratio is about 4, meaning that the richest fifth of the country makes four times as much as the poorest fifth. For the most unequal countries, like the United States and Portugal, the ratio is around 8.

When you examine the data from this perspective, shown in Figure 2.3, the countries snap crisply into order. Sweden, Japan, and Norway are no longer a hodgepodge of data points but huddle together tightly at the bottom left, with the lowest inequality and the lowest level of health and social problems. Each step you take along the road of inequality toward Finland, Denmark, Belgium, and beyond, you take a step up the ladder of the social problems index. By the time you reach the most unequal nations—the United Kingdom, Portugal, and the United States—they, too,

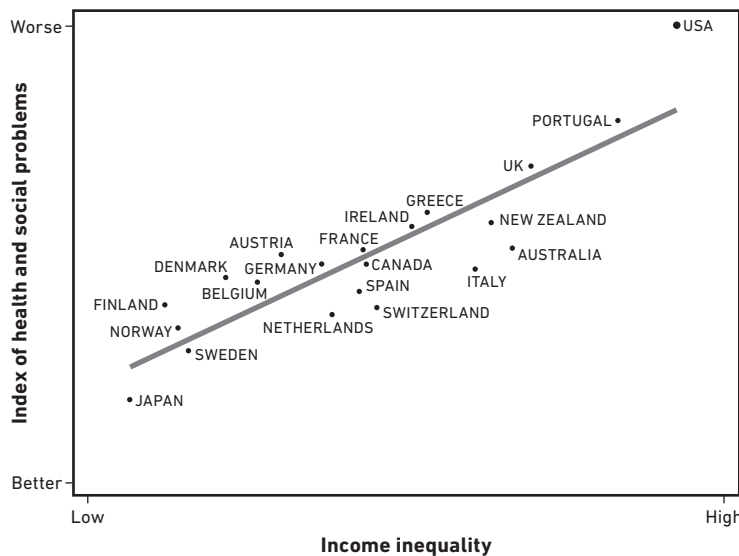


Figure 2.3. Index of health and social problems is strongly associated with income inequality in developed nations. Adapted from Wilkinson and Pickett (2009).

are no longer outliers but fall right along the line where you would expect to find them based on their level of inequality. The correlation with inequality was strong for every one of the ten topics that made up the index, and those links remained intact even when the researchers statistically controlled for each country's average income.

Perhaps the cultures, economies, and governments of these nations are too different to make direct comparisons among them. Wilkinson and Pickett addressed this concern by making the same comparisons across America's fifty states, seen in Figure 2.4. Again, it was the more unequal places that had higher rates of problems, and, again, the effect of inequality was greater than the effect of average income. This explains why rich states, like California, are



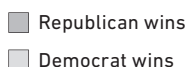


Figure 4.1. A murmuration of starlings.

necessarily true of all the individuals within it. Consider a murmuration of starlings.

Each bird in this marvelously named flock flies according to its own self-interest. By staying within the flock, an individual bird is protected from hawks and other predators. No single bird knows where the flock is heading next, and there is no leader directing the group. Each bird simply watches and listens to others nearby and tries to stay close to them. When ten thousand starlings all follow the same simple rule, the result is an astonishing shadow undulating across the landscape, a wave one moment and a whirlpool the next, then suddenly a spiraling helix, coming apart like a mammoth amoeba, then merging, whole again. As poet Richard Wilbur put it, “What is an individual thing? They roll / Like a drunken fingerprint across the sky!”

When you focus on the swarm as a whole, it appears to be a single organism, and it is difficult to keep track of the individuals within it.



painstaking methods to guarantee that they are representative of the American population, and they all tell the same story. Although no income group is monolithic, the trend is clear: The richer you are, the more likely you are to call yourself a Republican and to vote Republican. The poorer you are, the more likely you are to call yourself a Democrat and to vote Democrat.

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Figure 4.3. What the electoral map of the 2004 presidential election would look like if we counted only the votes of the poor (top) and rich (bottom). Dark states indicate Republican wins, light states indicate Democrat wins. Adapted from Gelman (2006).

The maps in Figure 4.3 show the same electoral map of the 2004 election, redrawn based on the incomes of the voters. The top image shows what the electoral map would look like if we counted only the votes of poor people—a landslide victory for Democrats. The second image shows what the electoral map would look like if we counted only the votes of the rich—a landslide win for the

Income Inequality and Political Polarization

1947–2012

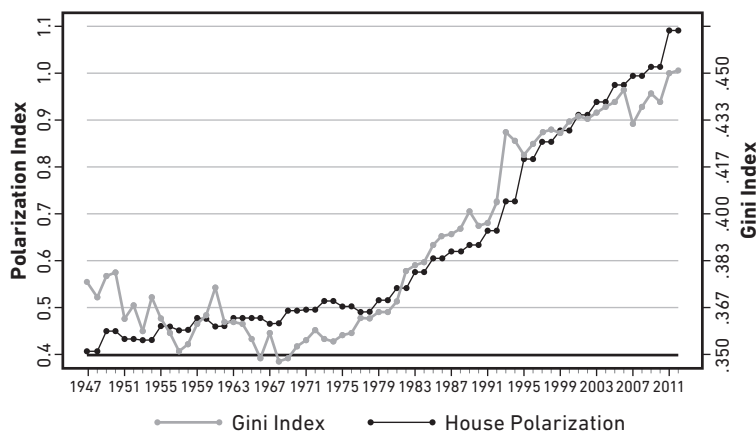


Figure 4.5. The Gini index of inequality and political polarization in the House of Representatives rose in lockstep since the 1970s. From McCarty, Poole, & Rosenthal (2016).

they calculated how polarized American politics has been in every Congress since 1947. Figure 4.5 shows that polarization in the House of Representatives and the Gini index of inequality have followed strikingly similar trajectories. Results for the Senate are similar. Both inequality and polarization were relatively low through the 1950s and 1960s. They then began rising in tandem in the mid-1970s and have remained on par ever since.

Behavioral experiments and historical data both point to the same conclusion: As our economic worlds diverge, so, too, do our politics. It becomes ever more difficult to see those on the other side of the aisle as well-meaning individuals who share our goals but differ in what they believe are the best means to reach them. Instead, the other side begins to look more and more like enemies.

Leslie Rutledge is the attorney general of Arkansas. When she was elected in 2014, she had to work harder than expected for one vote—her own. Rutledge is a Republican who supported Arkansas's 2013 voter ID law, which requires voters to show a

Life Expectancy at Birth vs. Average Annual Income

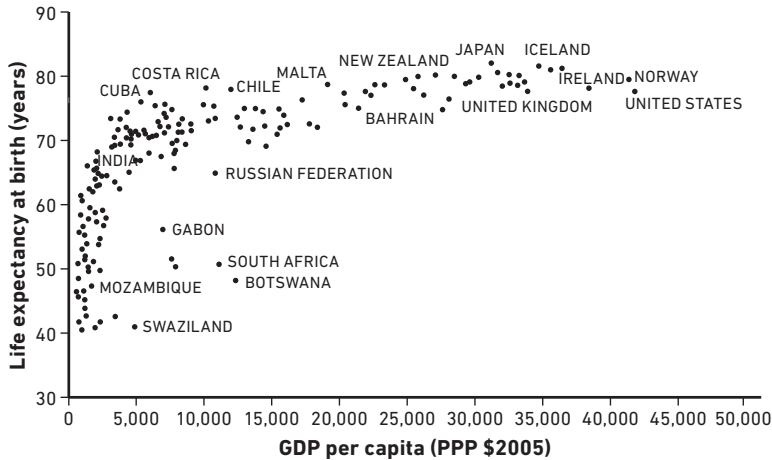


Figure 5.1. Effects of per capita income on life expectancy level off after countries reach a basic level of development.

wealthier you are, the longer you live, and the bigger the tombstone your family can afford. This link between longevity and tombstone size was documented by George Davey Smith, an epidemiologist in Scotland. His team roamed the graveyards of Glasgow, recording the height of the gravestones and the birth and death dates inscribed on them. He found that each meter of height was associated with a little more than two additional years of life. I brought my class of undergraduates out to the campus graveyard equipped with tape measures to test whether we would find the same relationship at another time and place. Sure enough, we found the same phenomenon in Chapel Hill: Longer lives were recorded on larger stones.

There are a lot of reasons, of course, why poverty could be bad for one's health. The poor may do without basic medical care, safe living conditions, and good sanitation. If conditions are truly desperate, they might die of hunger. More commonly, malnourished children fail to develop healthy immune systems and can die from

common infections, like measles. Those two sources of death together make up the statistics we occasionally hear that a child dies of hunger every eight seconds (or ten seconds, or fifteen; as global poverty has been reduced over the last decade, that grim statistic is dropping). You can see the difference in life expectancy between rich and poor countries in Figure 5.1.

When we examine the data within individual countries, we also see a very clear link between money and health. The more money you have, the better your health and the longer you are likely to live. Take, for example, the difference in death rates across the richest and poorest zip codes in America. In the richest zip codes, the annual death rate is about 50 deaths per 10,000 people. In the poorest zip codes, that number nearly doubles to 90 deaths per 10,000. Each step up in wealth translates into extra years in life.

We can see this pattern even more clearly in data from a massive study of more than ten thousand British Civil Service employees

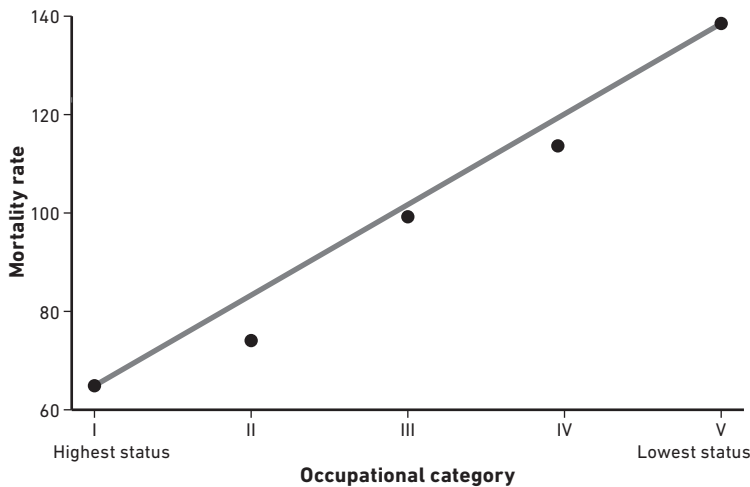


Figure 5.2. Social status and mortality rates are linearly related within rich countries. This example is from Marmot's study of British civil servants (2004).

Life Expectancy (United Nations report 2004)

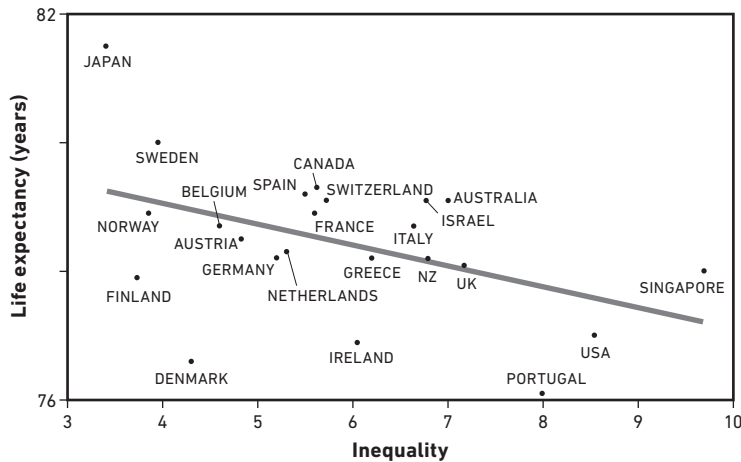


Figure 5.3. Among economically developed countries, higher inequality is associated with shorter life expectancies.

ladder. Their subjective assessments of where they stood compared with others proved to be a better predictor of their health than their occupational status. Adler's analyses suggest that occupational status shapes subjective status, and this subjective feeling of one's standing, in turn, affects health.

If health and longevity in developed countries are more closely linked to relative comparisons than to income, then you would expect that societies with greater inequality would have poorer health. And, in fact, they do. Across the developed nations surveyed by Wilkinson and Pickett, those with greater income equality had longer life expectancies (see Figure 5.3). Likewise, in the United States, people who lived in states with greater income equality lived longer (see Figure 5.4). Both of these relationships remain once we statistically control for average income, which means that inequality in incomes, not just income itself, is responsible.

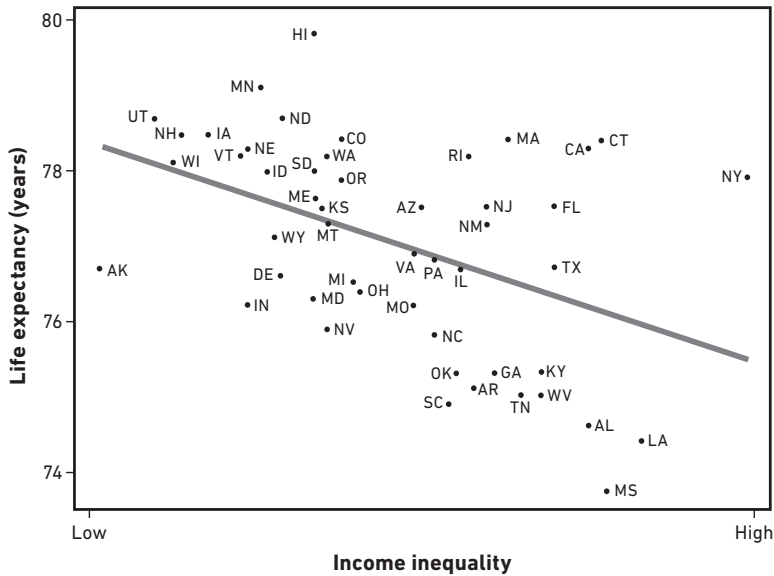


Figure 5.4. In the U.S., states with higher inequality tend to have shorter life expectancies.

But how can something as abstract as inequality or social comparisons cause something as physical as health? Our emergency rooms are not filled with people dropping dead from acute cases of inequality. No, the pathways linking inequality to health can be traced through specific maladies, especially heart disease, cancer, diabetes, and health problems stemming from obesity. Abstract ideas that start as macroeconomic policies and social relationships somehow get expressed in the functioning of our cells.

To understand how that expression happens, we have to first realize that people from different walks of life die different kinds of deaths, in part because they live different kinds of lives. We saw in Chapter 2 that people in more unequal states and countries have poor outcomes on many health measures, including violence, infant mortality, obesity and diabetes, mental illness,



Figure 6.1. How easily you see a face in this cloud depends on your needs at the moment. Wanda Hartwigsen/National Oceanic and Atmospheric Administration/Department of Commerce

Why, exactly, do people have this “universal tendency” to see deities in their snack foods? As we will learn, these visions have less to do with the spirit world than with the minds of the individuals who experience them. But these people are not crazy. On the contrary, they are engaging in an activity that we all do every

day, one that brings order and sanity to our lives. Randomness and chaos feel threatening, but orderly patterns are reassuring, helping us feel that the world is predictable, trustworthy, and controllable. When people detect patterns in noise, they are extracting meaning from a world that has too few bright lines and too many gray areas. Of course, we do not see just any patterns. Faces are especially common, because faces are especially informative to us, and the faces of religious icons are even more evocative. When a sense of meaning is what we are looking for, we tend toward the epic. The ancient Greeks looked up at the stars and saw constellations of gods and heroes, not errand boys.

We ordinarily think that our perceptions of the things around us are driven simply by the things themselves. And we normally assume that our beliefs about the world are driven by the world itself. But both our perceptions and beliefs are also driven by our

eye can see the parts that the other misses, we never notice the hole in the world.

You may have seen a figure like the one below used to illustrate the existence of the blind spot. But I want to use it to demonstrate how the brain fills in perceptual gaps. First, cover your left eye. Then, with your right eye, focus on the cross. Move the page slowly closer and farther from your face while keeping focused on the cross.

You should notice two things. First, at a certain distance, the dot will disappear, revealing your blind spot. Because you have covered your left eye, it can no longer supply the material that would ordinarily be employed to fill in the scene. But even more important, you will notice that, when the dot disappears, the box is immediately filled in with gray. Even though your left eye can't tip off the right eye about the dot, portions of the right eye can still see the gray box. And so, the brain does the best it can and papers over the box with more of the same.

Now you can switch eyes. Cover your right eye and focus on the dot this time. This time, when the cross vanishes, the space is filled in with white. Even for an action as basic as perceiving light and dark, the brain makes assumptions to fill in gaps. It assumes that the world is not random; that even if it has only partial

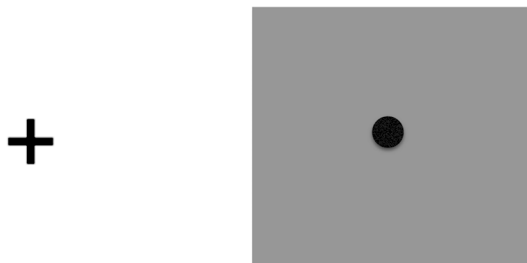


Figure 6.2. Your vision system fills in blind spots using assumptions from the context.

In another study, psychologists Kurt Gray and Daniel Wegner looked at the U.S. states where people had more or fewer hardships in their lives by compiling statistics on infant mortality, cancer deaths, infectious disease, violent crime, and environmental hazards. They combined these maladies into a single “suffering index” and plotted it against the proportion of people in each state who stated in polls that they strongly believed in God. Many theologians find suffering to pose a philosophical problem for religion, because it seems contradictory that a God who is all-powerful, all-good, and all-knowing would allow such misery. But the researchers found that anguish does not pose a theological problem for most believers. Quite the opposite. Like the biblical Job, the more people suffered, the more they had faith in God.

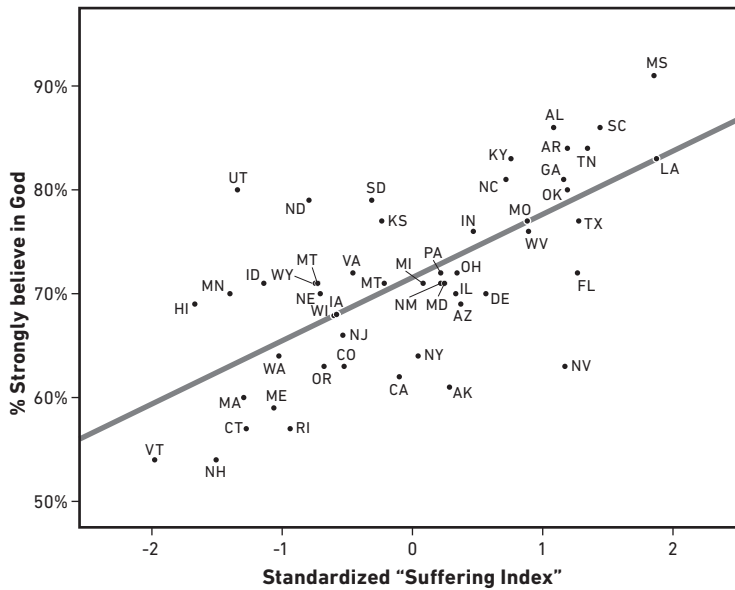


Figure 6.3. States where people suffer more have stronger belief in God. From Gray and Wegner, 2010.

Wealthier Nations Tend to Be Less Religious, But U.S. a Prominent Exception

% saying religion plays a very important role in their lives (2011–2013)

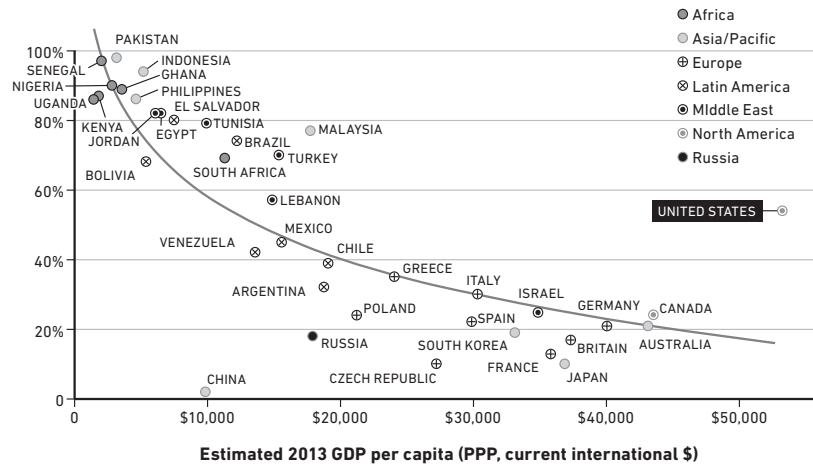


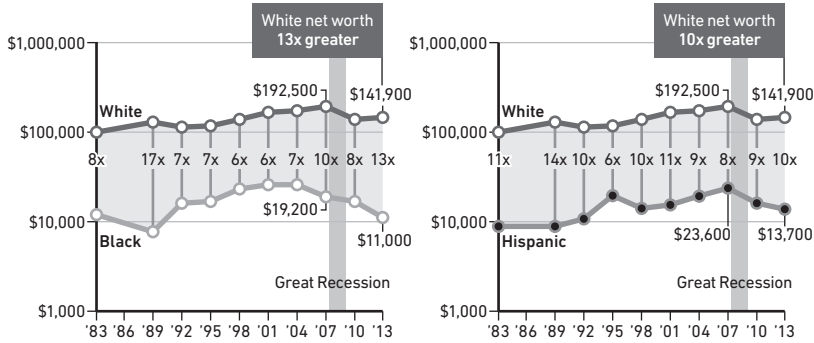
Figure 6.4. Wealthier countries tend to be less religious. Data from Pew Research Center.

scientific development would spread around the world. There are many places today where daily life has no resemblance at all to the university that Berger envisioned.

So, are economically developed countries less religious than poor ones? Here, the answer is clearly yes. As you can see in polling data in Figure 6.4, the wealthier the country, the less important religion is to the average citizen. The same trends can be seen if we look at other measures, like frequency of church attendance or the proportion of people who believe in God. Upwards of 90 percent of the population in very poor countries like Pakistan and Nigeria say that religion is very important in their lives. But the self-identified religious number only around 20 percent in wealthy Canada, Australia, and Germany. This appears to be clear confirmation that as people's lives become more secure in material terms, they have less need for the consolations of religion.

Racial, Ethnic Wealth Gaps Have Grown Since Great Recession

Median net worth of households, in 2013 dollars



Notes: Blacks and whites include only non-Hispanics. Hispanics are of any race. Chart scale is logarithmic; each gridline is ten times greater than the gridline below it. Great Recession began Dec. '07 and ended June '09.

Figure 7.1. Wealth gaps between white Americans and black and Hispanic Americans have not closed in recent decades. Data from Pew Research Center.

and black Americans to rate how much they thought both blacks and whites were targets of discrimination in each decade from the 1950s to the 2000s. Both groups of respondents agreed that antiblack discrimination had decreased during the course of those decades, although whites thought that it had fallen much more steeply than blacks did. The two groups differed even more strikingly, though, in their perceptions of antiwhite discrimination. Black respondents thought antiwhite bias was not a problem in the 1950s and was still not a problem today. White respondents, in contrast, believed that antiwhite bias had steadily risen in the period in question. Whites seemed to view discrimination as a zero-sum game: The less discrimination they perceived against blacks, the more they saw it turned against whites. The trend was so stark in the eyes of white respondents that by the 2000s they judged discrimination against whites to be a bigger problem than discrimination against blacks.

race. My collaborators Jazmin Brown-Iannuzzi, Erin Cooley, Ron Dotsch, and I recently tested whether people really make this psychological leap. We wanted to determine whether, when citizens are asked about welfare recipients, their mind's eye viewed them as black people.

To find that out, we needed a way to visualize our subjects' mental representations. We began by creating a composite photo consisting of selected facial features from a black man, a black woman, a white man, and a white woman. To this androgynous biracial face, we added random visual noise, like static on a TV screen. We repeated this exercise hundreds of times until we had a large set of faces where each looked slightly different and slightly blurry. We then showed research participants pairs from this group of photos and asked them to select which one looked more like a welfare recipient. By morphing together all of the images that had been judged to be the "welfare recipient" and then morphing those that had been chosen as the "non-welfare recipient," we then created two new composite photos.

The images that emerged captured subjects' images of what a welfare recipient looked like. When we showed pairs of unlabeled images to a new set of participants, they described the welfare recipient image as a black man and the image of the non-recipient as a white man. They judged the welfare recipient as looking lazy,



Figure 7.2. Mental images of the typical welfare recipient (left) and non-recipient (right).