Lane Kenworthy

Is income inequality harmful?

Lane Kenworthy, *The Good Society*

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A generation ago, perhaps even just a few years ago, worry about high or rising income inequality stemmed mainly from a belief that it is unfair. In recent years the source of apprehension has shifted. The dominant concern now is that inequality may have harmful effects on a range of outcomes we value, from education to health to economic growth to happiness to democracy and more. Does it?

My answer is organized as follows:

HYPOTHESES

One hypothesis of interest for some of these outcomes is that a higher level of income inequality increases *inequality* in the outcome. For instance, we might expect greater income inequality to contribute to greater inequality between the rich and the poor in life expectancy or happiness.

A second hypothesis is that a higher level of income inequality worsens the *aggregate level* of an outcome. For example, greater income inequality might reduce the average life expectancy or average happiness in a country.

Third, for some outcomes the hypothesis is that a higher level of income inequality worsens *change in the aggregate level* of an outcome. Greater income inequality might, for instance, reduce a country's economic growth (change in per capita GDP) or median household income growth.

HOW SHOULD WE ASSESS INCOME INEQUALITY'S EFFECTS?

The most informative test, which I'll use here, is to see whether changes in income inequality in the world's rich countries correlate with changes in the various outcomes. It's important to understand why this analytical approach is useful, so bear with me for a moment while I elaborate.

Research on inequality's effects has examined countries, regions (states, counties), cities, and individuals. I focus on countries for two reasons. First, the nation is where we now have the best data on income inequality, with income measured including transfers and taxes, reliably comparable across units, and covering a relatively long period of time. Second, countries are the unit of greatest interest from a policy perspective. Most of the relevant levers for influencing income inequality are at the level of the national government, rather than the region or city.

Wouldn't an examination of individuals provide a cleaner and more accurate test of inequality's effects? With individuals we can design experiments or analyze observational data from very large samples, whereas with countries neither is possible. However, relying on individual-level evidence comes with a critical limitation: we don't know whether effects we observe will scale up. For example, many studies of individuals find that people respond to financial incentives in such a way that we might expect lower tax rates to boost economic growth. Yet when we look at the world's rich countries, we find that lower taxes aren't associated with

faster economic growth. The incentive effect for individuals evidently is relatively small, or perhaps it is offset by other effects of taxes that are conducive to growth. Either way, this information — the impact of taxes on aggregate outcomes for the country — is what citizens and policy makers need to know. The same is true for income inequality.

I examine eighteen affluent democratic nations for which we have data on income inequality and on many of the outcomes of interest: Australia, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.[1]

Why only these countries? After all, they're a small fraction of the world's 190-plus nations, and they're home to only one-seventh of the world's population. The reason is that inequality's effects are likely to be very different in poor and middle-income countries than in rich ones. For instance, in less-affluent countries, income inequality tends to reduce economic growth,[2] but the ways in which it does so are specific to this type of country: it hampers educational attainment, as parents force their children to work instead of going to school, and it fosters political instability. Neither of these causal paths applies in rich democracies: few families keep their children out of elementary or secondary school due to financial need, and governments aren't threatened or toppled by groups demanding less inequality. If we want to understand the impact of income inequality in affluent democratic nations, we need to confine the analysis to such nations.

Much existing study of the effects of income inequality is comparative but static; it is based on patterns across countries at a single point in time. These "cross-sectional" correlations can be informative, but they also can be misleading, because nations differ culturally and in other ways that we can't measure very well and that might be the true cause of differences in outcomes such as economic growth or happiness.

To see what I mean, imagine we want to know the effect of a vitamin supplement on people's health. One approach would be to collect information from a large number of people about whether they take the vitamin supplement and about their health. Suppose we do this and we find that people who take the supplement tend to have better health. It would be a mistake to conclude that the supplement caused the better health, because those who take the supplement may differ from those who don't in ways that contribute to good health. Similarly, countries with lower income inequality may differ from countries with higher inequality in a variety of ways that affect economic, social, and political outcomes.

A better design for testing the impact of the vitamin supplement is to measure the health of a set of people, then have a randomly-selected subset of them take the

supplement, and then measure everyone's health again at a later point in time. We can't do this kind of experiment with countries, but we can approximate it. Between 1979 and 2007, the degree to which income inequality changed varied markedly across the rich countries. This variation in changes ("difference in differences") is useful for analytical purposes. If nations with larger increases in inequality experienced more change in an outcome, we can have greater confidence that a causal relationship exists. Examining the correlation between changes in the hypothesized cause and changes in the outcome takes constant, potentially-influential, difficult-to-measure differences between countries out of play.[3]

As it happens, the cross-country variation in changes in income inequality in recent decades is greater than the cross-country variation in average levels of inequality during that period.[4] This is an additional advantage of studying changes rather than levels.

I focus on change since 1979. This is for three reasons. First, data for some of the key measures aren't available before then. Second, this is the period of substantial change in income inequality, and of substantial variation across countries in the amount of change.[5] Third, causal processes since the late 1970s are likely to have differed from those in earlier decades.[6]

A difference-in-differences analysis presumes that the effect will show up within the measured time period. Effects of income inequality are likely to take a while to play out, so I focus on change over the full period from 1979 to 2007, rather than change over a single year or a few years. Three decades should be sufficient to identify an impact of income inequality.[7]

Why begin at 1979 and end at 2007? Though trends in income inequality have tended to be secular rather than cyclical, the business cycle has some influence. The best way to ensure comparability is therefore to examine years at similar points in the business cycle, and 1979 and 2007 were business-cycle peaks.[8] (In a few years it will make sense to extend the period of analysis beyond 2007.)

For most of the outcomes, I try controlling for some other potential influences, such as change in GDP per capita, change in educational attainment, change in ethnic heterogeneity, and change in the share of the population that is elderly (aged 65 and over). To keep the presentation simple, I mention this only when adding such controls alters the finding.

Changes in income inequality over the past generation have occurred at two different points in the income distribution. One is between households at the very top and everyone else; I use the top 1%'s income share to measure this. The other is among

those below the top; I measure this with the Gini coefficient for households in the bottom 99%. Figure 1 shows the change in income inequality from 1979 to 2007 in the eighteen countries according to these two measures. (An appendix has separate charts for each country showing the over-time patterns.)

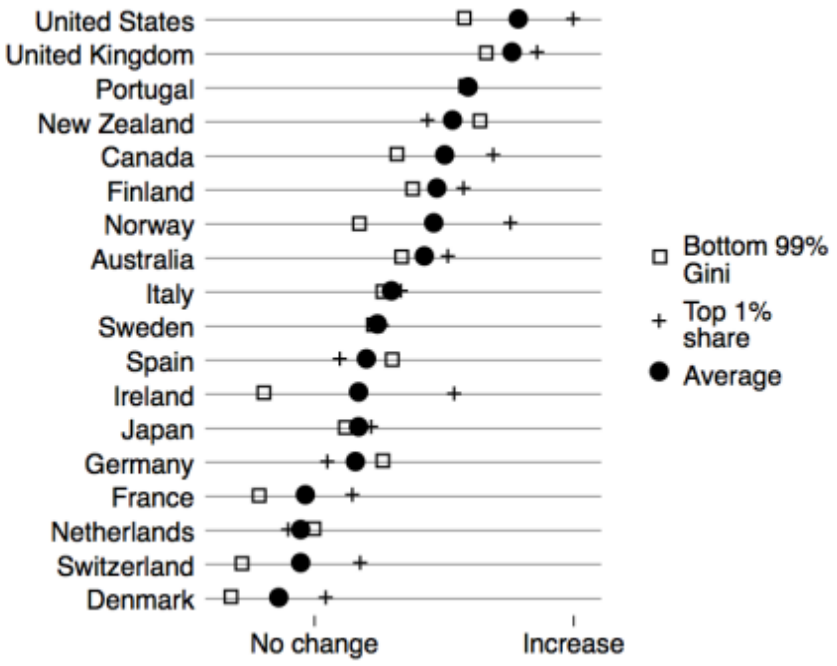


FIGURE 1. Change in income inequality, 1979 to 2007

Absolute change from 1979 to 2007. Bottom 99% Gini: posttransfer-posttax household income. Data source: Standardized World Income Inequality Database. Top 1% share: pretax income excluding capital gains. Data source: World Top Incomes Database. For this chart (but not for analyses below), the two series are converted to a common metric — a scale of 0 to 1, where 0 is the lowest observed value for all countries and years and 1 is the highest. Then change over time is calculated. Average: mean of change in bottom 99% Gini and change in top 1% share.

A difference-in-differences approach is appropriate when we have significant over-time change in the hypothesized cause, when there is variation across countries in that change, and when the change is mainly unidirectional rather than up-and-down. For income inequality in the world's rich countries during the period from 1979 to 2007, all three of these conditions apply (see figure 1 and the appendix).

Okay, on to the evidence.

EDUCATION

Let's begin with education and some other "social" outcomes. Higher levels of income inequality may widen disparities in educational attainment. Income differences can produce differences in children's capabilities and aspirations.[9] Income inequality may also drive up the cost of college, if affluent families are willing to pay more and more in tuition and fees to ensure success for their children and colleges engage in a spending arms race to compete for students.[10] In the United States, college costs have risen sharply in recent decades. Even with substantial funds available for financial aid, students from lower-income households may be forced to pay or borrow too much to attend college.[11] As figure 2 shows, rates of college completion among children from low-, middle-, and high-income families in the US have indeed diverged in the past generation.

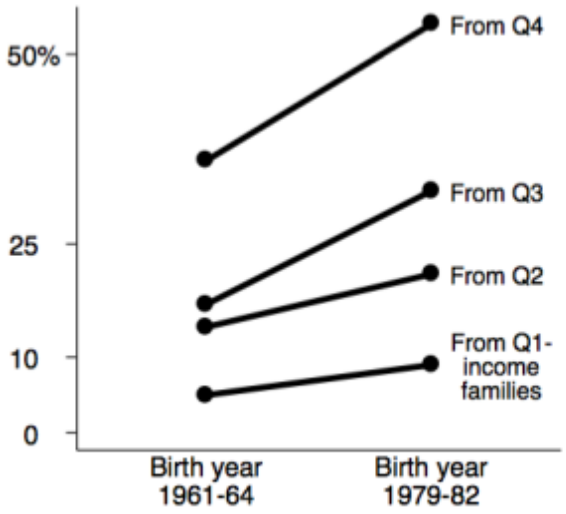


FIGURE 2. College completion by parents' income, United States

College completion: four or more years of college. Q1-income family: the person's family income during childhood was on the lowest quarter of the income ladder. Q2, Q3, and Q4 refer, respectively, to the second, third, and fourth quarters of the income ladder. Data source: Martha Bailey and Susan Dynarski, "Gains and Gaps: A Historical Perspective on Inequality in College Entry and Completion," in *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*, edited by Greg J. Duncan and Richard J. Murnane, Russell Sage Foundation, 2011, figure 6.3, using National Longitudinal Survey of Youth data.

Income inequality isn't the only causal factor here. Part of this divergence very likely owes to widening gaps in family structure, in parents' education, in parenting behaviors and practices, and perhaps in neighborhood quality. But the growing inequality of parents' income almost certainly is part of the story.[12]

If greater income inequality tends to reduce *equality* of college completion, does it also reduce the *average level* of college completion? The hypothesis is that the

marginal utility of income in boosting college-going declines as income increases, so transferring income from the poor to the rich will reduce the overall share getting a college degree in a country.

However, there are two reasons why higher inequality might not reduce college completion. First, college completion among children from middle- and upper-income families may increase enough to offset stagnation or decline among those lower in the income distribution.[13] Second, government policy might nullify income inequality's impact. For instance, universal public early education will reduce the effect of income differences on children's abilities and aspirations, and government subsidization of college attendance can ensure that it is affordable for all.[14]

College completion rates have increased in all affluent nations since the 1970s. The eighteen-nation average for the share of 25-to-34-year-olds with a university degree rose about ten percentage points. But the amount of increase has varied considerably across the countries, from just one percentage point in the United States to twenty-one in Finland. Have changes in income inequality contributed to this variation?

Figure 3 shows the pattern of change in college completion by change in income inequality from 1979 to 2007 for our eighteen countries. The predicted association is negative; countries with larger increases in income inequality should have smaller increases in college completion. But the data offer no indication of an adverse impact.

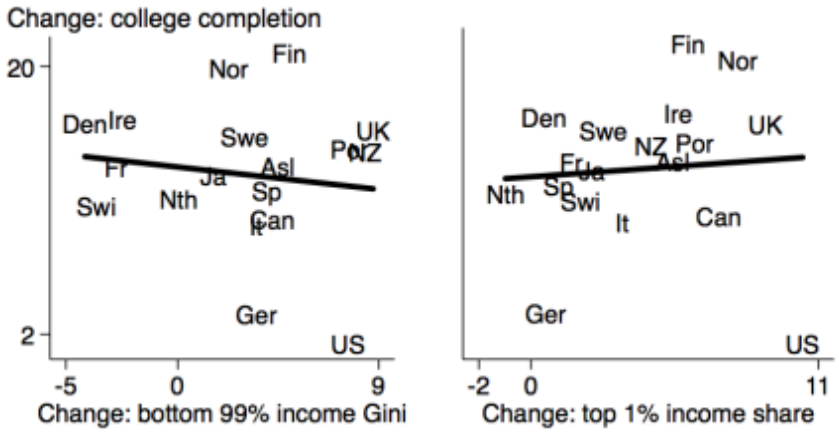


FIGURE 3. Change in college completion by change in income inequality, eighteen countries, 1979 to 2007

The lines are linear regression lines. The values on the axes are for change over 28 years. Income inequality: See the note to figure 1. College completion: Share of persons age 25 to 34 with a university degree. Figures for 1979, 1989, and 1999 are estimated using the share of those in 2009 with a university degree for the following

age groups: 55-64 (25-34 in 1979), 45-54 (25-34 in 1989), 35-44 (25-34 in 1999).
Data source: OECD.

Another measure of educational attainment that might shed some light on the impact of income inequality is student test scores.[15] The most comparable cross-country data are PISA test scores of fifteen-year-olds. Unfortunately, these are available only for the years 2000 to 2009. Here too there is no indication of a negative impact of rising income inequality (not shown).

HEALTH

Most affluent nations have a universal health care system that makes good-quality care available to all citizens at little or no out-of-pocket cost. Even so, length of life tends to vary by income across individuals, perhaps because additional income allows for better care or contributes to reduced stress, better diet, and more exercise.[16] This implies that greater income inequality will produce greater inequality of longevity within countries.

That is indeed what we observe in the United States. Income inequality has increased steadily since the late 1970s, and during this period the gap in life expectancy between Americans with low income and those with high income has widened sharply, as figure 4 shows. We don't know how much of this widening is caused by income.[17] Comparable over-time data for other rich nations would help, but such data don't exist.

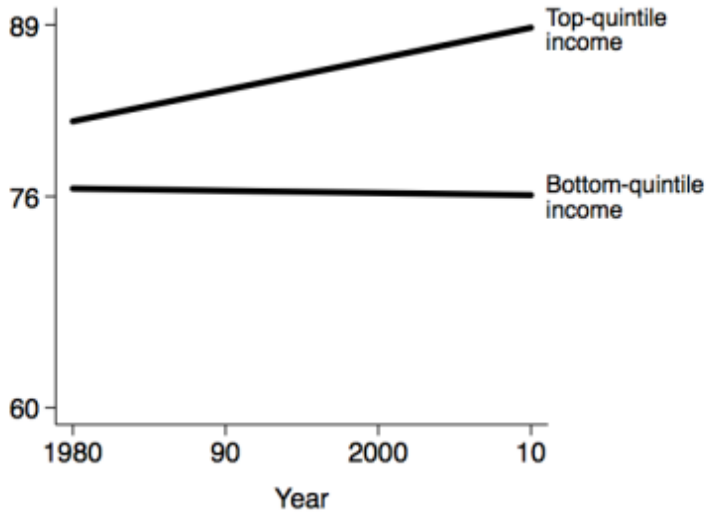


FIGURE 4. Life expectancy by income, United States
Life expectancy for males at age 50. Data source: Ronald Lee et al, *The Growing Gap in Life Expectancy by Income*, National Academies Press, 2015, figure 3-2.

More controversial is the notion, first advanced by Richard Wilkinson in the early 1990s, that higher income inequality contributes to lower *average* life expectancy.[18]

There are three main hypotheses about why income inequality might reduce average life expectancy. One is that the marginal utility of income in improving health declines as income rises. Life expectancy rises with income, but as we move up the income ladder the degree of improvement per extra unit of income declines. Thus, taking some money from a poor person and giving it to a rich person should increase the life expectancy of the rich person by less than it reduces the life expectancy of the poor person.

The second hypothesis is that larger differences in income within a society increase stress. Richard Wilkinson and Kate Pickett posit that "Greater inequality seems to heighten people's social evaluation anxieties by increasing the importance of social status…. If inequalities are bigger, so that some people seem to count for almost everything and others for practically nothing, where each one of us is placed becomes more important. Greater inequality is likely to be accompanied by increased status competition and increased status anxiety."[19]

The third hypothesized causal link is public policy. Greater income inequality may produce heightened opposition by the rich to higher taxes, thereby blocking expansion of public health care coverage or widespread adoption of new medical technology.[20] If so, the quality of health care services and the quantity of its provision might improve less than they otherwise would.

A large number of studies have concluded that income inequality is indeed negatively correlated with average life expectancy.[21] However, virtually all of these studies are cross-sectional. They examine the association between the level of income inequality and the level of life expectancy across nations, regions, counties, or cities at a single point in time. Studies analyzing differences in differences across countries have not found a negative association between changes in income inequality and changes in life expectancy.[22] Several relatively comprehensive reviews therefore conclude that the empirical case for an effect of income inequality on life expectancy is very thin.[23] The most recent of these summarizes this conclusion in the following way: "A few high-quality studies find that inequality is negatively correlated with population health, but the preponderance of evidence suggests that the relationship between income inequality and health is either non-existent or too fragile to show up in a robustly estimated panel specification. The best cross-national studies now uniformly fail to find a statistically reliable relationship between economic inequality and longevity."[24]

Life expectancy data are estimates, based on current mortality data and projections

of future trends. They are nevertheless regarded as fairly reliable for comparison both across countries and over time. Life expectancy increased in all of the countries during these three decades. The eighteen-nation average rose from 74 years in 1979 to 80 years in 2007. In most of these countries, income inequality increased during this period. This suggests that if inequality does adversely affect life expectancy, its effect has been weaker than that of whatever has been driving improvements in longevity — increased access to medical care, improved quality of medical care, better diet, more exercise, less smoking, and so on. If income inequality has adversely affected longevity, it has done so by slowing the degree of increase over time.

The two charts in figure 5 show change in life expectancy by change in income inequality for our eighteen countries. On the vertical axis is change in life expectancy. It's adjusted for a catch-up process — countries that began the period with lower life expectancy experienced faster increases than those beginning with high levels, probably because advances in medical devices, nutritional information, and other improvements are easily borrowed by laggards. On the horizontal axis is change in income inequality, measured in the first chart as the bottom 99% Gini and in the second chart as the top 1%'s income share.

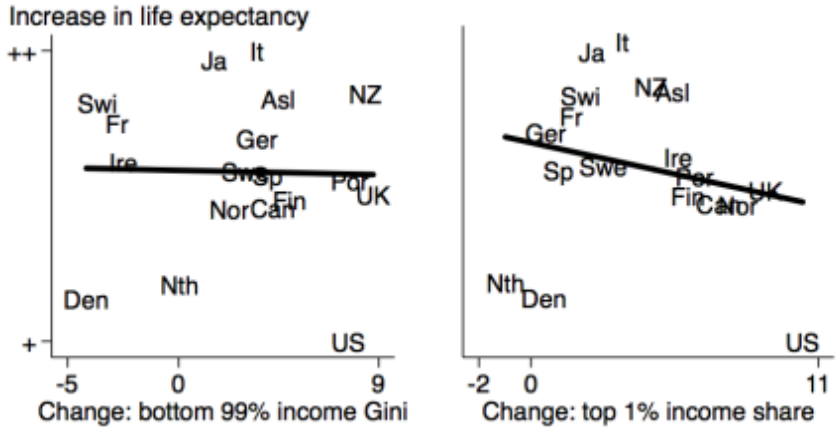


FIGURE 5. Change in life expectancy by change in income inequality, eighteen countries, 1979 to 2007

"+" = smaller increase; "++" = larger increase. The lines are linear regression lines. Income inequality: See the note to figure 1. Life expectancy: Years of life expectancy at birth. Change in life expectancy is adjusted for starting level; the vertical-axis measure is the residuals from a regression of 1979-to-2007 change in life expectancy on 1979 level of life expectancy. The range from "+" to "++" on the vertical axis is 4 years. Data source: OECD.

The first chart suggests no association. In the second chart we see the predicted

negatively-sloped pattern, but the estimated size of the effect isn't especially large. A US-size rise in income inequality — an increase in the top 1%'s income share of about ten percentage points over three decades — is estimated to reduce life expectancy by approximately half a year. Half a year of life is nothing to sneeze at, of course, but bear in mind that during the period from 1979 to 2007 life expectancy in these eighteen countries increased by an average of six years.[25] And if we control for change in smoking, the negative association between change in life expectancy and change in the top 1%'s income share disappears entirely.[26]

Life expectancy isn't the only relevant measure of health. Another for which we have extensive data is infant mortality. Analysis of changes in infant mortality yields a similar conclusion (not shown).

In recent decades obesity has become a significant health problem.[27] Greater income inequality might contribute to greater obesity. Across individuals, obesity is less common among those with higher income. If the marginal utility of income in reducing obesity declines as income rises, we can expect more income inequality to yield more obesity. Another hypothesis is that income inequality increases status competition, which increases stress, which in turn prompts overeating.[28]

Across countries and across the US states, the level of obesity seems to be positively correlated with the level of income inequality.[29] But as I've emphasized, we should be wary of trusting cross-sectional associations. What can we learn by examining changes in the rich nations?

Figure 6 shows change in the obesity rate by change in income inequality for eighteen countries. For both measures of income inequality, the pattern summarized by the solid regression line suggests support for the notion that income inequality increases obesity.

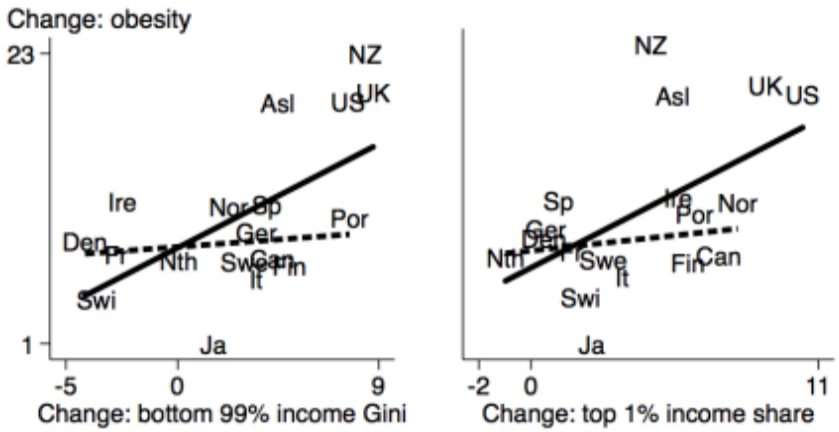


FIGURE 6. Change in obesity by change in income inequality, eighteen countries, 1979 to 2007

The lines are linear regression lines. The solid regression line includes all eighteen countries; the dashed line excludes Australia, Japan, New Zealand, the UK, and the US. The values on the axes are for change over 28 years. Income inequality: See the note to figure 1. Obesity: Share of adults with body mass index greater than 30. For Australia, Japan, New Zealand, the United Kingdom, and the United States, the obesity estimate comes from actual measurements of people's height and weight. For other countries the obesity estimate comes from surveys in which people report their height and weight to the interviewer. Data source: OECD.

But there are two problems. First, for the four nations in the upper-right corner — Australia, New Zealand, the United Kingdom, and the United States — the obesity estimates are based on actual measurements of people's height and weight, whereas for the other nations (except Japan) they are from self-reports by survey respondents. It's possible that self-reported data not only underestimate the true level of obesity in a country (they do, by three to seven percentage points) but also the degree of change over time. If so, the positive association described by the solid lines in figure 6 may be overestimated or altogether wrong.

Second, if the obesity rate has in fact risen faster in Australia, New Zealand, the UK, and the US than in other rich nations, there is a plausible alternative hypothesis as to why: these countries' weak regulation of food and restaurants and their lack of a well-entrenched healthy eating culture. In this account, large-portion restaurants, particularly fast-food ones, proliferated more rapidly in these countries than in others, junk food became available in grocery and convenience stores sooner and in larger quantities, and the shift away from home cooking and limited snacking occurred more quickly and decisively.[30]

Given these considerations, it's worth looking at the association between change in income inequality and change in obesity with Australia, New Zealand, the UK, and the US excluded. The dashed lines in figure 6 suggest a lack of association across the other countries.

As an additional check, we can look at the US states. Obesity data are available from 1995 to 2009. There is no association across the states between change in obesity over these years and change in income inequality (bottom 99% Gini).[31]

A final health indicator is self-reported health. Survey respondents are asked to rate their health as very good, good, fair, or poor. Several recent studies find no relationship across countries between income inequality and average self-reported health.[32]

What can we conclude? Income inequality very likely widens disparities in health, but it doesn't appear to have much impact on average life expectancy, infant mortality, obesity, or self-reported health.[33]

FAMILY

Does income inequality affect family formation and stability? We do observe, across individuals in the United States, a rising correlation between income and nonmarriage, divorce, teen birth, out-of-wedlock birth, and single parenthood. Each of these has decreased less or increased more among Americans with low income. Though it is difficult to separate the effect of income from that of education, it looks likely that rising income inequality has contributed to rising disparities in family problems.[34]

Is there also an impact on the aggregate (average) level of family formation and stability? Income inequality may increase teen and/or out-of-wedlock childbearing by weakening women's perceived opportunity to thrive in the labor market, by undermining men's ability to support a family, and by fostering unrealistic views among young people about the economic wherewithal needed for a successful marriage.[35] Several studies have found an association between income inequality and the teen birth rate across countries at a single point in time, though there seems to be no similar association for early marriage, divorce, or single parenthood.[36]

In the United States, the teen birth rate dropped steadily during the 1970s. It leveled off in the 1980s and then rose from 1987 to 1991. Since the mid-1990s it has again been falling, and rather quickly. This pattern is consistent with the trend in bottom-99% income inequality, which increased in the 1980s and early 1990s and then flattened out. It is inconsistent with the trend in top-end income inequality, which continued to rise well past the mid-1990s.

The OECD has data on teen births for fourteen nations in 1980 and 2008. The incidence of teen births decreased during these years in all countries, but more rapidly in some than in others. Figure 7 shows the association between change in income inequality and catchup-adjusted change in teen births. The "inequality is harmful" hypothesis predicts a positive correlation; countries with larger increases in income inequality should have experienced smaller declines in teen births (adjusting for starting level). In the first chart there is no association to speak of. In the second, with income inequality measured as the top 1%'s income share, we do observe a positive association, but it's weak and driven entirely by the United States and the United Kingdom. This is thin evidence on which to rest a conclusion that inequality has a harmful impact.

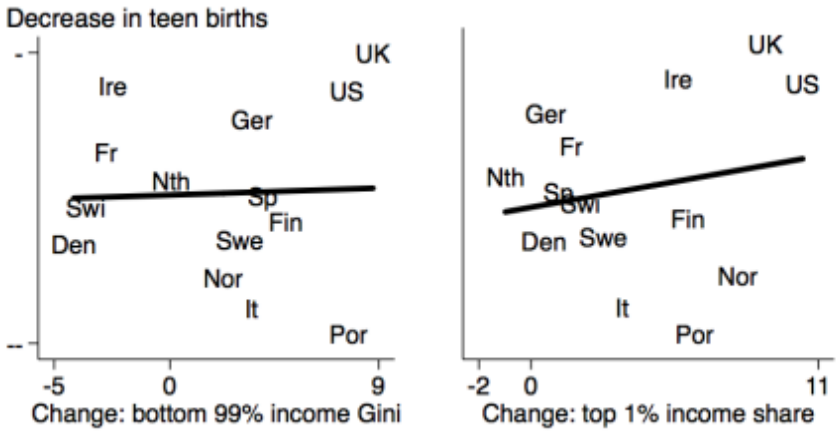


FIGURE 7. Change in teen births by change in income inequality, fourteen countries, 1980 to 2008

"-" = smaller decrease; "—" = larger decrease. The lines are linear regression lines. Income inequality: See the note to figure 1. Teen births: Number of children born alive to women aged 15-19 per 1,000 women of this age range. These data are available for the years 1980 and 2008 only. Change in teen births is adjusted for starting level; the vertical-axis measure is the residuals from a regression of 1980-to-2008 change in teen births on 1980 level of teen births. The range from "-" to "—" on the vertical axis is 15. Data source: OECD, "Family Database," series SF2.4.

Looking across the US states yields a similar conclusion: changes in the teen birth rate aren't correlated with changes in income inequality.[37]

SAFETY

Income inequality might increase crime. If inequality contributes to limited employment opportunities for young persons (especially males), it may encourage greater pursuit of illicit income-generating activities.[38] Inequality also can foster crime by breeding frustration, due to perceived relative deprivation and blocked opportunity.[39] Yet evidence regarding the link between income inequality and crime is mixed.[40]

Of particular concern is violent crime. Comparable longitudinal data for countries are available for only one type of violent crime: homicide. Some posit that this too is influenced by income inequality.[41] Homicide rates have decreased in most rich nations since the early 1990s. Has income inequality contributed to variation across the countries in the amount of decrease? Figure 8 shows catchup-adjusted change in homicide rates by change in income inequality for our eighteen countries. There is no indication of the predicted positive association.

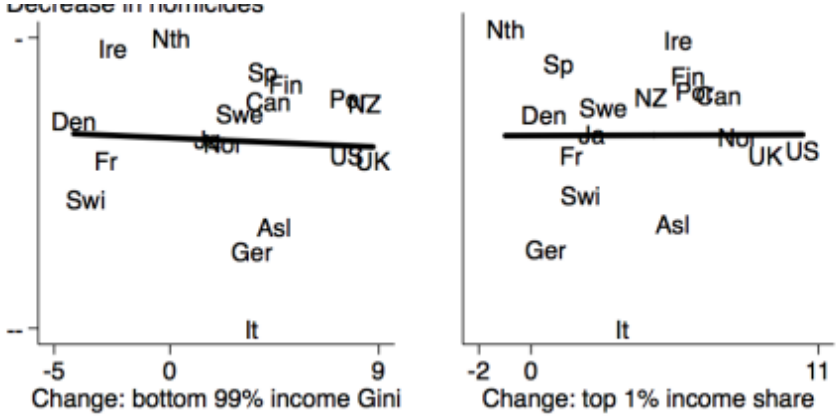


FIGURE 8. Catchup-adjusted change in homicides by change in income inequality, eighteen counties, 1979 to 2007

"-" = smaller decrease; "—" = larger decrease. The lines are linear regression lines. Income inequality: See the note to figure 1. Homicides: Homicides per 100,000 population. These data are available for 1986 to 2007. Change in homicides is adjusted for starting level; the vertical-axis measure is the residuals from a regression of 1986-to-2007 change in homicides on 1986 level of homicides. The range from "—" to "-" on the vertical axis is 5. Data source: OECD.

RESIDENTIAL MIXING

Income inequality allows and in some respects encourages households with different incomes to live in different communities. In particular, given that household income can have a direct effect on the quality of schools and other public or quasi-public services and institutions in an area, those with higher incomes benefit from living near others with higher incomes. If families pay a premium in order to live in areas with better amenities, home prices get bid up, making it more difficult for those with middle and low incomes to buy their way in. This type of process can cascade down the income ladder, producing residential segregation by income from top to bottom.

Data for assessing the degree to which income inequality reduces residential mixing are available for the United States, but not, to my knowledge, in comparable form for other rich nations. Sean Reardon and Kendra Bischoff have examined residential segregation among American families with children from 1970 to 2009.[42] They find that residential mixing by income decreased (segregation by income increased) in the 1980s and the 2000s, though not in the 1970s and 1990s.[43] They also find that across large metro areas, residential mixing by income is lower where income inequality is higher, though it is only mixing of the affluent that is lower, not mixing of the poor.

Most important, Reardon and Bischoff conduct a difference-in-differences analysis. They find that metro areas in which income inequality increased more tended to also

have larger decreases in residential mixing by income.[44] This too holds only for mixing of families at the top, not for those at the bottom, which is what we might expect given that most of the increase in income inequality after the 1980s has consisted of separation between the top and the rest.[45]

TRUST

Higher income inequality is, according to some, corrosive of generalized trust. One hypothesis is that visible inequality leads people to think cheating must be rife. "When 1 percent of the population takes home more than 22 percent of the country's income," writes Joseph Stiglitz, "reasonable people, even those ignorant of the maze of unfair policies that created this reality, can look at this absurd distribution and be pretty certain that the game is rigged."[46]

Another hypothesis suggests that more income inequality yields less personal interaction and therefore less familiarity with people from other income classes. "We tend to choose our friends from among our near equals," say Richard Wilkinson and Kate Pickett, "and have little to do with those much richer or much poorer. And when we have less to do with other kinds of people, it's harder for us to trust them. Our position in the social hierarchy affects who we see as part of the in-group and who as out-group — us and them — so affecting our ability to identify with and empathize with other people."[47]

A third hypothesis holds that income inequality reduces trust by enhancing a sense that the middle class is modest in size while the poor are numerous and lack incentives to adhere to norms of honesty. "If the bottom groups are poor," according to Christian Albrekt Larsen, "then it is fair to imagine that they have a lot to gain by cheating…. [Also,] the middle may easily imagine that persons at the bottom do not have much reputation to lose. Along the same line of reasoning it is fairly easy to understand why the middle might perceive imagined fellow citizens belonging to the middle as trustworthy. Persons in the middle of society are fairly well-off and therefore their (perceived) gain from cheating is lower. At the same time the losses connected with being caught cheating seem to be much higher…. But most importantly, persons in 'the middle' have much more reputation to lose."[48]

Public opinion surveys regularly ask respondents whether they think "most people can be trusted" or "you can never be too careful in dealing with others."[49] The share responding that most people can be trusted is a measure of generalized trust. It is negatively correlated with the level of income inequality across countries, across the American states, and over time for the US as a whole.[50] However, trust began decreasing in the United States in the 1970s (perhaps even earlier), which is prior to the rise in income inequality, and the decline in trust does not seem to have

accelerated once inequality began to increase.[51] This suggests that, if income inequality and trust are correlated over time, the causal direction may run from trust to inequality rather than the other way around.[52] The single-point-in-time cross-sectional associations across nations and states are questionable for reasons I noted at the beginning of this chapter.

Data on trust are available for fifteen nations beginning in the early 1980s from the World Values Survey. The over-time trend has varied across nations, with trust increasing in some, remaining constant in some, and decreasing in some.

Figure 9 shows change in trust by change in income inequality. The predicted association is negative; countries with larger increases in income inequality should be more likely to have experienced stagnant or falling trust. And that's indeed what we observe. The association is negative for both measures of income inequality.

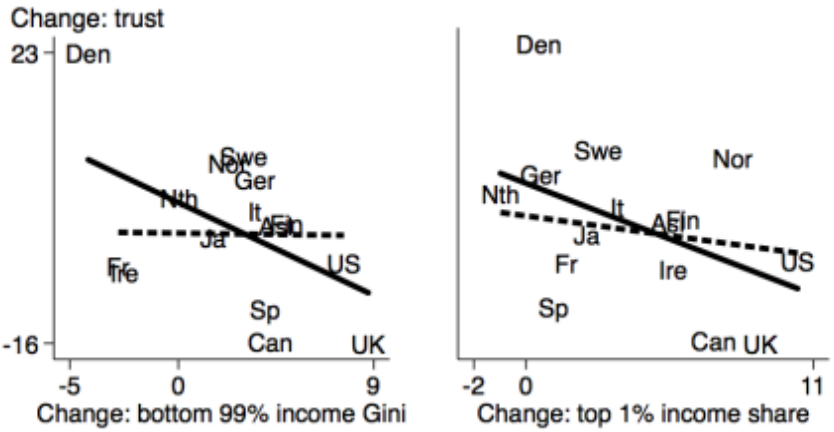


FIGURE 9. Change in trust by change in income inequality, fifteen countries, 1979 to 2007

The lines are linear regression lines. The solid regression line includes all fifteen countries; the dashed line excludes Denmark and the United Kingdom. The values on the axes are for change over 28 years. Income inequality: See the note to figure 1. Trust: Share of adults saying "most people can be trusted." The other response option is "You can never be too careful when dealing with others." Actual years for trust are 1981 to 2007. Data source: World Values Survey.

Yet the correlation is driven by just two countries: Denmark (upper-left corner) and the United Kingdom (lower-right). If we take these two countries out, the negative association goes away entirely (first chart) or largely (second chart), as the dashed lines in the charts indicate. Is it sensible to rest our verdict on these two countries? Do Denmark and the UK illuminate a trust-reducing impact of income inequality?[53] I suspect they don't. In Denmark, trust increased massively according to the World

Values Survey data. Income inequality did decrease a little in Denmark — at least when measured as the Gini for the bottom 99% of households — but it seems unlikely that this dramatically increased contact and friendships among people of different incomes, or that it sharply reduced middle-class Danes' sense of a large underclass who cannot be trusted. And is there good reason to believe the opposite happened in the UK, where income inequality rose and trust decreased? An alternative possibility is that this is measurement error — that for some reason the survey results exaggerate the true amount of increase in trust in Denmark and the true amount of decrease in trust in the UK.[54]

An analysis of over-time patterns in the US states offers additional grounds for skepticism about the impact of income inequality on trust. Malcolm Fairbrother and Isaac Martin find that between 1980 and 2000, trust didn't tend to decrease more in states in which income inequality increased more.[55]

ECONOMIC GROWTH

Let's turn now to economic and financial outcomes, beginning with what some consider the most damaging of income inequality's hypothesized effects: slower growth of economic output. In *The Price of Inequality*, Joseph Stiglitz concludes that "We are paying a high price for the inequality that is increasingly scarring our economy — lower productivity, lower efficiency, lower growth…."[56] Stiglitz and others have advanced reasonable hypotheses about why income inequality is likely to be bad for economic growth.[57] The rich spend a smaller fraction of their income than the middle class and the poor, so rising inequality may reduce consumer demand. People might not work as hard if they perceive the distribution of pay and income to be unfair. And income shortfalls, whether absolute or relative to others, may encourage people to borrow more, increasing the likelihood of financial crises that reduce economic growth in the short- or long-run.

What does the evidence say? Recent research has reached varying conclusions about the effect of income inequality on economic growth in rich nations, but few studies have concluded that inequality is bad for growth.[58]

Figure 10 shows change in GDP per capita by the average level of income inequality for eighteen nations between 1979 and 2007. Unlike in previous sections, these two charts use the *level* of inequality on the horizontal axis rather than change in inequality. The hypothesis is that a higher level of income inequality will be associated with less economic growth — a smaller increase in GDP per capita. To create a "change" measure of economic growth, we would need to look at, say, the difference between growth of GDP per capita in the 2000s and growth of GDP per capita in the 1980s. But these periods are too short to accurately gauge nations'

economic growth performance.[59] We need to look at longer periods, and that means focusing on change in GDP per capita over the whole of 1979 to 2007, which in turn means that we should use the level of income inequality rather than change in inequality.

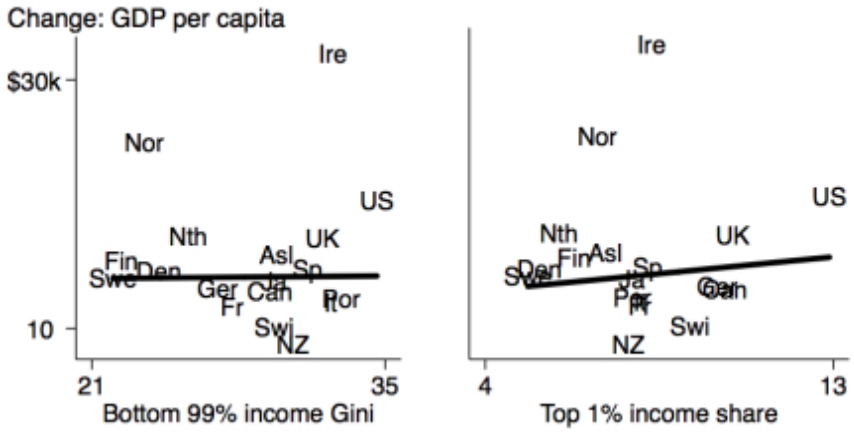


FIGURE 10. Change in GDP per capita by level of income inequality, eighteen countries, 1979 to 2007

The lines are linear regression lines, calculated with Ireland and Norway excluded. The values on the vertical axis are for change over 28 years. Income inequality: See the note to figure 1. GDP per capita: Gross domestic product per person, adjusted for inflation and converted to US dollars using purchasing power parities. "k" = thousand. The change measure for GDP per capita is absolute change, not percentage change, but it is very similar to percentage change in GDP per capita adjusted for catch-up. Data source: OECD.

Neither of the charts in figure 10 suggests that income inequality has been bad for economic growth. (The graphs use the average level of inequality during 1979-2007; using the level at the beginning of the period, in 1979, doesn't alter the conclusion. The lines in the graphs exclude Ireland and Norway, as each had exceptionally rapid economic growth for idiosyncratic reasons.[60]) Indeed, the regression line in the second chart slopes slightly upward, suggesting there could perhaps be a positive association between inequality and growth. That positive association, however, hinges on the position of a single country, the United States, whose economic growth was buoyed by two bubbles (the internet stock bubble in the late 1990s and the housing bubble in the 2000s). The most sensible conclusion from these data is that income inequality has had little or no effect on economic growth.

How can it be that income inequality hasn't hurt growth? We know consumer demand is vital for economic growth, and we know that the middle class and the poor are a more important source of demand than the rich. If a larger share of the income has

been going to those at the top, musn't that have reduced consumption and hence the economy's growth rate? Not necessarily. The truth is, we don't know what mix of consumption and investment is optimal for economic growth. It's perfectly reasonable to *suspect* that the top-heavy rise in income inequality in countries such as the United States has moved us away from the optimal point, but since we don't know where that optimal point is, this suspicion has to take a back seat to the data. And the data for affluent nations in the era of high and rising income inequality don't support the "inequality is harmful" hypothesis.

There surely is some point at which the top 1%'s income share would be high enough to impede economic growth. But the experience of the world's rich countries in the period from 1979 to 2007 suggests that that point probably hasn't yet been reached.

EMPLOYMENT

Another prominent indicator of economic health is employment. Figure 11 shows change in the employment rate — the share of working-age adults who have a paying job — by change in income inequality for our eighteen countries. Here too the pattern doesn't support the hypothesis that income inequality hurts the economy. Countries with larger increases in income inequality haven't tended to suffer slower employment growth.

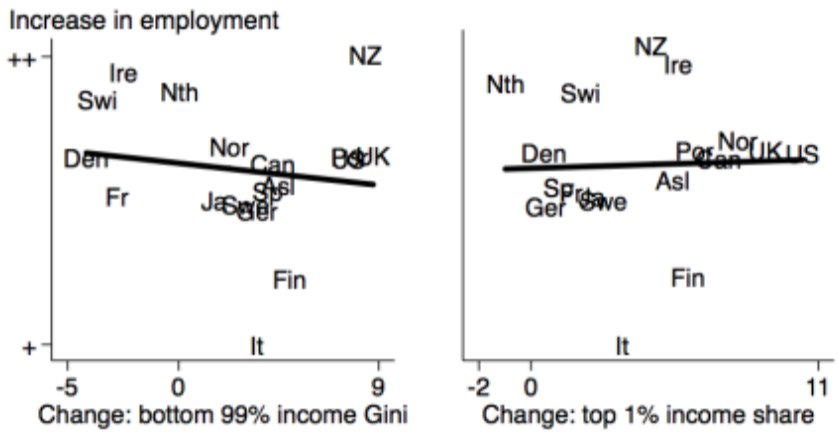


FIGURE 11. Change in employment by change in income inequality, eighteen countries, 1979 to 2007

"+" = smaller increase; "++" = larger increase. The lines are linear regression lines. The values on the axes are for change over 28 years. Income inequality: See the note to figure 1. Employment: Employed persons aged 25 to 64 as a share of the population aged 25 to 64. Change in employment is adjusted for starting level; the vertical-axis measure is the residuals from a regression of 1979-to-2007 change in employment on 1979 level of employment. The range from "+" to "++" on the vertical axis is 20 percentage points. Data source: OECD.

ECONOMIC STABILITY

Income inequality might be bad for the economy in another way: by causing financial crises. Proponents of this notion suggest three mechanisms. First, households with stagnant incomes increase borrowing in order to sustain consumption growth, and their debt levels eventually become unsustainable. Second, as the rich get a larger and larger portion of the income, they end up with excess savings, which fuels speculative investment and financial bubbles. Third, the rich use their money and consequent political influence to press policy makers to loosen regulations on finance, and this too leads to bubbles.[61]

Anthony Atkinson and Salvatore Morelli have done the most comprehensive study of financial crises across countries and over time. They conclude that "The history of systemic banking crises in different countries around the world does not suggest that either rising or high inequality is a significant causal factor."[62]

What about the 2008 crisis in particular? It probably will be a while yet before the causes are fully sorted out, but there are grounds for skepticism about income inequality's contribution.[63] Growing demand for loans by middle- and low-income households may have been driven more by the rising cost of homes and college,

along with relaxed lending standards and the availability of home equity loans, than by slow household income growth (see below). Risky lending may have been spurred by the creation of new financial instruments that appeared to spread risk and by rising pressure for profits in publicly-owned investment firms. Finally, the Federal Reserve could have quashed the housing bubble, the proximate precipitant of the crisis, had it wanted to. That it chose not to do so arguably owed more to Fed Chair Alan Greenspan's ideological predilections than to the political influence of America's rich.

HOUSEHOLD INCOME GROWTH: THE POOR

If the rich or the upper-middle class capture a large share of a country's economic growth, the incomes of poor households are likely to increase more slowly than economic growth allows. This is a matter of simple arithmetic. The pie grows, but the slice going to those at the top gets larger and larger relative to the slice going to the poor. The poor's slice may grow in absolute size, but not as much as it could and, arguably, should.

Now, this could be offset if rising income inequality causes economic growth to increase. If that were to happen, the faster increase in the size of the pie might offset the shrinking relative size of the piece going to those at the bottom. But as we saw in figure 10, there is little indication that income inequality has, in fact, produced faster economic growth in the world's affluent countries.

Another potential counteracting force is government redistribution. An influential hypothesis holds that if the market distribution of income becomes more unequal, policymakers will increase redistribution, thereby offsetting part or all of the shortage of income growth suffered by the poor.[64] This is because when income inequality goes up, the median voter will benefit from an increase in redistribution, and this hypothesis predicts that governments will respond to the median voter's wishes.

On the other hand, a greater income gap between the rich and the poor might reduce empathy on the part of the affluent, give them more incentive to campaign against redistribution (they have more to lose), and enhance their influence over policymakers.[65]

There is little evidence to suggest that redistribution increases when the market distribution of income becomes more unequal. Public opinion surveys often find a lot of people who agree that "government should reduce income differences between rich and poor," but that share hasn't tended to increase much in response to an increase in income inequality.[66] Also, affluent countries with higher market inequality tend to have less redistribution, not more. And in recent decades redistribution hasn't

increased more in nations with larger increases in income inequality.[67]

So what has happened to income growth among poor households during the era of high and rising income inequality? As with economic growth, the outcome here is already a change measure — change in household income for those at the bottom of the ladder. To create a measure of change in this change, we would need to compare income change in, say, the 1980s with income change in the 2000s. But these periods are too short to get a true indication of household income growth. So here too I examine the association between change in the outcome and the *level* of income inequality during the 1979-2007 period. (I use the average level of inequality from 1979 to 2007, but using the level at the beginning of the period, in 1979, yields the same conclusion.)

The two charts in figure 12 offer little indication that income inequality has slowed income growth among poor households.[68] The lines do slope downward, but the countries are spread widely around the lines.

FIGURE 12. Change in low-end household incomes by level of income inequality, eighteen countries, 1979 to 2007

The lines are linear regression lines, calculated with Ireland and Norway excluded. The values on the vertical axis are for change over 28 years. Income inequality: See the note to figure 1. P10 household income: Posttransfer-posttax household income at the 10th percentile of the distribution. The incomes are adjusted for household size and then rescaled to reflect a three-person household, adjusted for inflation, and converted to US dollars using purchasing power parities. The change measure for P10 household income is absolute change, not percentage change. Data source: Luxembourg Income Study.

Why is that? Although we often think of economic growth trickling down to low-end households via rising employment and rising wages, since the late 1970s that has been more the exception than the rule in the world's rich nations. Instead, when

household incomes at the low end have risen, it has been largely due to an increase in government transfers. If we step back, that isn't surprising. In most rich countries 20-35% of all households have no earnings, and this includes many on the low rungs of the income ladder. They are disabled, sick, caring for children or other family members, temporarily unemployed, or elderly. They rely heavily on government transfers, and so their incomes rise to the extent that those transfers rise.[69]

Policy choices about whether to increase government transfers to low-income households seem to have been largely independent of income inequality. The contrast between the United States and the United Kingdom is illustrative. Both countries have had high and rising income inequality. But whereas government transfers to the poor were kept more or less constant in the US (an increase in Social Security and EITC was offset by a decline in AFDC-TANF), in the UK they rose sharply, at least during the New Labour governments beginning in 1997. Those governments, headed by Tony Blair and Gordon Brown, focused much of their rhetoric and policy reform on increasing employment and economic opportunity, but they also increased benefits and/or reduced taxes for low earners, single parents, and pensioners.[70]

In short, changes in government transfers have been the chief determinant of changes in low-end household incomes in the rich nations over the past several decades, and political decisions, rather than income inequality, have determined the degree to which those transfers increased.

HOUSEHOLD INCOME GROWTH: THE MIDDLE CLASS

A rise in income inequality — particularly a top-heavy one — will tend to reduce middle class households' relative incomes. They will fall farther behind those at the top of the income distribution. What about their absolute incomes? Income growth is not a zero-sum game, since the pie tends to get larger over time. But disproportionately large gains at the top are likely to come at least partly at the expense of those in the middle, resulting in slower growth of income than would have been the case in the absence of high inequality.[71]

On the other hand, this isn't automatically true. A rising income share for those at or near the top could instead come at the expense of the upper-middle class or the poor rather than the middle.

In the United States, the over-time story is consistent with the "inequality is harmful" hypothesis. Between the mid-1940s and the late 1970s, with income inequality at its low point, middle-class incomes increased rapidly. Since 1979 inequality has been much higher, and in this period the incomes of middle-class households have risen much more slowly.[72]

Does this hold if we compare across nations? Has middle-class income growth been slower in nations with greater income inequality?

Figure 13 shows middle-class income growth by level of income inequality. On the vertical axis of each chart is change in posttransfer-posttax income for the median (p50) household. It is adjusted for economic growth, which is a key determinant of median income growth.[73] On the horizontal axis is the average level of income inequality during 1979-2007. (The story is similar for the level of income inequality at the beginning of the period, in 1979.)

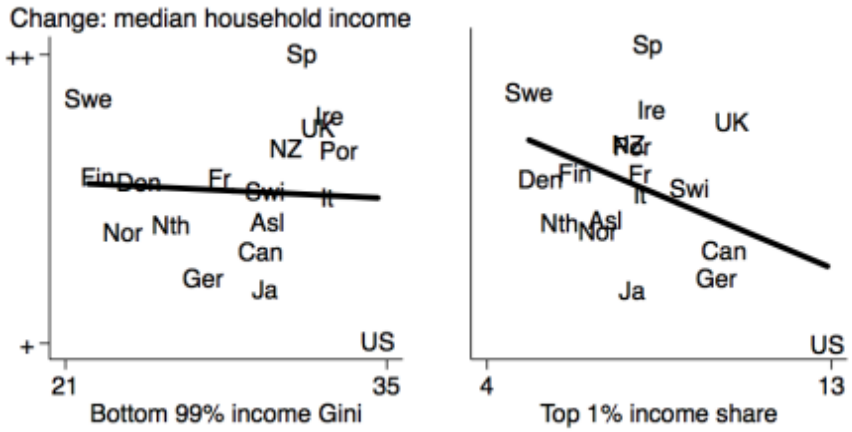


FIGURE 13. Adjusted change in median household income by level of income inequality, eighteen countries, 1979 to 2007

"+" = smaller increase; "++" = larger increase. The lines are linear regression lines. Income inequality: See the note to figure 1. Median household income: Posttransfer-posttax household income at the 50th percentile of the distribution. The incomes are adjusted for household size and then rescaled to reflect a three-person household, adjusted for inflation, and converted to US dollars using purchasing power parities. The change measure for median household income is absolute change, not percentage change. Change in median household income is adjusted for economic growth; the vertical-axis measure is the residuals from a regression of 1979-to-2007 change in median household income on change in GDP per capita. The range from "+" to "++" on the vertical axis is $20,000. Data source: Luxembourg Income Study; OECD.

The first plot indicates no impact of income inequality within the bottom 99% on middle-class household income growth, but the second plot suggests a possible sizable effect of top-end inequality. (The pattern is stronger and cleaner if we extend the time period to 2013.[74]) The data imply that if the top 1%'s income share in the United States had been 5%, as it was in Sweden, rather than 13%, America's median household income might have increased by an additional $8,000 between 1979 and 2007 — doubling the actual increase.

Is the pattern in the second chart in figure 13 spurious? Are there other things that could account for the association we observe between top-end income inequality and growth-adjusted change in median income? That's always possible, but some of the most likely culprits — country differences in the return to skills, in collective bargaining, in employment, and in government transfers — don't change the story.[75]

HOUSEHOLD BALANCE SHEETS

In the United States, average household saving as a share of disposable household income fell from 10% in the 1970s to 8% in the 1980s to 5% in the 1990s to 3% in the 2000s.[76] And household debt jumped from 74% of disposable income in 1979 to 138% in 2007.[77] Two hypotheses suggest that rising income inequality may cause households to reduce their saving, increase their borrowing, and thereby run up debt.

According to the first hypothesis, low- and middle-income households borrowed more in order to keep their absolute consumption increasing in the face of slow income growth.[78] Americans had come to expect a certain rate of increase in their spending over time, and when this expectation was frustrated due to stagnant or slowly-rising earnings, they turned to borrowing as a substitute.

The second hypothesis posits that upper-middle-class households borrowed more in order to maintain their relative position vis-à-vis the rich, especially in housing. According to Robert Frank, housing is a "positional" good: to a greater degree than for goods such as toothpaste and cereal, people's happiness with their home hinges on how it compares to other homes.[79] Frank suggests that rapidly-rising income allowed the well-to-do to purchase increasingly large and elaborately-equipped homes. Because housing satisfaction depends on relative comparison, middle-class homeowners and homebuyers felt compelled to follow suit, leading to dramatic increases in home prices and housing expenditures. To afford these expensive homes and home renovations, middle-class buyers had no choice but to take on high levels of debt.[80]

Both of these explanations for the drop in saving and the rise in debt in the United States are plausible. However, an equally-plausible alternative hypothesis says the saving decline owed not to rising inequality but to an increase in the supply of available credit. Beginning in the early 1980s, US financial firms became increasingly aggressive in developing new and augmented financial products and marketing them to investors and consumers.[81] This included smaller down payments for mortgage loans, access to home equity loans and lines of credit, and reductions in the stringency of criteria by which borrowers' creditworthiness was assessed. These shifts sharply boosted Americans' access to credit, and in doing so they contributed to a loosening of their attitudes toward borrowing and financial risk.[82]

For comparison across countries, the best measure of household borrowing is savings as a share of household disposable income. Increased borrowing will show up as reduced saving. Figure 14 shows changes in household saving by changes in income inequality. The pattern is consistent with the hypothesis that income inequality increases debt: nations with a larger rise in income inequality have tended to experience a larger reduction in saving. (The regression lines are calculated with Norway excluded, on the grounds that household income growth in the country was so rapid that household saving wasn't likely to fall no matter what happened to income inequality.) On the other hand, the association is not terribly strong; many of the countries lie quite far from the regression line. When income inequality is measured as the distance between the top 1% and the bottom 99% (the second chart), we see a puzzling bifurcation, with countries located either in the lower-right or the upper-left portion of the chart. Within these two groups we don't see the predicted negative effect of income inequality on saving.

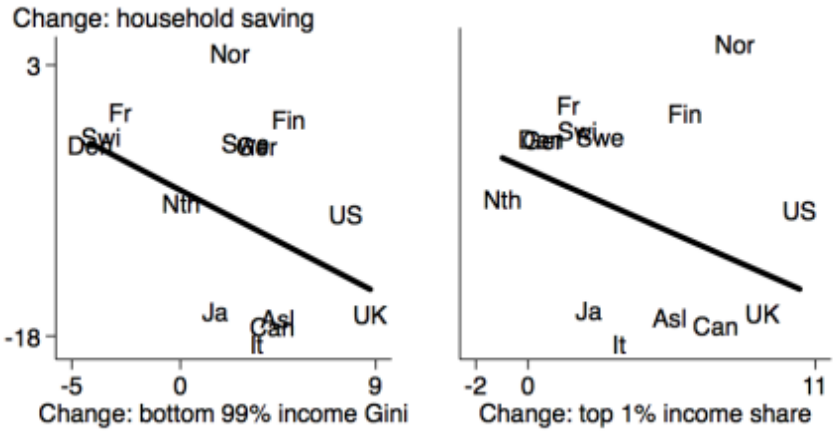


FIGURE 14. Change in household saving by change in income inequality, fourteen countries, 1979 to 2007

The lines are linear regression lines, calculated with Norway excluded. The values on the axes are for change over 28 years. Income inequality: See the note to figure 1. Household saving: Net household saving as a share of disposable household income. Data source: OECD.

Let's look more closely at the details of the US experience. Robert Frank, Adam Seth Levine, and Oege Dijk have found that changes in income inequality within the bottom 99% between 1990 and 2000 are correlated with changes in the rate of nonbusiness bankruptcy filings.[83] This is consistent with what we see in the cross-country data.

Yet a recent study by Olivier Coibion and colleagues finds that in the 1990s and 2000s low-income households in high-inequality regions in the United States borrowed relatively less than their counterparts in low-inequality regions.[84] Though it

doesn't speak directly to the question of change over time, this pattern is the opposite of what we would expect to see if income inequality were a key contributor to household saving and borrowing behavior.

Every three years, the Survey of Consumer Finances (SCF) asks Americans whether in the past five years their income has increased, stayed constant, or decreased. Neil Fligstein and Adam Goldstein report that between 1989 (the earliest year of available data) and 2007 there was an increase in the share of those in the bottom 60% of incomes who said their income had decreased or stayed constant. But the increase was relatively small and confined largely to the brief period from 2004 to 2007.[85] Fligstein and Goldstein also conclude that "consumption of financial services and the interjection of financial services professionals into households' financial decision-making rose roughly in tandem for all income groups over time. This suggests that the increased supply of these instruments may have been the main cause of their expansion."[86] Finally, Fligstein and Goldstein find that most of the increase in household debt from 1989 to 2007 was mortgage-related — mortgages on primary residences, home equity loans on those residences, and the purchase of other real estate including second homes and commercial property by households. The largest increase in mortgage borrowing was by households with incomes between the 70th and 90th percentiles and by households who said their income had increased in the past five years.[87]

These patterns aren't consistent with the notion that rising income inequality caused low- and middle-income households to massively expand their borrowing. They *are* consistent with Robert Frank's hypothesis that upper-middle class households have borrowed more in an attempt to maintain their position relative to the rich. Also consistent with Frank's hypothesis is a finding by Marianne Bertrand and Adair Morse: in states where the incomes of those in the top 10% are higher, households on the middle rungs of the income ladder tend to consume a larger portion of their incomes, regardless of the level of their income or the degree to which it has changed.[88]

So is Frank's hypothesis correct? We can also look at housing bubbles and their timing. If the rich bid up the price of existing and new homes and the upper-middle class borrows in order to keep pace, we should expect a housing bubble. There was indeed a housing bubble in the United States beginning in 1998. One potential problem for the income inequality hypothesis is that this is nearly two decades after the rise in the top 1%'s income share commenced. Another problem is that if we look across countries, there is no discernible correlation between changes in income inequality and the incidence of housing bubbles.[89] Among countries with sizable increases in the top 1%'s income share, Australia, Canada, Ireland, the UK, and the US experienced a big run-up in home prices between 1998 and 2005. But so too did a

number of countries in which the top 1%'s share didn't increase much, including Denmark, France, the Netherlands, Spain, and Sweden.

The conclusion? It's possible that income inequality drove up borrowing by upper-middle class Americans in a housing "arms race." But it's also quite possible that rising borrowing was a response to changes in access to credit.

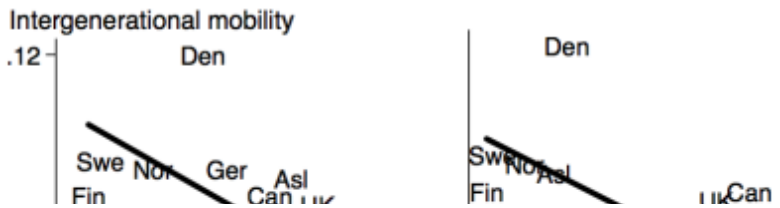
EQUALITY OF OPPORTUNITY

Most Americans embrace the ideal of equal opportunity, as do many of their counterparts in other rich countries.[90] Income inequality may hinder equality of opportunity.[91] People's income is correlated with their parents' income, as children who grow up in households with higher incomes are more likely to have good health care, low stress, learning-centered preschools, good elementary and secondary schools, extracurricular activities that promote cognitive skills and earnings-enhancing noncognitive traits, and access to a strong university. We would thus expect a widening of the gap in parents' income to widen the gap in opportunity for their children to reach the middle or above.

Then again, parents' income isn't the only determinant of a person's abilities and motivations when she reaches adulthood. Nonmonetary influences such as genetics, in-utero developments, parents' habits and behaviors, peers, neighborhoods, and schooling matter too. In addition, there surely are diminishing returns to money; beyond a certain point, more parental income probably helps only a little, if at all.[92]

Scientists typically assess equality of opportunity by looking at the degree of relative intergenerational income mobility. If there is more mobility — if children tend to end up in a different position on the income ladder than their parents — we conclude that opportunity is reasonably equal. It isn't a perfect measure, but it's the best one available.

The data requirements are stiff. We need reliable information on the income of adults and of their children at similar points in the life cycle. At the moment, we have comparable data for only eleven nations. Figure 15 shows that among this small group of countries, those with greater income inequality do indeed tend to have less intergenerational mobility.



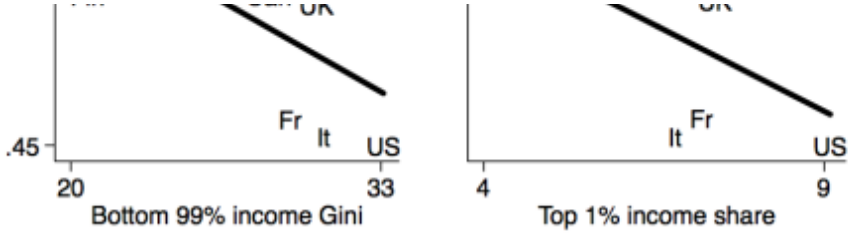


FIGURE 15. Level of intergenerational mobility by level of income inequality, eleven countries

The lines are linear regression lines. Income inequality: Level in 1985. For data description and sources, see the note to figure 1. Intergenerational mobility: Correlation between the earnings of fathers and their sons. The values on the vertical axis are reversed so that higher on the axis indicates more mobility. Data source: John Ermisch, Markus Jäntti, and Timothy Smeeding, eds., *From Parents to Children: The Intergenerational Transmission of Advantage*, Russell Sage Foundation, 2012, figure 1.1.

The problem is that there are other factors that could explain the association we observe in figure 15. The four Nordic nations — Denmark, Finland, Norway, and Sweden — have low income inequality and high mobility. Maybe their low inequality causes their high mobility. But they also have been providing affordable high-quality early education to a substantial portion of children aged 1 to 5 for roughly a generation.[93] James Heckman and Gøsta Esping-Andersen, among others, argue that early education is perhaps the single most valuable thing a society can do to equalize opportunity.[94] In addition, these countries feature late tracking in K-12 schools and heavy subsidies to ensure that college is affordable for all. These public services, rather than low income inequality, could be the key to why the Nordic countries have such high intergenerational mobility.[95] If we leave out the Nordic nations, the cross-country association between income inequality and intergenerational mobility remains, but it is quite weak.[96]

Data are available for commuting zones (local labor markets) within the United States. In contrast to the country data, they suggest little if any correlation between income inequality and relative intergenerational mobility, though here too we lack the ability to assess differences in change over time.[97]

If income inequality impedes intergenerational mobility, we should observe a decline in mobility during the period of rising income inequality in the United States. It's too early to reach a definitive conclusion about this, as we need to know whether mobility declined for Americans born after 1979, and they are only in their early thirties. Findings so far are mixed: some studies conclude that there likely has been a decrease in intergenerational mobility, while others find no indication of a decrease.[98]

Deirdre Bloome has examined mobility trends in the US states and whether they correlate with trends in income inequality. She finds no evidence of a robust relationship. States in which income inequality has increased the most have not been more likely to suffer a decline in intergenerational income mobility.[99]

To sum up, the available evidence offers hints of support for the hypothesis that income inequality hinders equality of opportunity. But that support is limited and fragile — too weak, I suspect, to convince a skeptic.

HAPPINESS

Across individuals, income is positively associated with happiness and life satisfaction.[100] We should expect, therefore, that as income inequality increases, inequality of subjective well-being increases as well. As figure 16 shows, we do in fact see this in the United States over the past generation. Among Americans on the top third of the income ladder, the share saying they are "very happy" has increased slightly, whereas among those on the bottom third the share has decreased.

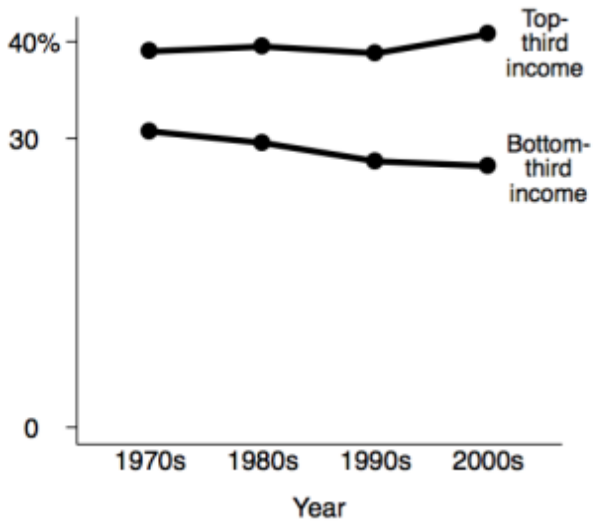


FIGURE 16. Happiness by income, United States

Share of adults who say they are "very happy." The survey question: "Taken all together, how would you say things are these days — would you say that you are very happy, pretty happy, or not too happy?" Data source: General Social Survey, sda.berkeley.edu, series happy, coninc.

What about average happiness? Income inequality could be bad for average happiness in a variety of ways.[101] First, subjective well-being tends to increase with income, but with declining marginal utility. The higher the income, the less an additional dollar tends to boost subjective well-being. Hence, taking some money from the poor and giving it to the well-off should reduce average subjective well-

being. Second, if it's a person's relative income, not simply their absolute income, that affects subjective well-being, falling farther behind those at the top might reduce happiness or life satisfaction. Third, people may have a preference for less inequality, so a high or rising level might reduce average subjective well-being. Fourth, people may believe that an increase in income inequality reduces their likelihood of succeeding financially. Fifth, inequality might worsen subjective well-being via a rise in status anxiety and stress. Finally, greater inequality might reduce trust, which in turn affects happiness.

We have over-time data for sixteen nations beginning in the early 1980s from the World Values Survey. The survey has two measures of subjective well-being. One is happiness. Respondents are asked "Taking all things together, would you say you are not happy at all, not very happy, rather happy, or very happy." The other is life satisfaction. Respondents are asked "All things considered, how satisfied are you with your life as a whole these days?" They rate their life satisfaction on a scale of zero to ten.

In most nations there has been relatively little change in either happiness or life satisfaction. Even so, it could be that income inequality is the cause of what little variation across the countries there has been in over-time change.

Figure 17 shows change in happiness by change in income inequality. There is no correlation. Figure 18 shows change in life satisfaction by change in income inequality. Here, in the second chart, we do see the expected negative correlation: nations with larger increases in the top 1%'s income share have been more likely to experience drops in life satisfaction. A US-size increase in the top 1%'s share is estimated to have reduced life satisfaction by 0.3 points on a ten-point scale. If we control for economic growth, that increases to 0.5 points. This might indicate a real impact of top-end income inequality, but if so it isn't an especially large one, and it explains a very small portion of the variation in changes in life satisfaction across countries.[102]

On the whole, the evidence doesn't suggest that income inequality has had a significant impact on subjective well-being.

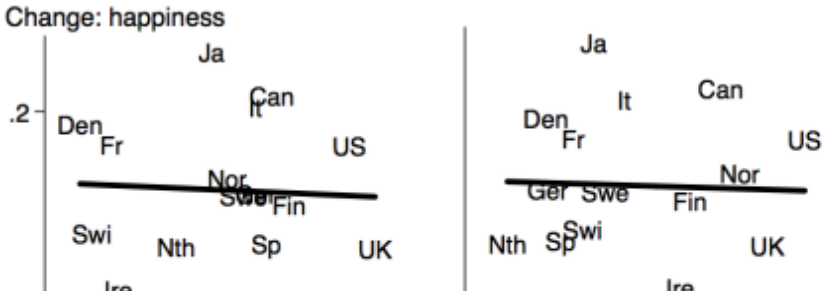


FIGURE 17. Change in happiness by change in income inequality, sixteen countries, 1979 to 2007

The lines are linear regression lines. The values on the axes are for change over 28 years. Income inequality: See the note to figure 1. Happiness: Average response. 1 = not happy at all, 2 = not very happy, 3 = rather happy, 4 = very happy. Question: "Taking all things together, would you say you are…." Actual years for happiness are 1981 to 2007. Data source: World Values Survey.

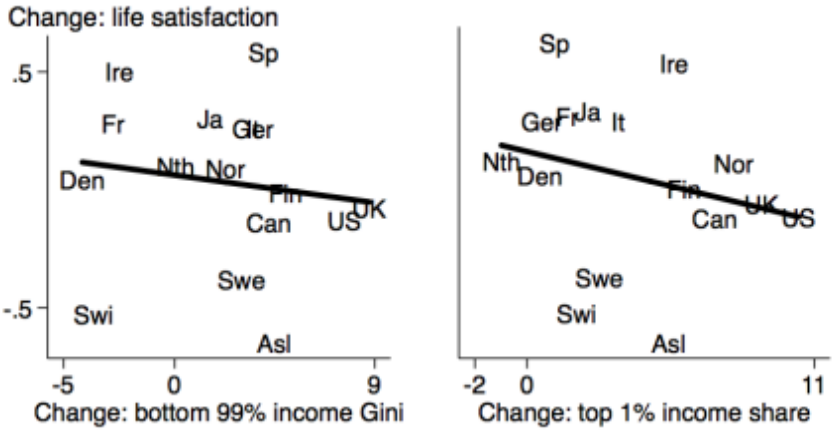


FIGURE 18. Change in life satisfaction by change in income inequality, sixteen countries, 1979 to 2007

The lines are linear regression lines. The values on the axes are for change over 28 years. Income inequality: See the note to figure 1. Life satisfaction: Average response. Scale from 0 to 10. Question: "All things considered, how satisfied are you with your life as a whole these days?" Actual years for life satisfaction are 1981 to 2007. Data source: World Values Survey.

DEMOCRACY

Rising income inequality is hypothesized to have polluted American politics by (1) reducing trust in political institutions, (2) reducing voter turnout, (3) increasing polarization between the two parties, and (4) increasing the influence of the rich on policy decisions.[103]

The first three hypotheses don't square with the over-time patterns in the United States. According to data from the American National Election Studies (NES), trust in government and in the political process began declining in the 1960s and continued

in the 1970s, before income inequality began increasing. And during the period of rising income inequality since the 1970s, political trust has changed very little.

Voter turnout in presidential elections also declined beginning in the 1960s, prior to the rise in income inequality. Moreover, it reached a low point in 1996 and has increased since then, returning by 2008 to the level of the early 1960s. Voter turnout in off-year elections has not changed since 1974, despite the steady increase in income inequality.[104]

Party polarization refers to the fact that elected Republican legislators have moved to the right on key economic issues while Democratic legislators have moved to the left. Here too, timing is a problem for the "inequality is harmful" hypothesis. In the authoritative study of party polarization, *Polarized America*, Nolan McCarty, Keith Poole, and Howard Rosenthal write that "In both chambers [the House and the Senate], the Republicans became more moderate until the 1960s and then moved in a sharply conservative direction in the 1970s. The pattern for the Democrats is almost exactly the opposite. Consequently, the two party means [average party positions] moved closer together during the twentieth century until the 1970s and then moved apart."[105] Income inequality between the top 1% and the bottom 99% didn't begin increasing until the 1980s, after the polarization of the parties commenced. And income inequality within the bottom 99% hasn't changed much since the mid-1990s, yet party polarization has continued unabated.[106]

What about inequality of political influence? Money clearly matters in American politics,[107] so with the richest getting a large and rising share of the country's income, it's sensible to hypothesize that they would have growing success in swaying policy makers to support their preferences. On the other hand, the influence of money in American politics occurs mainly via lobbying rather than campaign contributions, and while the amount of money spent on lobbying has increased exponentially in the past several decades,[108] much of that increase, if not all of it, might well have occurred in the absence of a rise in income inequality. After all, lobbying is funded primarily by companies and other organizations, rather than by individuals. Moreover, the impact of money is likely to be smaller when there is already a lot being spent. American politics has been flush with private cash for a generation, so it could be that additional spending no longer buys much additional influence.

The most relevant evidence comes from studies by Larry Bartels and Martin Gilens.[109] For the period from 1989 to 1994, Bartels examined the relationship between senators' votes on proposed policy changes and the opinions of Americans in the lower third, middle third, and upper third of income. He found that voting correlated much more closely with the views of those with higher incomes. Gilens extended Bartels' analysis by examining both the Senate and the House of

Representatives, by covering the presidencies of Lyndon Johnson, Ronald Reagan, Bill Clinton, and George W. Bush, and by looking at actual policy outcomes. His finding echoes that of Bartels. This research by Bartels and Gilens strongly suggests that unequal incomes contribute to unequal political influence in the United States.

But that isn't all we want to know. No one thinks we can, or should, do away with income inequality. But we could perhaps return to the degree of income inequality we had in the late 1970s. We might even conceivably reduce income inequality in America to something like the level that obtains in some of the more egalitarian rich nations. This suggests two questions for social scientists: First, has the pattern of unequal influence increased as income inequality has risen since the late 1970s? If so, we have reason to hope that reducing income inequality would reduce the degree of inequality in political influence. Second, is the degree of inequality in political influence greater in the United States than in affluent nations that have less income inequality? Sadly, we don't have good answers to these questions.

In their book *Winner-Take-All Politics*, Jacob Hacker and Paul Pierson detail a litany of policy initiatives since the mid-1970s that in their view have had a significant influence — some because they were passed, others because they were blocked — on economic and social outcomes for ordinary Americans. There is no indication in their account of a steady increase in the tendency for policy to favor the rich.[110] And in Pierson's view, "On domestic issues Obama is the most consequential and successful Democratic president since LBJ. It isn't close."[111] That's not what we would expect to observe if big money has become increasingly influential in determining policy outcomes.

The only systematic attempt to assess changes in inequality of political influence is by Martin Gilens. He found that the correlation between income and influence on policy was weak during the Johnson presidency, strong during the presidencies of Reagan and Clinton, and relatively weak during the first six years of George W. Bush's presidency. This isn't what the "income inequality is harmful" hypothesis predicts, though there may be some confounding factors, such as the September 11, 2001 terrorist attacks, that skewed the pattern during the Bush years.

The well-to-do may exert their influence mainly by keeping proposed reforms from ever coming to a vote and via behind-the-scenes shaping of legislation that does pass, and it's possible that their growing income share has enhanced their ability to use these kinds of levers. But here too we lack supportive evidence.

On the second question, whether unequal influence on policy is greater in the US than in more economically egalitarian rich countries, to my knowledge there is no systematic research. We have no counterparts for other nations to the Bartels and

Gilens studies.

To summarize: Although the notion that greater inequality of incomes will produce greater inequality of political influence is intuitively compelling, we lack evidence to support it — even for the United States, which is where we would expect this effect to be strongest. Nor do we have compelling evidence that income inequality's rise has weakened trust in political institutions, reduced voter turnout, or heightened political polarization. That doesn't mean these hypotheses are wrong, but it does mean that strong conclusions about harmful effects of rising income inequality on democracy aren't (yet) warranted.[112]

IS INCOME INEQUALITY HARMFUL?

Let's step back and take stock. I've looked at the experiences of the world's rich countries in the period from 1979 to 2007 to see what they tell us about income inequality's effects on an array of social, economic, and political outcomes. My conclusion is that the available evidence suggests, first, that income inequality has done significant harm and, second, that inequality's harm has been less pervasive and devastating than some claim.

The evidence supports some of the key claims. Income inequality has reduced middle-class household income growth. And in the United States it has increased disparities in education, health, family formation, family stability, and happiness, and it has reduced residential mixing.

At the same time, many of the most prominent hypotheses are supported only weakly or not at all.[113] The evidence suggests that income inequality hasn't slowed the growth of college completion. It either hasn't reduced the increase in life expectancy or the decrease in infant mortality or, if it has, the impact has been small. It looks unlikely to have contributed to the rise in obesity. It hasn't slowed the fall in teen births or homicides since the early 1990s. It hasn't reduced economic growth. It hasn't hindered employment. It isn't systematically linked to the occurrence of economic crises. It hasn't reduced income growth for poor households. It doesn't appear to have affected average happiness. In the United States it has had little or no impact on trust in political institutions, on voter turnout, or on party polarization.

For some outcomes — trust, the Great Recession, household balance sheets, equality of opportunity, and inequality of political influence — the evidence is ambiguous or it is simply too soon to make any kind of informed judgment.

There is an important caveat: What holds on average across a group of countries doesn't necessarily apply to each individual country. It's possible, for instance, that

while income inequality hasn't tended to reduce economic growth in the world's affluent nations in general, it *has* done so in one or more specific countries, such as the United States. Comparative analysis identifies patterns, but where there is a pattern there may also be exceptions.

Many of the "income inequality is harmful" hypotheses are compelling. So why has income inequality had little or no apparent impact on so many outcomes? One possibility is that inequality has an effect that is small, and it's one of many things that influences these outcomes, so its small impact is outweighed by others.

Or it could be that income inequality has had a sizable impact, but one that's been blunted or offset in some of the countries where inequality has increased a lot. For instance, the United Kingdom experienced a large jump in income inequality between 1979 and 2007, but for part of that period its government sharply increased transfers to the poor and increased spending and efficiency in health care. These policy initiatives offset what otherwise might have been a harmful development for low-income households. However, I'm skeptical that this phenomenon has been pervasive enough to hide strong causal effects of inequality.

It could be that institutions and policies in most or all of these rich countries are sufficiently effective that they mitigate the impact of income inequality. If that's the case, some might conclude these countries are useless for testing the impact of income inequality. But a more important point is that, if true, this means income inequality's impact in modern affluent nations is not particularly strong relative to the impact of those institutions and policies, which implies that policy makers wishing to achieve better outcomes should probably look first to change policies and institutions, rather than to reduce income inequality.

Another possibility is that income inequality has a sizable effect, but one that takes longer than three decades to be noticeable. Or perhaps income inequality has a large effect only once it reaches a high level, and it currently is below that level in most or all of the rich countries. Finally, if rising income inequality does increase the political influence of the rich, there could be harmful spillover effects down the road on a range of outcomes, as wealthy funders lobby for reduced spending on physical infrastructure, education, research, and key social protections. While plausible, each of these last three possibilities is not, at the moment, testable. For the verdict on them, we'll have to wait and see.

WHAT SHOULD WE DO?

Should we worry about high and rising income inequality in the United States? My answer is yes, for three reasons.

First, we have good evidence that income inequality tends to reduce middle-class income growth, increase disparities in education, health, family structure, and happiness, and heighten residential segregation. Not everyone will find these consequences objectionable, but I do.

Second, although we don't have strong evidence that the rise in income inequality over the past generation has increased inequality of political influence, there's good reason to fear that it has. That would be an intrinsically bad thing; it's antithetical to what most of us understand to be the core of democracy — government by and for all of the people, not just some of the people. In addition, if rising income inequality does increase the political influence of the rich, that could potentially have undesirable spillover effects on a variety of outcomes in the future.

Third, the level of income inequality that currently obtains in the United States is unfair. Given that luck plays a huge role in determining the income people end up with, much of the disparity in incomes is, arguably, undeserved. Most of us accept some amount of income inequality as consistent with a reasonable degree of freedom and needed to sustain a dynamic, healthy economy. But the degree of inequality in the contemporary US surely is past that point.

That said, reducing income inequality isn't likely to be easy or quick. And income inequality's apparently small or nonexistent impact on many of the outcomes examined here suggests that it shouldn't necessarily be at the forefront of policy goals. For many of these outcomes, from education to health to economic growth and more, a direct approach, rather than an indirect one that works via reduced income inequality, is likely to be the most successful path.

1. Austria and Belgium are missing data for a key measure of income inequality. Otherwise they would be included. ↩
2. Robert J. Barro, "Inequality and Growth Revisited," Working Paper Series on Regional Economic Integration 11, Asian Development Bank, 2008; Jonathan D. Ostry, Andrew Berg, and Charalambos G. Tsangarides, "Redistribution, Inequality, and Growth," International Monetary Fund, 2014. ↩
3. Glenn Firebaugh, *Seven Rules for Social Research*, Princeton University Press, 2008, ch. 5; Joshua D. Angrist and Jorn-Steffen Pischke, *Mostly Harmless Econometrics*, Princeton University Press, 2009, pp. 227-243; Lane Kenworthy, "Step Away from the Pool," *Newsletter of the American Political Science Association Organized Section for Qualitative and Multi-Method Research*, 2011. ↩
4. Kenworthy, "Step Away from the Pool." ↩
5. See OECD, *Growing Unequal?*, 2008; Anthony Atkinson, Thomas Piketty, and Emmanuel Saez, "Top Incomes in the Long Run of History," *Journal of Economic Literature*, 2011. ↩

6. Lane Kenworthy, *Jobs with Equality*, Oxford University Press, 2008, ch. 4. ↩
7. What if it takes a long time for a change in income inequality to have an impact? (See Angus Deaton, "Health, Inequality, and Economic Development," *Journal of Economic Literature*, 2003; M. Maria Glymour, "Sensitive Periods and First-Difference Models: Integrating Etiologic Thinking into Econometric Techniques," *Social Science and Medicine*, 2009.) I address this possibility by looking at the relationship between change in income inequality over the first or the first and second business cycles and change in outcomes over the second and third business cycles or just the third. I mention the results of these analyses only when they differ from the results for the full 1979-to-2007 period. ↩
8. Rather than calculate pure change scores (ending-year value minus beginning-year value), I regress each variable on year to calculate average yearly change and then multiply by 28. This avoids potential problems due to quirks in beginning or ending values. ↩
9. Greg J. Duncan and Richard J. Murnane, eds., *Whither Opportunity? Rising Inequality, Schools, and Children's Life Chances*, Russell Sage Foundation and Spencer Foundation, 2011. ↩
10. Catherine B. Hill, president of Vassar College, writes: "Real income growth that skews toward higher-income families creates challenges for higher education. The highest-income families are able and willing to pay the full sticker price. Schools compete for these students, supplying the services that they desire, which pushes up costs. Restraining tuition and spending in the face of this demand is difficult." Catherine B. Hill, "Higher Education's Biggest Challenge Is Income Inequality," *Washington Post*, September 6, 2013. ↩
11. Census Bureau, "Financing the Future: Postsecondary Students, Costs, and Financial Aid, 1996-1997," 2002, table 6a; Christopher Jencks, "The Graduation Gap," *The American Prospect*, November 2009. ↩
12. Greg J. Duncan, Ariel Kalil, and Kathleen M. Ziol-Guest, "Increasing Inequality in Parent Incomes and Children's Schooling," unpublished, 2013. ↩
13. Susan E. Mayer, "How Did the Increase in Economic Inequality between 1979 and 1990 Affect Children's Educational Attainment?," *American Journal of Sociology*, 2001; Thomas J. Kane, "College-Going and Inequality," in *Social Inequality*, edited by Kathryn M. Neckerman, Russell Sage Foundation, 2004; Martha Bailey and Susan Dynarski, "Gains and Gaps: A Historical Perspective on Inequality in College Entry and Completion," in *Whither Opportunity?*, 2011. ↩
14. Gøsta Esping-Andersen, "Equal Opportunities and the Welfare State," *Contexts*, 2007; Ben Ansell, "University Challenges: Explaining Institutional Change in Higher Education," *World Politics*, 2008. ↩
15. Richard Wilkinson and Kate Pickett, *The Spirit Level: Why Greater Equality Makes Societies Stronger*, Bloomsbury Press, 2009; Dennis J. Condron, "Egalitarianism and Educational Excellence: Compatible Goals for Affluent Societies?," *Educational Researcher*, 2011; David Madland and Nick Bunker, "The Middle Class Is Key to a Better-

Educated Nation," Center for American Progress, 2011. ↩

16. Michael Marmot, "The Influence of Income on Health: Views of An Epidemiologist," *Health Affairs*, 2002; John Mullahy, Stephanie Robert, and Barbara Wolfe, "Health, Income, and Inequality," in *Social Inequality*, edited by Kathryn M. Neckerman, Russell Sage Foundation, 2004; Gopal K. Singh and Mohammad Siahpush, "Widening Socioeconomic Inequalities in US Life Expectancy, 1980–2000," *International Journal of Epidemiology*, 2006; Hilary Waldron, "Trends in Mortality Differentials and Life Expectancy for Male Social Security–Covered Workers, by Average Relative Earnings," Working Paper 108, Office of Research, Evaluation, and Statistics, Social Security Administration, 2007; Johan Fritzell, Jennie Bacchus Hertzman, Olof Bäckman, Ida Borg, Tommy Ferrarini, and Kenneth Nelson, "Growing Inequality and Its Impacts in Sweden," GINI Project, 2010, figure 3.10; William Evans, Barbara Wolfe, and Nancy Adler, "The SES and Health Gradient: A Brief Review of the Literature," in *The Biological Consequences of Socioeconomic Disparities*, edited by Barbara Wolfe, William Evans, and Teresa E. Seeman, Russell Sage Foundation, 2012; Christian Bjørnskov, Ioana Neamtu, and Niels Westergård-Nielsen, "Growing Inequality and Its Impacts in Denmark," GINI Project, 2013, figure 19; Wiemer Salverda, Christina Haas, Marloes de Graaf-Zijl, Bram Lancee, Natascha Notten, and Tahnee Ooms, "Growing Inequalities and Their Impacts in the Netherlands," GINI Project, 2013, figure 3.13; Michael Marmot, *The Health Gap*, Bloomsbury Press, 2015. ↩
17. Congressional Budget Office, "Growing Disparities in Life Expectancy," Economic and Budget Issue Brief, 2008; Christopher Jencks, "The Poor Die Young: What's Killing Them?," unpublished, 2009; S. Jay Olshansky, Toni Antonucci, Lisa Berkman, Robert H. Binstock, Axel Boersch-Supan, John T. Cacioppo, Bruce A. Carnes, Laura L. Carstensen, Linda P. Fried, Dana P. Goldman, James Jackson, Martin Kohli, John Rother, Yuhui Zheng, and John Rowe, "Differences in Life Expectancy Due to Race and Educational Differences Are Widening, and Many May Not Catch Up," *Health Affairs*, 2012; Beth Truesdale and Christopher Jencks, "Should Rising Income Inequality Increase Class Disparities?," unpublished, 2013; Annie Lowrey, "Income Gap, Meet the Longevity Gap," *New York Times*, March 16, 2014. ↩
18. Richard Wilkinson, "Income Distribution and Life Expectancy," *British Medical Journal*, 1992. ↩
19. Wilkinson and Pickett, *The Spirit Level*, pp. 39, 43-44, 85. See also Michael Marmot, *Status Syndrome: How Your Social Standing Directly Affects Your Health*, Bloomsbury, 2004; Marii Paskov, Klarita Gërxhani, Herman G. van de Werfhorst, "Income Inequality and Status Anxiety," Discussion Paper 90, GINI Project, 2013; Richard Layte and Christopher T. Whelan, "Who Feels Inferior? A Test of the Status Anxiety Hypothesis of Social Inequalities in Health," *European Sociological Review*, 2014. ↩
20. Andrew Clarkwest, "Neo-Materialist Theory and the Temporal Relationship between Income Inequality and Longevity Change," *Social Science and Medicine*, 2008. ↩
21. Naoki Kondo, Grace Sembajwe, Ichiro Kawachi, Rob M. van Dam, S.V. Subramanian, and Zentaro Yamagata, "Income Inequality, Mortality, and Self-Rated Health: Meta-Analysis

of Multilevel Studies," *BMJ*, 2009; Wilkinson and Pickett, *The Spirit Level*; University of Wisconsin Population Health Institute, "County Health Rankings: Key Findings Report," 2015. ↩

22. Ken Judge, Jo-Ann Mulligan, and Michaela Benzeval, "Income Inequality and Population Health," *Social Science and Medicine*, 1998; Gary Burtless and Christopher Jencks, "American Inequality and Its Consequences," in *Agenda for the Nation*, edited by Henry Aaron, Pietro S. Nivola, and James M. Lindsay, Brookings Institution, 2003; Jason Beckfield, "Does Income Inequality Harm Health? New Cross-National Evidence," *Journal of Health and Social Behavior*, Andrew Leigh and Christopher Jencks, "Inequality and Mortality: Long-Run Evidence from a Panel of Countries," *Journal of Health Economics*, 2007; Andrew Leigh, Christopher Jencks, and Timothy M. Smeeding, "Health and Economic Inequality," in *The Oxford Handbook of Economic Inequality*, edited by Wiemer Salverda, Brian Nolan, and Timothy M. Smeeding, Oxford University Press, 2009; Mary C. Daly and Daniel C. Wilson, "Inequality and Mortality: New Evidence from U.S. County Panel Data," Working Paper 2013-13, Federal Reserve Bank of San Francisco, 2013. ↩
23. Angus Deaton, "Health, Inequality, and Economic Development," *Journal of Economic Literature*, 2003; John Lynch, George Davey Smith, Sam Harper, Marianne Hillemeier, Nancy Ross, George A. Kaplan, and Michael Wolfson, "Is Income Inequality a Determinant of Population Health? Part 1. A Systematic Review," *Milbank Quarterly*, 2004; Mullahy, Robert, and Wolfe, "Health, Income, and Inequality"; Leigh, Jencks, and Smeeding, "Health and Economic Inequality." ↩
24. Leigh, Jencks, and Smeeding, "Health and Economic Inequality," p. 386. ↩
25. Andrew Clarkwest suggests that the initial level of income inequality is likely to have a stronger impact on change in life expectancy than the degree of change in inequality, and he finds this to hold across the US states. See Clarkwest, "Neo-Materialist Theory and the Temporal Relationship between Income Inequality and Longevity Change." Adding the initial level of the bottom 99% Gini or the top 1%'s income share to the regressions here doesn't support this hypothesis (not shown). ↩
26. For a suggestion that smoking might account for the comparatively poor performance of Denmark and the Netherlands, see Eileen M. Crimmins, Samuel H. Preston, and Barney Cohen, eds., *Explaining Divergent Levels of Longevity in High-Income Countries*, National Academies Press, 2011. The measure I use is change in smoking between 1950 and 1980, which assumes a lag of about thirty years. The smoking data are from www.pnlee.co.uk/iss.htm. ↩
27. Lane Kenworthy, "Weight Moderation," *The Good Society*. ↩
28. According to Wilkinson and Pickett (*The Spirit Level*, p. 95), "People with a long history of stress seem to respond to food in different ways from people who are not stressed. Their bodies respond by depositing fat particularly round the middle, in the abdomen, rather than lower down on the hips and thighs…. The body's stress reaction causes another problem. Not only does it make us put on weight in the worst places, it can also increase our food intake and change our food choices, a pattern known as stress-eating or eating for comfort." A third possibility, suggested by Beth Truesdale (personal

communication), is that income inequality "pushes the food culture of the elite really far away from the food culture of the majority. One plausible result could be that, by dismissing processed foods out of hand, policy makers and opinion formers lose their lever for improving the nutritional value of fast foods and processed foods that are a staple of many diets." See David H. Freedman, "How Junk Food Can End Obesity," *The Atlantic*, 2013. ↩

29. Wilkinson and Pickett, *The Spirit Level*. ↩
30. R. Rosenheck, "Fast Food Consumption and Increased Caloric Intake: A Systematic Review of a Trajectory Towards Weight Gain and Obesity Risk," *Obesity Reviews*, 2008. Another alternative hypothesis suggests that the culprit is economic insecurity rather than income inequality. See Avner Offer, Rachel Pechey, and Stanley Ulijaszek, "Obesity Under Affluence Varies by Welfare Regimes: The Effect of Fast Food, Insecurity, and Inequality," *Economics and Human Biology*, 2010. ↩
31. Lane Kenworthy, "Weight Moderation," *The Good Society*. ↩
32. Yaqiang Qi, "The Impact of Income Inequality on Self-Rated General Health: Evidence from a Cross-National Study," *Research in Social Stratification and Mobility*, 2012; Herman G. Van de Werfhorst and Wiemer Salverda, "Consequences of Economic Inequality," *Research in Social Stratification and Mobility*, 2012. ↩
33. My findings are similar to those reached a decade ago by Gary Burtless and Christopher Jencks, who concluded that "a relationship may exist, but it is small, hard to detect, and not very important compared to more direct and controllable influences on longevity and health." Burtless and Jencks, "American Inequality and Its Consequences," pp. 94-95. ↩
34. Melissa Schettini Kearney and Phillip B. Levine, "Income Inequality and Early Nonmarital Childbearing: An Exploration of the 'Culture of Despair'," Working Paper 17157, National Bureau of Economic Research, 2011; Charles Murray, *Coming Apart*, Crown, 2012; Lane Kenworthy and Timothy Smeeding, "Growing Inequalities and Their Impacts in the United States," GINI Project, 2013; Andrew J. Cherlin, *Labor's Love Lost: The Rise and Fall of the Working-Class Family in America*, Russell Sage Foundation, 2014; Phillip N. Cohen, *The Family*, W.W. Norton, 2014. ↩
35. Wilkinson and Pickett, *The Spirit Level*, ch. 9; Sara McLanahan, "The Reciprocal Effects of Economic Inequality and Nonmarital Childbearing," Tobin Project, 2010. ↩
36. Wilkinson and Pickett, *The Spirit Level*; Emma Calvert and Tony Fahey, "The Impact of Income Inequality on the Family," Geary Working Paper 2013-02, University College Dublin, 2013. ↩
37. Melissa Schettini Kearney and Phillip B. Levine, "Explaining Recent Trends in the U.S. Teen Birth Rate," Working Paper 17964, National Bureau of Economic Research, 2012. ↩
38. Richard B. Freeman, "Why Do So Many Young American Men Commit Crimes and What Might We Do About It?," *Journal of Economic Perspectives*, 1996. ↩
39. Robert K. Merton, *Social Theory and Social Structure*, Free Press, 1968. ↩
40. Burtless and Jencks, "American Inequality and Its Consequences"; Bruce Western, Meredith Kleykamp, and Jake Rosenfeld, "Crime, Punishment, and American Inequality,"

in *Social Inequality*, edited by Kathryn M. Neckerman, Russell Sage Foundtion, 2004. At the individual level, the propensity to commit crime is higher among those with lower incomes. Cross-sectional studies across US states or localities have sometimes yielded findings of a positive association. Some types of crime that seem likely to be encouraged by inequality, such as theft, do not correlate with inequality across countries. And over time, the association between inequality and crime in the United States is not particularly strong. ↩

41. Richard Wilkinson and Kate Pickett hypothesize that "the propensity for violence among young men lies partially in evolved psychological adaptations related to sexual competition…. So what factors explain why some societies seem better than others at preventing or controlling these impulses to violence? The simple answer is that increased inequality ups the stakes in the competition for status: status matters even more." Wilkinson and Pickett, *The Spirit Level*, p. 134. ↩
42. Sean F. Reardon and Kendra Bischoff, "Income Inequality and Income Segregation," *American Journal of Sociology*, 2011; Kendra Bischoff and Sean F. Reardon, "Residential Segregation by Income, 1970-2009," Russell Sage Foundation, 2013. ↩
43. See also Richard Fry and Paul Taylor, "The Rise of Residential Segregation by Income," Pew Research Center, 2012. ↩
44. See also Tara Watson "Inequality and the Measurement of Residential Segregation by Income," *Review of Income and Wealth*, 2009. ↩
45. Lane Kenworthy, "Income Inequality," *The Good Society*. ↩
46. Joseph E. Stiglitz, "In No One We Trust," *New York Times*, December 21, 2013. ↩
47. Wilkinson and Pickett, *The Spirit Level*, p. 51. See also Eric Uslaner, *The Moral Foundations of Trust*, Cambridge University Press, 2002; Christian Albrekt Larsen, *The Rise and Fall of Social Cohesion*, Oxford University Press, 2013. ↩
48. Larsen, *The Rise and Fall of Social Cohesion*, p. 88. ↩
49. This is often referred to as "generalized trust" to distinguish it from trust in particular institutions, such as government or large firms. ↩
50. Bo Rothstein and Eric Uslaner, "All for All: Equality, Corruption, and Social Trust," *World Politics*, 2005; Andrew Leigh, "Does Equality Lead to Fraternity?," *Economics Letters*, 2006; Henrik Jordahl, "Inequality and Trust," IFN Working Paper 715, Research Institute of Industrial Economics, 2007; Christian Bjørnskov, "Social Trust and Fractionalization: A Possible Reinterpretation," *European Sociological Review*, 2008; Wilkinson and Pickett, *The Spirit Level*, ch. 4; OECD, "Trust," *Society at a Glance*, 2011; Sander Steijn and Bram Lancee, "Does Income Inequality Negatively Affect General Trust?," Discussion Paper 20, GINI Project, 2011; Larsen, *The Rise and Fall of Social Cohesion*. ↩
51. Robert Putnam and Anant Thaker, "Equality and Social Capital: What's the Connection?," unpublished, 2010; Kenworthy and Smeeding, "Growing Inequalities and Their Impacts in the United States," figure 4.3.4. ↩
52. Putnam and Thaker, "Equality and Social Capital: What's the Connection?" ↩
53. Christian Albrekt Larsen has looked at the Danish, Swedish, UK, and US cases in detail. He concludes as follows (Larsen, *The Rise and Fall of Social Cohesion*, p. 181): "Our

perceptions of the broader society in which we live are crucial for our assessment of the trustworthiness of others. The 'social democratic route' led to less economic inequality and poverty, which for Danes and Swedes encouraged the perception that most citizens belonged to the trustworthy middle classes. The 'neo-liberal route' led to more economic inequality and poverty, which gave British and Americans the perception that most citizens belonged to the untrustworthy bottom…. The mass media has contributed to constructing these different perceptions of living in a society with a large and untrustworthy 'bottom', or, of living in a society with a large and trustworthy 'middle'." ↩

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