# Do We Face a Permanently Divided Society?

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The paper builds on a large literature showing that 1) attitudes in the U.S. are different than attitudes in other countries; 2) lifetime incomes are more equally distributed than annual incomes because people are economically mobile; 3) however, neither intragenerational nor intergenerational mobility has *increased*, suggesting that lifetime income dispartities are rising along with annual income disparities; 4) the current recession is likely to exacerbate these trends because short-term job losses have longer-term consequences, especially for individuals at the bottom of the distribution.

The paper further argues, somewhat more tentatively, that current disparities in the U.S. are likely to persist or even grow in the absence of a major shift in policy because societies with large gaps between the haves and have-nots replicate those gaps in future generations. That is, the further apart are the rungs of the economic ladder the more difficult it will be for people to climb the ladder. In short, inequality eventually affects mobility.

This argument is bolstered by the observation that the new fault lines in American society revolve around education and family structure. The children of well-educated two-parent families have a large advantage over those in less well-educated single parent families – advantages that, as I will show, are more important than ever to the mobility process.

I conclude that opportunity-enhancing policies such as improving education and strengthening families, along with the usual calls for more progressive taxes and benefit programs, need to play a role in changing current trajectories if we wish to avoid a permanently divided society.

## Perspectives on Social welfare.

I want to start with a discussion of social welfare to see if we are all on the same page about what this means. This discussion will be familiar to economists but not necessarily to those from other disciplines.

Economists argue that a market economy under certain simplifying if unrealistic assumptions leads to an efficient set of outcomes, meaning that no reallocation of resources could produce a higher income or general level of welfare for society as a whole.<sup>2</sup> This assertion can be proved mathematically.<sup>3</sup> The case for government intervention then rests, first, on whether there are exceptions to the simplifying assumptions, such as imperfect competition or social costs, which interfere with the efficient operation of the market, and second, on whether the distribution of income (or other goods) that one begins with is considered "fair." If the distribution of income is not

<sup>&</sup>lt;sup>2</sup> Technically, the proposition is that no reallocation can make one person in society better off without making someone else worse off, usually referred to as Pareto optimality.

<sup>&</sup>lt;sup>3</sup> Kenneth J. Arrow, "An Extension of the Basic Theorems of Classical Welfare Economics," *Proceedings* of the Second Berkeley Symposium on Mathematical Statistics and Probability (1951): pp. 507-532; Gerard Debreu, *Theory of Value: An Axiomatic Analysis of Economic Equilibrium* (New Haven: Yale University Press, 1959): pp. 90-97.

fair, then some people's dollar votes in the market will get greater weight than they should. (They may also get greater weight in political markets than they should – one basis for the criticism of the Supreme Court's recent decision in *Citizens United v*. *Federal Election Commission*.) But fairness is subjective. It depends on what the polity judges the proper distribution of those dollar votes to be. Most people reject the idea of a completely equal distribution because they understand that it would undermine incentives to produce income. But they may also reject the free market distribution – that is, the particular distribution that results from some combination of genetic differences, family background, luck, and rewards for effort or talent.

As discussed in more detail below, different views about how much government should intervene in the process hinge, in part, on what people believe about why economic disparities exist and how much incentives matter. Those who believe that luck or the circumstances of one's birth determine where one ends up in the distribution are likely to favor greater intervention on the grounds that these are not under the control of the individual. Those who believe that effort and talent matter more and that society needs to reward those who make good choices will have a different view.

## Why Markets Don't Produce Optimal Distributional Outcomes.

To be more specific, advocates of greater social equality usually base their arguments on one of three arguments: the role of luck in the process, the social consequences of inequality, and/or their own ethical preferences.

**The role of luck**. Not everyone is born equal or begins life at the same starting line. And as John Rawls famously argued, we should be prepared to imagine what kind of society we would want to inhabit if we did not know what our own position in that society was going to be – and specifically, I would argue, our genetic endowments and the kind of family and country into which we are born and raised.<sup>4</sup> Redistributive policies in this case are designed to compensate for these initial inequalities in a way that creates a more level-playing field, more equal opportunity, and more social mobility. But the goal is not necessarily greater equality of incomes per se but rather greater opportunity for all to get ahead. As we shall see, when people believe that such opportunities exist, they are much less likely to favor further redistribution.

Adverse social consequences. Second, we may believe that too much inequality leads to less social cohesion, to poorer health, or a political system too dominated by moneyed interests.<sup>5</sup> These arguments, it should be noted, are instrumental or utilitarian rather than

<sup>&</sup>lt;sup>4</sup> John Rawls, A Theory of Justice (Cambridge, MA: Harvard University Press, 1971): pp. 136-142.

<sup>&</sup>lt;sup>5</sup> For a review of the possible effects of inequality from the social science perspective, see Gary Burtless and Christopher Jencks, "American Inequality and Its Consequences," in *Agenda for the Nation*, edited by Henry J. Aaron, James M. Lindsay, and Pietro S. Nivola (Washington: Brookings, 2003), pp. 61-108. For a review of inequality's effects from the public health perspective, see Richard G. Wilkinson and Kate E. Pickett, "Income inequality and population health: A review and explanation of the evidence," *Social Science & Medicine* 62, no. 7 (2006), pp. 1768-1784. Burtless and Jencks sum up their findings as follows: "Overall, we conclude that the effects of inequality on economic growth, health, and equality of opportunity are modest and uncertain in rich countries. We worry most about the possibility that changes in

ethical in nature. Redistributive policies in this case rest on some notion of the need to create a better-functioning society. In this paper I want to especially address the extent to which inequality feeds on itself as the result of its effects on people's ability and desire to get ahead.

**Ethical beliefs or preferences**. Even in a society in which initial inequalities were compensated and which functioned well, one might feel that the outcomes of a market system were unfair. That is, even after attempts to level the playing field (for example, by providing universal access to education and health care) and for any extremes that lead to societal dysfunction (such as by not allowing wealthy individuals or corporations to "buy" elections and distribute rewards to themselves), we may remain dissatisfied with the final distribution of income (or other goods). In democratic societies, the public can and does give voice to such preferences.

## Where do our preferences come from and what do they depend on?

Evolutionary biologists have shown that a sense of altruism is built into our genetic make up. Put most simply, a species that cooperates survives. Psychologists and economists have confirmed this insight based on experimental studies or observations of behavior which show that given a choice between a large sum of money that is very unevenly divided and a smaller sum that is more evenly divided, individuals will choose the latter.<sup>6</sup> Although evolutionary biology may be the bedrock upon which altruistic preferences rest, it doesn't explain why some societies – and some individuals within each society – have stronger preferences for equality than others.

the distribution of income have led to changes in the distribution of political power both because such a change undermines the legitimacy of the political system and because it can make the increase in economic inequality irreversible. But although we worry about these risks, we have no way of knowing how great they are. We conclude that citizens of the United States and other rich countries should decide how much economic inequality they are willing to tolerate largely on the basis of what they think is just, not on the basis of its alleged beneficial or adverse effects." Wilkinson and Pickett review the results of 168 analyses that examine the relationship between income inequality and population health at several different levels of analysis including international, state, region, metropolitan area, county, census tract, and parish. They find that a majority of studies offer support for the claim that higher levels of income inequality are negatively associated with population health. Of the 168 analyses, they classify 87 as "wholly supportive" of the relationship between higher inequality and worse population health, 44 as "partially supportive," and 37 as "unsupportive."

<sup>&</sup>lt;sup>6</sup> See Ernst Fehr and Urs Fischbacher, "The Nature of Human Altruism," *Nature* 425 (2003), pp.785-791; Colin Camerer and Richard H. Thaler, "Ultimatums, Dictators and Manners," *The Journal of Economic Perspectives* 9, no. 2 (1995), pp. 209-219; Matthew Rabin, "Incorporating Fairness into Game Theory and Economics," *The American Economic Review* 83, no. 5 (1993), pp. 1281-1302. Fehr and Fischbacher review the experimental evidence as well as the evolutionary origins of human altruism. Camerer and Thaler review the literature on the ultimatum and dictator games and point to manners and etiquette as an explanation. Based on experimental evidence, Rabin creates a game-theoretic framework that incorporates fairness. He summarizes the three stylized facts of his model as follows: "(A) People are willing to sacrifice their own material well-being to help those who are being kind. (B) People are willing to sacrifice their own material well-being to punish those who are being unkind. (C) Both motivations (A) and (B) have a greater effect on behavior as the material cost of sacrificing becomes smaller."

In the U.S., the Gini index for households (a measure of inequality that is equal to 0 when incomes are equally distributed and to 1 when one household has all of the income) was 0.47 in 2008.<sup>7</sup> The same index was 0.31 for Europe.<sup>8</sup> These differences in inequality reflect, in turn, the larger role of government in Europe in redistributing income and regulating product and labor markets. In an attempt to explain this difference between the U.S. and Europe, Alesina and his co-author hypothesize that the variation across countries in the amount of redistribution is related to beliefs about what causes inequality.<sup>9</sup> In the U.S., people believe that where you end up depends on your own efforts and skills – that is U.S. citizens believe they live in a meritocracy. In Europe, people believe that luck, family connections, birth, and corruption are more important determinants of success. As can be seen in Figure 1, for example, the proportion of people in the U.S. who believe that "people get rewarded for their effort" (61%) is dramatically higher than the median proportion (36%) who believe this in other advanced countries. Similarly, Alesina finds that the percentage of GDP devoted to social welfare expenditures is related to beliefs about the role of luck in accounting for success. Because differences in income in the U.S. are believed to be related to skill and effort and because social mobility is assumed to be high, inequality is more acceptable than in Europe and causes less unhappiness than it does in countries where the idea of meritocracy is far less prevalent.<sup>10</sup>

In another paper, Alesina digs more deeply into why preferences vary across individuals and not just across countries, focusing in this case on the U.S. He finds that preferences for redistribution are greater among those who have poorer future prospects (objectively and subjectively), who believe that opportunity depends more on luck than merit, who have low current income, low education (holding income constant), and who are female, African-American, young, and risk averse as well as more altruistic.<sup>11</sup>

The public in the U.S. has very mixed views on why some people are more successful than others. For example, a 2007 Pew study found that 62 percent of people disagree with the idea that success is largely determined by forces outside one's control, and a 2001 poll sponsored by National Public Radio, the Kaiser Family Foundation, and

<sup>&</sup>lt;sup>7</sup> U.S. Census Bureau, *Historical Income Inequality Tables*, table H-4

<sup>(</sup>http://www.census.gov/hhes/www/income/histinc/ineqtoc.html).

<sup>&</sup>lt;sup>8</sup> Eurostat, "Inequality of income distribution: Gini coefficient"

<sup>(</sup>http://nui.epp.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\_sic2&lang=en).

<sup>&</sup>lt;sup>9</sup> Alberto Alesina and George-Marios Angeletos, "Fairness and Redistribution," *The American Economic Review* 95, no. 4 (2005), pp. 960-980.

<sup>&</sup>lt;sup>10</sup> Alberto Alesina, Rafael Di Tella, and Robert MacCulloch, "Inequality and happiness: are Europeans and Americans different?" *Journal of Public Economics* 88 (2004), pp. 2009-2042. When comparing their results for the U.S. and Europe, Alesina, Di Tella, and MacCulloch find no difference in the effect of inequality on the reported happiness of the rich in Europe and the rich in the U.S. They also find no difference between those on the political right in Europe and those on the right in the U.S. However, they find that the reported happiness of the European left is more negatively affected by inequality than the reported happiness of those on the left in the U.S. The effect of inequality on the reported happiness of the soft the U.S. (but this finding is only significant at the 0.10 level). The authors argue that the perception of higher levels of mobility in the U.S. might explain these differences. <sup>11</sup> Alberto Alesina and Eliana La Ferrara, "Preferences for redistribution in the land of opportunities," *Journal of Public Economics* 89 (2005), pp. 897-931.

Harvard University's Kennedy School found that people are about evenly divided in ranking lack of personal effort or outside circumstances as the bigger cause of poverty.<sup>12</sup> The public also clearly prefers opportunity-enhancing programs such as education and training and earmarked assistance for health care, child care, or nutrition to straight cash assistance.<sup>13</sup>

Other studies have noted that altruism depends, to some extent, on the ability of the donor to identify with the recipient. Put differently, altruism is selective. It depends not only on the perceived causes of someone else's misfortune (are they "deserving or undeserving") but on group ties or solidarity which are harder to create in a large ethnically and racially diverse country such as the U.S. in comparison to the smaller and more homogeneous societies of Northern Europe.<sup>14</sup>

# How Should We Measure the Current State of Distributional Equity in the U.S.

This brings me to how we should assess the current distribution of income in the U.S. Let me immediately admit that income is a rather narrow measure of the distribution of valuable goods in a society but follow the convention that it is more readily measured and more commonly used than other indicators that might be preferable on theoretical grounds.<sup>15</sup>

Taking income as a reasonable measure of one's economic position, the conventional approach has been to look at the distribution of income at a point in time (what I will henceforth call cross-sectional inequality) and to compare it to some earlier period of time or to benchmark it against the experience of other countries. Thus, it is commonly noted that the distribution of income in the U.S. has become more unequal in recent decades and that it is also more unequal than the distribution in some other advanced countries.

What this simple story about cross-sectional inequality misses is the fact that individuals change their economic position over time and that, in addition, people enter and leave the sample with the result that we may be comparing apples to oranges. Any change in the composition of the population – for example, an influx of immigrants or a surge in the size of the elderly population or an increase in single parent families – can affect the results. Most importantly, comments to the effect that the rich are getting richer or the poor are getting poorer suggest to the listener that we are following the same individuals or families over time and observing what has happened to their incomes when this is not

<sup>13</sup> For more detail, see Ron Haskins and Isabel Sawhill, *Creating an Opportunity Society* (Washington:

<sup>&</sup>lt;sup>12</sup> Pew Research Center for the People and the Press, "Trends in Political Values and Core Attitudes: 1987-2007" (Washington: 2007); National Public Radio, Kaiser Family Foundation, and Harvard University Kennedy School, "Poverty in America," (2001; http://npr.org/programs/specials/poll/poverty/summary.html).

Brookings Institution Press, 2009), pp. 19-31.

<sup>&</sup>lt;sup>14</sup> For more on this point, see Haskins and Sawhill, *Creating an Opportunity Society*, pp. 19-22.

<sup>&</sup>lt;sup>15</sup> For examples of alternative measures and frameworks of overall well-being, see Amartya Sen, *Inequality Reexamined*, (New York: Russell Sage Foundation, 1992); Robert Haveman, "What Does It Mean to Be Poor in a Rich Society?" in *Changing Poverty, Changing Policies*, edited by Maria Cancian and Sheldon Danziger (New York: Russell Sage Foundation, 2009), pp. 384-408.

at all what cross-sectional inequality is measuring. Instead people move up and down the income ladder over time.

For this reason, it has long been recognized that incomes are more equally distributed over longer than over shorter periods of time. Consider a society in which everyone had identical incomes at each age but incomes grew with age and experience. Then, annual incomes would be very unequal but lifetime incomes would be identical (under certain simplifying assumptions about mortality, labor force participation, composition of the population, etc.). With some caveats about the effects of volatility on well-being, discussed below, the distribution of lifetime or permanent incomes seems like the right concept by which to judge the fairness of a society.

If this is the right concept, how do we measure it? Can we look at people's lifetime incomes and ask whether they are becoming more equally or unequally distributed over time? This would only be possible if we had full income histories on members of the population and also omitted from the analysis all those who are still alive – not a very interesting or appealing exercise.<sup>16</sup> Fortunately, there is an indirect way around this dilemma that involves combining data on short-term income inequality with data on income mobility.<sup>17</sup>

The important point is that the degree of inequality in a society will vary with the time period over which it is measured. If there is any earnings or income mobility over one's career or life cycle, lifetime or longer-term inequality will be less than shorter-term or annual inequality. Thus, in principle, one cannot infer the state of inequality in a society without some attention to how much and what kind of mobility exists.<sup>18</sup> As we will see in a subsequent section, greater income inequality (based on successive cross sections) has not been accompanied by greater mobility and may have been accompanied by less mobility. Thus, the argument that greater cross-sectional income inequality should be dismissed for this reason has to be rejected.<sup>19</sup>

<sup>&</sup>lt;sup>16</sup> We would also have to worry about how to handle all those who died prematurely and thus had foreshortened income histories for this reason alone.

<sup>&</sup>lt;sup>17</sup> Ideally one would want to measure mobility over a life time as well and would thus be faced with some of the same practical problems that exist for measuring lifetime incomes. To my knowledge, no one has tried the latter strategy. And virtually everyone who studies mobility worries about the lack of data on the most recent birth cohorts.

<sup>&</sup>lt;sup>18</sup> For this reason, students of inequality and mobility—e.g., A. F. Shorrocks, "The Measurement of Mobility," *Econometrica* 46, no. 5 (1978), pp. 1013-1024—have suggested that a good (although indirect) measure of mobility is the ratio of one to the other. Specifically, Mobility = 1 - an index of long-term inequality/an index of short-term inequality. Thus, if the Gini coefficient for annual incomes were .4 but the coefficient for 20-year incomes were .2, then the mobility index would be 1 - 2/4 or .5. If short and long-term inequality were identical, then M = 0. Any positive value of M denotes some mobility and higher values denote more of it. Although widely used and useful for many purposes, Gary Fields has criticized this measure because it treats mobility that leads to greater equality the same as mobility that leads to less equality. See Gary S. Fields, "Does Income Mobility Equalize Longer-Term Incomes? New Measures of an Old Concept," working paper (Cornell University, ILR Collection, 2008).

<sup>&</sup>lt;sup>19</sup> This conclusion, while widely made, may be premature. It is not just the amount of mobility that matters but also its nature or pattern. Gary Fields illustrates this well by comparing two simple scenarios which he labels the "Gates winning" and "Gates losing" scenarios. Gates winning is represented by  $1,3 \rightarrow 1,5$  in

Finally, I want to address two further complications. The first is the role of economic growth as a lubricant in the process. The second is the role of income volatility in affecting individual well-being.

In a society with no growth, one person's gains are another person's losses. Indeed, as growth (or "absolute mobility") has slowed, relative mobility has become more important. When the escalator is no longer moving, the only way to move up is to push past other people.<sup>20</sup> Growth is the great lubricator of social mobility because it allows some to gain without imposing losses on others. In its absence, the losers will complain, and the political system will likely respond to those complaints. In an effort to protect the losers, the political response may then impose costs on the general population (e.g., barriers to trade). In the absence of growth, it may also be very difficult to redistribute income because such redistribution will impose absolute, not just relative, losses (in the form of tax increases and thus lower disposable incomes) on some portion of the population.<sup>21</sup>

Volatility also matters. Imagine two societies both of which had the same lifetime distribution of incomes across their populations but one of which delivered that income in a very uneven pattern. The uncertainty this created, and the need for either individual saving, borrowing, or social insurance to smooth this pattern, would then be an additional issue. Indeed, ignoring volatility seems like an especially grave omission in light of the effects of the current recession. If short-term deviations from some average level of income are of equal and offsetting value, as they would be (as a first approximation) in the context of no growth and no individual mobility, their main normative significance rests on the premise that people are risk averse. They cope with short-term swings in their

this two period, two person model where the first number represents the income of person one and the second number represents the income of person 2. Gates losing is represented by  $1,3 \rightarrow 5, 1$ . Note that in the Gates winning scenario total lifetime income is 1, 8 and in the Gates losing scenario it is 6, 4. Lifetime incomes are more equally distributed in the second scenario. Fields' point is that the mobility index is not very sensitive to this kind of reranking. Using a measure of mobility designed to capture whether changes in mobility are equalizing or disequalizing of long-term incomes, Fields finds that mobility was equalizing up until about 1980 but disequalizing after then. See Gary S. Fields, "Does Income Mobility Equalize Longer-Term Incomes? New Measures of an Old Concept."

<sup>&</sup>lt;sup>20</sup> See Daniel P. McMurrer and Isabel V. Sawhill, *Getting Ahead: Economic and Social Mobility in America* (Washington: Urban Institute Press, 1998); Julia B. Isaacs, Isabel V. Sawhill, and Ron Haskins, *Getting Ahead or Losing Ground: Economic Mobility in America* (The Brookings Institution and The Pew Economic Mobility Project, 2008).

<sup>&</sup>lt;sup>21</sup> Simon Kuznets, "Economic Growth and Income Inequality," *The American Economic Review* 45, no. 1 (1955), pp. 1-28; Benjamin M. Friedman, *The Moral Consequences of Economic Growth* (New York: Alfred A. Knopf, 2005). Kuznets suggested that in the early stages of industrialization, income inequality would rise, but that it would eventually level off and then decline at a more mature stage of the process. Friedman describes the historical record in more detail and notes that each new burst of technological advances may initially widen income disparities by favoring those with the requisite skills to use the new technologies; but he posits that eventually the population will adapt to the new requirements by acquiring additional education, thereby reducing disparities. This is a widely held perspective among economists that goes by the name of skill-biased technological change. The puzzle is why there hasn't been a greater or faster response to the wage premia earned by better educated workers, thereby increasing the supply of skilled workers and reducing their wage advantage in the process.

incomes by saving, borrowing (dissaving) or by buying insurance (or asking their government to provide it) in order to smooth their income over time. Behavioral economists have shown that people are loss averse; they do not weight a gain in income as much as a loss so volatility can indeed reduce their well-being.<sup>22</sup> But in the real world, it's very hard to draw a line between short-term movements in income that are "bad" and those that are "good." Put differently, volatility may simply be the price of mobility. Moreover, the research on volatility has yet to determine whether it is due more to activities that are voluntarily chosen, such as a decision to retire early, or to activities that are imposed by external events, such as a recession. For both of these reasons assessing the welfare losses associated with more volatility is difficult, and efforts to buffer people from modest shocks or those that reflect their own behavioral choices as opposed to, say, the effects of a recession or changes in employer practices can do more harm than good if carried too far.

In the next section I briefly review three bodies of empirical research that have focused respectively on cross-sectional income inequality, income mobility across generations and over the life cycle, and short-term fluctuation in income or income volatility.<sup>23</sup> I will then return to the question of how cross-sectional inequality and year-to-year volatility in people's incomes affect their longer-term prospects.

## Income Inequality

Income inequality has been increasing dramatically in the U.S. since the late 1970s. The Gini coefficient, a measure of income dispersion across the entire distribution, has increased steadily, rising from 0.39 in 1970 to 0.47 in 2008 (see Figure 2). Another way to analyze income inequality is to look at the income shares of top earners. Thomas Piketty and Emmanuel Saez, in a seminal article on income inequality, calculate the income shares of top earners since 1913 using data from individual tax returns.<sup>24</sup> After World War II, the top decile's income share stabilized at about 33 percent through the 1960s. However, since the 1970s, the top decile's income share has increased quite rapidly, rising to nearly 50 percent in 2007-a higher proportion than any year since 1917, surpassing even the peak achieved in the late 1920s.<sup>25</sup> The income share of the top

<sup>&</sup>lt;sup>22</sup> Amos Tversky and Daniel Kahneman, "Loss Aversion in Riskless Choice: A Reference-Dependent Model," The Quarterly Journal of Economics 106, no. 4 (1991), pp. 1039-1061.

<sup>&</sup>lt;sup>23</sup> Some researchers have attempted to incorporate all three measures in a single metric which can then be decomposed into the three different measures of income risk: the risk of being born with fixed personal attributes that lead to lifetime inequality, a reranking of persons across time, and the risk of short-term variation around a person-specific time trend. For the most ambitious effort of this type, see Austin Nichols, "Trends in Income Inequality, Volatility, and Mobility Risk," (Urban Institute, 2008). Nichols uses PSID data for 1976-2004 to conduct a mathematical decomposition of his metric of total income variability (half the squared coefficient of variation) which indicates that all three have increased and that the results are not very sensitive to the accounting period or adjustments for family size. Increases in longrun inequality dominate the other two measures of variability. Although interestingly, this decomposition seems somewhat mechanical and unhinged from any behavioral considerations.

<sup>&</sup>lt;sup>24</sup> Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," The *Quarterly Journal of Economics* 118, no. 1 (2003), pp. 1-39. <sup>25</sup> Emmanuel Saez, "Striking it Richer: The Evolution of Top Incomes in the United States (Update with

<sup>2007</sup> estimates)," (http://elsa.berkeley.edu/~saez/saez-UStopincomes-2007.pdf, 2009).

1 percent has fluctuated across time, but this group has experienced an especially dramatic rise in their share of income from about 9 percent in the 1960s and 1970s to over 23 percent in 2007 (see Figure 3).<sup>26</sup>

It is not entirely clear how the current recession affects overall measures of income inequality. On the one hand, unemployment is concentrated among low-wage workers, which exacerbates inequality. However, as Saez notes, historically the top percentile's share of income has decreased during downturns, "as business profits, realized capital gains, and stock option exercises fall faster than average income." But, Saez also finds that the top percentile's share of income quickly recovers after a recession in the absence of "drastic policy changes, such as financial regulation or significantly more progressive taxation..."<sup>27</sup> These trends at the top would, at least initially, reduce overall levels of inequality. Thus, the trends on the lower and upper ends of the income distribution seem to have competing and possibly offsetting effects on inequality in the short term.<sup>28</sup> But as I will argue below, the recession is likely to have longer-term consequences that play special havoc with those experiencing job losses, a group that is concentrated at the bottom of the distribution.

The trends in inequality persist whether income is measured before taxes and transfers or after. Taxes and transfers reduce inequality quite substantially but they are not responsible in any significant way for observed trends.<sup>29</sup> However, when one incorporates the value of health insurance, which has greatly increased in value, this conclusion may have to be modified. In a new and interesting analysis, Burtless and Svaton show that if we counted the value of health care paid for by third parties (employers or government), income gaps between rich and poor and young and old would be reduced considerably.<sup>30</sup> With the recent passage of a health reform bill that will dramatically increase government subsidies for health care, their analysis takes on added meaning. As David Leonhardt of the New York Times argued shortly after enactment of the health reform bill in March 2010, it "is the biggest attack on economic inequality since inequality began rising

<sup>&</sup>lt;sup>26</sup> In fact, Richard Burkhauser and his coauthors find that "while the income divergence between the very top income holders and the rest of society was growing in the 1990s, the growth in income inequality across the entire distribution occurred at a more moderate pace." Richard V. Burkhauser et al., "Recent Trends in Top Income Shares in the USA: Reconciling Estimates from March CPS and IRS Tax Return Data," Working Paper 15320 (National Bureau of Economic Research, 2009).

<sup>&</sup>lt;sup>27</sup> Saez, "Striking it Richer: The Evolution of Top Incomes in the United States (Update with 2007 estimates)."

<sup>&</sup>lt;sup>28</sup> It is also important to consider the long-run trend of inequality leading up to a recession, see Gadi Barlevy and Daniel Tsiddon, "Earnings inequality and the business cycle," *European Economic Review* 50, no. 1 (2006), pp. 55-89. Barlevy and Tsiddon model the relationship between inequality trends and the business cycle and find that "recessions tend to amplify long-run trends, i.e. they involve more rapidly increasing inequality when long-run inequality is increasing, and more rapidly decreasing inequality when long-run inequality is decreasing."

<sup>&</sup>lt;sup>29</sup> For some measures of post-tax and post-transfer inequality, see Congressional Budget Office, "Historical Effective Federal Tax Rates: 1979 to 2005" (2007). For an analysis of the progressivity of the U.S. federal tax system across time, see Thomas Piketty and Emmanuel Saez, "How Progressive is the U.S. Federal Tax System? A Historical and International Perspective," *Journal of Economic Perspectives* 21, no. 1 (2007), pp. 3-24.

<sup>&</sup>lt;sup>30</sup> Gary Burtless and Pavel Svaton, "Health Care, Health Insurance, and the Distribution of American Incomes," *Forum for Health Economics & Policy* 13, no. 1 (2010).

more than three decades ago.<sup>31</sup> The bill extends Medicaid, provides subsidies to families of four making up to \$88,000 a year and pays for these extensions primarily by taxing the rich and cutting back Medicare, especially for those in private plans. A recent analysis by Burkhauser and Simon suggests that health care reform will increase the income of households in the lowest decile by over 8 percent (\$797) and reduce overall income inequality by about 1 percent. This analysis does not take into account the extra taxes that will be paid by higher-income Americans, but it is a start on determining the likely effects.<sup>32</sup> All told, it seems like health care reform should reduce inequality although this will not be reflected in most conventional measures.

Turning to other explanations for the trend, some of the growth in income inequality is due to changes in family composition (especially more single parent families) and in marriage patterns (high earners marrying each other) but much is due to greater inequality in earnings.<sup>33</sup>

The reasons for greater earnings inequality have been much researched and the current consensus seems to be that most of the trend is related to skill-biased technological change (creating a big wage premium for the better educated) with such factors as unionization, minimum wages, trade, and immigration playing smaller although not insignificant roles. I have reviewed this literature elsewhere and will not repeat the details here.<sup>34</sup>

## Income Mobility

There is considerable income mobility in the U.S. People move up and down the economic ladder both over the life course (intragenerationally) and across generations (intergenerationally).

One reason that incomes increase over time is because of economic growth. Normally, wages and incomes increase with productivity both during one's working career and from one generation to the next. In recent decades, economic growth has slowed and whatever prosperity we have had has been less broadly shared with the result that a rising tide is no longer any guarantee of higher incomes for most people. Between 1979 and 1999 (both business cycle peaks) real median family income increased by only 15 percent and stagnated thereafter even before the current recession began.<sup>35</sup> Slower and less broadly distributed growth has, in turn, focused greater attention on relative mobility – that is, the

<sup>&</sup>lt;sup>31</sup> David Leonhardt, "In Health Bill, Obama Attacks Wealth Inequality," *The New York Times*, March 24, 2010, p. A1.

<sup>&</sup>lt;sup>32</sup> Richard V. Burkhauser and Kosali I. Simon, "Measuring the Impact of Health Insurance on Levels and Trends in Inequality," Working Paper 15811 (National Bureau of Economic Research, 2010), p. 17.

<sup>&</sup>lt;sup>33</sup> Gary Burtless, "Globalization and Income Polarization in Rich Countries," Issues in Economic Policy 5 (Brookings, 2007). Burtless finds that changes in household composition and marriage patterns explain 12-20 percent of the rise in inequality between 1979 and 2004, and increases in earned income inequality explain 39-53 percent of the rise in equality over the same time period.

<sup>&</sup>lt;sup>34</sup> For further discussion on the causes of growing inequality, see Ron Haskins and Isabel Sawhill, *Creating an Opportunity Society*, pp. 33-37 and the original studies cited therein.

<sup>&</sup>lt;sup>35</sup> Ron Haskins and Isabel Sawhill, *Creating an Opportunity Society*, pp. 49-50.

tendency for people to move up and down within the ranks or to change their position relative to others in the distribution.

While absolute mobility has slowed, the story about relative mobility is more complicated. Over the life course, a typical pattern is for individuals to have relatively low incomes when they are young and to experience rising incomes with age and years in the labor market. In addition, incomes may rise or fall as a result of an illness, a divorce, a second earner's decision to enter or leave the labor force, a business success or failure, or for other reasons. About 60 percent of all working-age families change income quintiles (a relative measure that does not include the effects of economic growth) over a ten year period, and almost half of those in the bottom quintile at the beginning of each decade have moved into a higher quintile by the end of the decade. Moreover, these proportions have not changed much over the past five decades (see Figure 4 for data on the last three decades; the longer-term picture is reviewed in Haskins and Sawhill).<sup>36</sup> Thus, the best evidence suggests that intragenerational mobility is relatively high and unchanging. Moreover, it almost certainly reflects primarily the natural rise of earnings with age and experience.

Turning to intergenerational mobility, or the extent to which children's economic status is affected by their parents' income or socioeconomic status, we now have good data suggesting that people do move up and down the ladder but that it helps if you have the right parents. Although children born into middle income families have a roughly equal chance of moving up or down the ladder once they become adults, those born into rich or poor families have a much higher probability of remaining rich or poor as adults. Roughly 40 percent of those born into the bottom or the top quintile of the income distribution will remain in that same quintile when they become adults (see Figure 5). Moreover, the U.S. has less intergenerational mobility than some other advanced nations, especially the Nordic countries where cross-sectional inequality is also much lower than in the U.S. (see Figure 6).<sup>37</sup>

Studies of whether intergenerational mobility has increased or decreased in the U.S. in recent decades have come to quite different conclusions with some suggesting it has decreased and some suggesting it has remained roughly constant. (No study has found an increase in mobility that might have compensated for the increase in cross-sectional inequality.) Our ability to measure these trends is constrained by the fact that we do not yet have data on the adult incomes of the youngest generations who were born during the 1980s and 1990s when inequality was growing rapidly, especially at the top of the distribution.<sup>38</sup>

<sup>&</sup>lt;sup>36</sup> Ron Haskins and Isabel Sawhill, *Creating an Opportunity Society*, p. 69.

<sup>&</sup>lt;sup>37</sup> See Ron Haskins and Isabel Sawhill, *Creating an Opportunity Society*, p. 66.

<sup>&</sup>lt;sup>38</sup> For a review of the evidence on this topic, see Isabel V. Sawhill, "Trends in Intergenerational Mobility," in *Getting Ahead or Losing Ground: Economic Mobility in America*, edited by Julia B. Isaacs, Isabel V. Sawhill, and Ron Haskins (The Brookings Institution and The Pew Economic Mobility Project, 2008), pp. 27-35.

It would be nice to understand why it is that one's economic prospects are strongly influenced by one's family of origin. As Bowles and Gintis have noted, the mechanisms are something of a black box, but as they and others have pointed out education appears to be the most important intervening variable linking parental status and their offspring's later success in life.<sup>39</sup> Parents and children share genetic endowments. In addition, the family, school, and neighborhood environments of children born into more advantaged families help them get ahead in life. However, efforts to unpack this black box have not produced much consensus about the mechanisms involved or about their relative importance. At the same time, this literature raises some fundamental normative questions about how any society goes about providing more equality of opportunity. If the advantages that families provide their children (both genetically and environmentally) are key, and we are not willing as a society to interfere much in this private arena, then our ability to provide genuine opportunities for children born into less advantaged circumstances is somewhat limited.<sup>40</sup> Access to high quality education and health care or other community resources can help, of course, but may not be sufficient to move the needle very far toward greater equality of opportunity.<sup>41</sup> In this case, some argue, the only alternative is to redistribute income or other valuable resources after the fact. One problem with this solution is that it has little political support in the United States, and is inconsistent with the public's strong belief in meritocracy.

## Income Volatility

Income mobility is normally measured over relatively long periods of time, such as a decade in the case of intragenerational mobility and an entire generation in the case of intergenerational mobility. Another body of literature has looked at very short-term fluctuations in income from year to year and found that such fluctuations have become more common than in the past. The best-known work on this topic is Jacob Hacker's and he finds that such volatility more or less doubled between 1969 and 2004.<sup>42</sup> Most other studies have found something similar although the magnitude of the increase and the reasons for it have been open to debate. Karen Dynan and her colleagues find that household income volatility increased by about one third between the late 1960s and the

<sup>&</sup>lt;sup>39</sup> See, for example, Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves, "Introduction," in *Unequal Chances: Family Background and Economic Success*, edited by Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves (Princeton: Princeton University Press, 2005), pp. 1-22; Tom Hertz,

<sup>&</sup>quot;Understanding Mobility in America" (Center for American Progress, 2006); and David J. Harding et al., "The Changing Effect of Family Background on the Incomes of American Adults," in *Unequal Chances: Family Background and Economic Success*, edited by Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves (Princeton: Princeton University Press, 2005), pp. 100-144.

<sup>&</sup>lt;sup>40</sup> Jencks has made this argument well in several papers including Christopher Jencks and Laura Tach, "Would Equal Opportunity Mean More Mobility?" in *Mobility and Inequality: Frontiers of Research in Sociology and Economics*, edited by Stephen L. Morgan, David B. Grusky, and Gary S. Fields (Stanford: Stanford University Press, 2006), pp. 23-58; and David J. Harding et al., "The Changing Effects of Family Background on the Incomes of American Adults" of which Jencks is a coauthor.

<sup>&</sup>lt;sup>41</sup> This argument can also be found in David J. Harding et al., "The Changing Effects of Family Background on the Incomes of American Adults," pp. 133-34.

<sup>&</sup>lt;sup>42</sup> Jacob Hacker, *The Great Risk Shift* (New York: Oxford University Press, 2008); Jacob Hacker and Elisabeth Jacobs, "The Rising Instability of American Family Incomes, 1969-2004: Evidence from the Panel Study of Income Dynamics," Briefing Paper #213 (Economic Policy Institute, 2008).

middle of the current decade.<sup>43</sup> Much of this volatility is driven by the fact that there are a relatively small proportion of households (e.g., 10 percent) that experience very large changes in their incomes (e.g., a 50 percent change). Some of these large changes are the result of a voluntary event (e.g. a decision to leave the labor force to start a family) and some are due to an involuntary event (e.g., loss of a job), making their normative significance somewhat unclear. In addition, a recent CBO analysis shows no trend in year to year earnings variability for either men or women since 1989 (see Figure 7).<sup>44</sup> Whatever these income shocks are due to, they have raised questions about the adequacy of social insurance benefits such as unemployment or health insurance, parental leave policies, and the replacement of income in the case of disability or retirement. Moreover, almost all of the research cited here was done before the current recession began, and the kinds of income drops precipitated by that recession (hopefully followed by a bounce back) are likely to dwarf anything we have seen in recent decades.

# How Does an Increase in Short-Term Income Inequality Affect the Distribution of Lifetime Incomes?

I next address the question of whether greater cross-sectional inequality affects the extent of mobility. Does a society with more poverty and inequality risk becoming one in which there is also less opportunity to join the middle class? When the rungs of the income ladder are further apart, does it become more difficult to climb the ladder?<sup>45</sup>

Hypothesis 1: Inequality in the annual distribution of income (or earnings) produces more mobility and thus less long-term inequality because people will try harder to win the prizes that success brings. In the face of more unequal rewards for performance, people will have a greater incentive to get a good education, work hard, and be successful on the job. For example, the argument is made that very high salaries for top executives may not be needed as much to incentivize those executives as to motivate those in middle management who aspire to be equally successful.

<sup>&</sup>lt;sup>43</sup> Dynan, Karen, "The Income Roller Coaster: Rising Income Volatility and Its Implications," *Pathways* (Spring 2010), pp. 3-6. Volatility is measured as as the standard deviation across households of the percent change in income across two year periods – with some smoothing.

<sup>&</sup>lt;sup>44</sup> Congressional Budget Office, "Trends in Earnings Variability Over the Past 20 Years" (2007). Other important contributions to this literature include Peter Gottschalk and Robert Moffitt, "The Rising Instability of U.S. Earnings," *Journal of Economic Perspectives* 23, no. 4 (2009), pp. 3-24.; Karen E. Dynan, Douglas W. Elmendorf, and Daniel E. Sichel, "The Evolution of Household Income Volatility," (Brookings Institution and Federal Reserve Board, 2008); Austin Nichols and Seth Zimmerman, "Measuring Trends in Income Variability," (Urban Institute, 2008); Gregory Acs, Pamela Loprest, and Austin Nichols, "Risk and Recovery: Understanding Changing Risks to Family Incomes," Paper 14 (Low-Income Working Families, Urban Institute, 2009); Peter Gosselin, *High Wire: The Precarious Financial Lives of American Families* (New York: Basic Books, 2008).

<sup>&</sup>lt;sup>45</sup> Mobility is commonly measured by looking at the intergenerational income elasticity (the coefficient from a regression of offspring's income on parental income). This elasticity will be smaller than the correlation between the two generation's incomes during periods when inequality is rising. If r = the correlation and B = the coefficient, then r = B (standard deviation of parental incomes/standard deviation of children's incomes).

This thesis about the positive effects of inequality is by now well-worn and much touted in conservative circles. Reviewing all of the empirical evidence relating to it is beyond the scope of this paper but I want to make at least a few comments on its current relevance. First, the effects are almost certainly nonlinear. That is, a top tax rate of 90 percent (a rate that actually existed in the U.S. for a period of time) has a very different effect than a top tax rate of 35 percent or even 50 percent. Second, the effects of any marginal rate may be largest when incomes are low rather than high, and some of the highest implicit marginal rates are imposed on low-income families when they lose benefits as their earned income rises. Raising taxes on high-income families but lowering them on those who might be called lower middle income could be a good mobilityenhancing strategy. For similar reasons, another good idea is policies that condition assistance on mobility-enhancing behaviors. Examples are the Earned Income Tax Credit, educational grants conditioned on school performance, and health insurance subsidies that vary with health behaviors such as exercise and diet.

Hypothesis 2: Cross-sectional income inequality produces less mobility and thus more long-term inequality because the rungs of the ladder are farther apart. A high level of inequality in family incomes may make it more difficult for children from less privileged families to escape their circumstances. They experience less positive home environments and harsher parenting; they are more likely to live in troubled neighborhoods and to go to inferior schools; and they may have difficulty competing for good jobs with career paths that lead to higher earnings over time. Their more affluent peers may have all kinds of advantages, by contrast, from parents who emphasize learning and self control at an early age to expensive universities and lucrative career contacts and knowledge of the world later in life.

More specifically, consider the current distribution of income across families with children. Not only is it less equal than in the past, it also has two other features worth noting. It is more highly correlated with education and it is more highly correlated with family structure than in an earlier era.

It is more correlated with education because the returns to education have risen sharply as the demand for skilled workers has outpaced the supply in recent decades. Thus, if we ranked today's parents by their earnings ability, we would also be ranking them, as a first approximation, by their education level. Yes, there are PhDs driving tax cabs or operating ski lifts and there are high school dropouts who have created new computer tecnology, but the general tendency of earnings to rise sharply with education – and more sharply than in the past – is well documented.<sup>46</sup> As Figure 8 shows, wages rose most rapidly between 1965 and 2008 for those with the most education.

On both theoretical and empirical grounds, education is widely seen as the most important mediating variable between a parent's status and a child's success. But in a

<sup>&</sup>lt;sup>46</sup> See, for example, Claudia Goldin and Lawrence F. Katz, *The Race between Education and Technology* (Cambridge, MA: Harvard University Press, 2008). These authors emphasize that skill-biased technological change need not lead to higher wage premia for better-educated workers if supply keeps pace with demand, but it hasn't.

world of almost universally available free public education, how do more educated parents help their children acquire more human capital? Some of the linkages are obvious. For genetic reasons, better educated parents tend to have more able children who then do better in the classroom than their less able counterparts. Their parents can also afford to live in better neighborhoods and enroll their children in better schools, send them to college, and afford the tuitions of elite schools. Many of these children don't just have one well-educated parent; they have two. This greatly increases their family's potential income which can be translated into actual income if the second parent works and into valuable time with children if he doesn't. Some of the reasons for the linkage between education and children's prospects are less obvious, harder to measure, and more controversial. But it is probably the case that the children of educated parents have been better socialized to be successful, to have different attitudes and aspirations, and to have spent time in environments where education occurs not just in but also *outside* of school.<sup>47</sup> Parental investments in the health care of their children may play a similar role with more advantaged parents having both the resources and the knowledge to respond more fully to childhood disabilities and illnesses that if left untreated can have lifelong consequences.

But if we were looking for another variable to rival education in explaining the distribution of income, it would be family structure (see Figure 9).<sup>48</sup> Those at one tail of the distribution are mostly less-educated single parents and those at the other tail are mostly highly-educated married parents. Research by Adam Thomas and myself shows that the decline in marriage rates since the 1970s has had a very large effect on the proportion of children living in poverty even after adjusting for the obvious fact that marriage is selective of those parents with greater advantages.<sup>49</sup> Indeed, what is striking is the extent to which family structure as well as education is the new dividing line between the haves and have-nots in American society. Educated women continue to have children within marriage. Less educated women have children much earlier, usually outside of marriage, and often before they have completed their schooling. As shown in Figure 10, the marriage gap between educated and less educated women has widened dramatically since the late 1960s.<sup>50</sup> In addition, there are big differences between the two tails of the distribution in the extent to which children are planned, the maturity of their parents at the time of their birth, and the number of siblings with whom they must compete for parental time or other resources.<sup>51</sup> For whatever reasons, the literature on

<sup>&</sup>lt;sup>47</sup> For some evidence on the effects of attitudes, see John C. Loehlin, "Resemblance in Personality and Attitudes between Parents and Their Children: Genetic and Environmental Contributions," in *Unequal Chances: Family Background and Economic Success*, edited by Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves (Princeton: Princeton University Press, 2005), pp. 192-207.

<sup>&</sup>lt;sup>48</sup> This is the conclusion of Ron Haskins and Isabel Sawhill, *Creating an Opportunity Society*; and Gary Burtless, "Globalization and Income Polarization in Rich Countries."

<sup>&</sup>lt;sup>49</sup> Adam Thomas and Isabel Sawhill, "For Richer or for Poorer: Marriage as an Antipoverty Strategy," *Journal of Policy Analysis and Management* 21, no. 4 (2002).

<sup>&</sup>lt;sup>50</sup> Also, see Daniel T. Ellwood and Christopher Jencks, "The Spread of Single-Parent Families in the United States Since 1960," in *The Future of the Family*, edited by Daniel P. Moynihan, Timothy M. Smeeding, and Lee Rainwater (New York: Russell Sage Foundation, 2004), pp. 25-65.

<sup>&</sup>lt;sup>51</sup> Isabel Sawhill, Adam Thomas, and Emily Monea, "An Ounce of Prevention...Policy Presciptions for Reducing the Prevalence of Fragile Families," *The Future of Children* (forthcoming).

child development shows that two parents are better than one for a variety of behavioral and cognitive outcomes.  $^{52}$ 

To summarize, we know that: 1) income is less equally distributed than it was a few decades ago; 2) that it is more correlated with education; and 3) that it is more correlated with family structure. Since both parental education and family structure have reasonably well-known effects on children, even if parental income per se were not correlated with children's success, we would have good reasons to believe that the particular form of income inequality we have experienced in the U.S. has set the stage for the greater persistence of class in the future. To be sure, it is a class structure largely based on meritocratic principles and on stable family ties rather than on the inheritance of wealth, connections, and winning life's lottery. But it does suggest the importance of dealing with the distribution of educational opportunities and with differences in family structure, not just income.

## Possible conclusion: There is a u-shaped relationship between inequality and

**mobility**. Up to a point, more inequality leads to greater mobility but beyond some point the level of effort and skill needed to climb the ladder becomes infeasible or much more difficult. My own view is that current disparities in the U.S. threaten the mobility that has long been heralded as a peculiarly American condition. However, I can cite only bits and pieces of evidence in favor of this hypothesis. Although there is no strong or consistent evidence that mobility has declined, some studies suggest that it has, especially among men.<sup>53</sup> Kopczuk, Saez, and Song, in particular, show that mobility has increased for women but declined for men.<sup>54</sup> But now that women are quite well-integrated into the labor market and the gender wage gap has shrunk, especially for younger cohorts, the increased mobility of women that has masked declining mobility among men may fade away, exposing a society which risks getting into a vicious cycle in which inequality breeds more inequality. We can also look to micro studies of child development for more direct evidence that low (relative) income adversely affects such outcomes as schooling,

<sup>&</sup>lt;sup>52</sup> See Sarah McLanahan, Elisabeth Donahue, and Ron Haskins, "Introducing the Issue," *The Future of the Children* 15, no. 2 (2005), pp. 3-12.

<sup>&</sup>lt;sup>53</sup> Bhashkar Mazumder, "Fortunate Sons: New Estimates of Intergenerational Mobility in the United States Using Social Security Earnings Data," *The Review of Economics and Statistics* 87, no. 2 (2005), pp. 235-255; Wojciech Kopczuk, Emmanual Saez, and Jae Song, "Earnings Inequality and Mobility in the United States: Evidence from Social Security Data Since 1937," *The Quarterly Journal of Economics* 125, no. 1 (2010), pp. 91-128; Gary S. Fields, "Does Income Mobility Equalize Longer-Term Incomes? New Measures of an Old Concept"; Isabel V. Sawhill, "Trends in Intergenerational Mobility."

<sup>&</sup>lt;sup>54</sup> Using longitudinal earnings data from the Social Security Administration that go all the way back to 1937, Kopczuk, Saez, and Song estimate trends in inequality and mobility across time. Because these data are of such high quality over such a long period of time (nearly 70 years), this article offers key insights into how inequality and mobility have changed. They find that the inequality trend is U-shaped, declining up to the early 1950s at which point it began to rise steadily. In addition, measures of short-term relative mobility have been pretty stable since the middle of the 20th century. (To measure short-term mobility, they use a Shorrocks index—the ratio of the five-year Gini to the average annual Gini during those five years—and the rank correlation between year t and t+1.) And finally, while overall long-term mobility measures (from early in a worker's career to late in a worker's career) have increased since 1951, these measures have remained stable for men and have actually declined slightly in the past few decades. "The decrease in the gender earnings gap and the resulting substantial increase in upward mobility over a lifetime for women is the driving force behind the increase in long-term mobility among all workers."

health, and labor market success. Here, too, the evidence is somewhat mixed with some scholars (e.g., Duncan et al.) finding significant adverse effects and others (e.g., Mayer) finding few.<sup>55</sup> What I have emphasized in this essay is the need to look more carefully at what it is about higher income parents that makes a difference. Is it just their income and the material resources they can provide to their children or is it attributes that are highly correlated with income, such as parental education and family structure, that make the difference? <sup>56</sup> My guess is that it is primarily the latter.

Cross national evidence reinforces the general view that inequality and social mobility are linked. The nations with the least inequality (e.g. the Nordic countries) also have the most intergenerational mobility. Interestingly, the OECD has come to the conclusion that inequality does interfere with social mobility, and has pointed to these cross-national findings to support their view.<sup>57</sup> Finally, at least one academic study, using cross-national data, has shown that an increase in inequality is associated with lower mobility.<sup>58</sup>

## How Does Volatility Affect the distribution of Lifetime Incomes?

This question has taken on added resonance as the result of the current recession. Imagine that the recession has minimal effects on the current earnings of those whose lifetime earnings are expected to be high but seriously depresses the current earnings of those whose lifetime earnings (before the recession) were expected to be low – if for no other reason than the fact that they are much more likely to be unemployed for a considerable period.<sup>59</sup> Even if the earnings of the second group bounce back strongly to what those earnings would have been in the absence of the recession, they will have lower lifetime earnings (partly offset by unemployed workers now have less experience and

<sup>&</sup>lt;sup>55</sup> Susan E. Mayer, *What Money Can't Buy: Family Income and Children's Life Changes* (Cambridge, MA: Harvard University Press, 1997); Greg J. Duncan, Ariel Kalil, and Kathleen M. Ziol-Guest, "Economic Costs of Early Childhood Poverty," Issue Paper 4 (Washington: Partnership for America's Economic Success, 2008). For further discussion of these findings, see Ron Haskins and Isabel Sawhill, *Creating an Opportunity* Society, p. 82 and the original studies cited therein.

<sup>&</sup>lt;sup>56</sup> See Robert Haveman and Barbara Wolfe, *Succeeding Generations: On the Effects of Investments in Children* (New York: Russell Sage Foundation, 1994), p. 246. Haveman and Wolfe provide some evidence on this issue in their book and find that growing up in poverty, conditional on parental education, is not statistically significant and has very small effects on high school graduation. Conversely, parental education, conditional on poverty status, is significant and has very large effects.

<sup>&</sup>lt;sup>57</sup> Anna Cristina D'Addio, "Intergenerational Mobility: Does It Offset or Reinforce Income Inequality?" in *Growing Unequal? Income Distribution and Poverty in OECD Countries* (OECD, 2008), pp. 203-221. <sup>58</sup> Dan Andrews and Andrew Leigh, "More inequality, less social mobility," *Applied Economics Letters* 16 (2009), pp. 1489-1492. They find that a 10 point rise in the Gini coefficient is associated with a 0.07 to 0.13 increase in the intergenerational earnings correlation between fathers and sons in 16 countries. The higher estimate comes from regressions excluding the Warsaw pact countries.

<sup>&</sup>lt;sup>59</sup> Note that research by Blank and Card shows that increases in unemployment have bigger relative effects on the earnings of lower- than of higher-income households. However, the total income of low-income households is comprised of a much smaller proportion of earned income than higher-income households, since low-income households receive more transfer income. As a result, Blank and Card find that rises in unemployment has only a very small effect on the income distribution. See Rebecca M. Blank and David Card, "Poverty, Income Distribution, and Growth: Are They Still Connected?" *Brookings Papers on Economic Activity*, no. 2 (1993), pp. 285-339.

probably lower levels of skill than if they had been continuously employed. They may also have to adapt to the changing structure of the economy, abandoning hopes of returning to their old jobs and needing to find employment in newly growing sectors that demand a new set of skills or that require moving to a new community with all that implies in terms of uprooting families and selling a home into a difficult market. In all these cases, an earnings shock can have longer-term ramifications that cannot be easily dismissed.

Empirical evidence in favor of this thesis comes from a series of articles that have focused on the longer-term consequences of job loss, often as the result of a mass layoff. In their seminal article, Jacobson, LaLonde, and Sullivan use administrative data from Pennsylvania for the period 1974 to 1986, and find that six years after workers have separated from their firms, they experienced an earnings loss of 25 percent of their expected earnings (without displacement).<sup>60</sup> More recently, von Wachter and his coauthors employed a much broader data set using Social Security records to analyze the effect of job displacement on long-term earnings. They find that workers who were displaced in the early 1980s experienced earnings losses of 20 percent 15 to 20 years after the displacement.<sup>61</sup> These studies are based on job losses associated with mass layoffs. Stevens uses national-level, longitudinal data from the Panel Study of Income Dynamics to examine the effect of almost all involuntary job separations on earnings. She finds that subsequent job losses after the original displacement play an important role in a worker's long-term losses in earnings after displacement. "Average earnings reductions 6 or more years after a job loss are approximately 9%. If the effect of a single displacement is isolated, however, average earnings 6 or more years after a worker's most recent job loss are only 1% below their expected level."62

The pernicious effects of a sluggish economy on a worker's long-term earnings are not restricted to individuals already in the labor force. Kahn uses data from the National Longitudinal Survey of Youth to investigate the impact of economic conditions at the time of college graduation on future earnings and other labor market outcomes. Her sample is comprised of individuals who graduated from college between 1979 and 1989 so that she can estimate the effect of economic conditions on those who graduated during the recession of the early 1980s as well as those who graduated before and after it. She restricts the sample to white males, as "their labor supply decisions are least sensitive to external factors such as childbearing or discrimination." Individuals whose graduations coincide with inferior economic conditions experience "persistent, negative wage effects." These individuals also tend to experience lower occupational attainment and slightly higher educational attainment and job tenure.<sup>63</sup>

<sup>&</sup>lt;sup>60</sup> Louis S. Jacobson, Robert J. LaLonde, Daniel G. Sullivan, "Earnings Losses of Displaced Workers," *The American Economic Review* 83, no. 4 (1993), pp. 685-709.

<sup>&</sup>lt;sup>61</sup> Till von Wachter, Jae Song, and Joyce Manchester, "Long-Term Earnings Losses due to Mass Layoffs During the 1982 Recession: An Analysis Using U.S. Administrative Data from 1974 to 2004," working paper (2009).

paper (2009). <sup>62</sup> Ann Huff Stevens, "Persistent Effects of Job Displacement: The Importance of Multiple Job Losses," *Journal of Labor Economics* 15, no. 1 (1997), pp. 165-188.

<sup>&</sup>lt;sup>63</sup> Lisa B. Kahn, "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy," working paper (Yale School of Management, 2009).

# Conclusions and Implications

I have argued that what matters most from a normative perspective is disparities in lifetime incomes, and that in the U.S. at least the connection between inequality and welfare (or happiness) is attenuated because of our belief in meritocracy. Because mobility rates do not seem to have changed very much (if anything, they have declined) the more widely used measure of inequality based on a cross-section of annual incomes appears to be a reasonably good proxy for assessing trends (although not levels) in these disparities.

But with inequality reaching new highs not seen since the 1920s or earlier, it is worth asking if we are headed for a vicious cycle in which greater inequality tamps down mobility, producing still more inequality in the future. For this reason, it is important to understand how inequality at a point in time may affect mobility over time. I have hypothesized that this relationship may be U-shaped. Up to a certain point more inequality produces more mobility but after some point it has a negative effect and we enter a vicious cycle. I have also argued that the new face of inequality – one that is increasingly characterized by disparities in education and family structure – have implications for children's future prospects and thus for the chances that inequality will persist into the future. That the rungs of the economic ladder are further apart than in the past is beyond dispute. But they may also be harder to climb than in the past and that is even more worrisome.

For those who agree with this view and want to do something about current disparities, I would also argue that a focus on opportunity (that is, mobility) instead of poverty and inequality may make sense for at least two reasons. First, Americans believe that they live in a meritocratic society. Although the facts are only partially consistent with this belief, it is a deeply entrenched view, and public opinion polls and attitudinal surveys show that the public is more willing to support investments in education, health, and other opportunity-enhancing programs than they are to redistribute income via taxes and transfers after the fact. Second, policies that affect parental education and family structure are likely to have larger intergenerational effects than policies that only affect income. At the same time, we should not ignore the need to shore up the economic position of the poor and near-poor as this is both easier to do and likely to have some modest effects as well, especially if whatever assistance is provided is designed to encourage education, work, and stronger families.



**Source**: Julia B. Isaacs, Isabel V. Sawhill, and Ron Haskins, *Getting Ahead or Losing Ground: Economic Mobility in America* (The Brookings Institution and The Pew Economic Mobility Project, 2008), figure 1, p. 37.

**Notes**: Brookings tabulations of data from the 1999 Social Inequality III module of the International Social Survey Program; data collected 1998-2001.

#### FIGURE 2

#### U.S. Gini Coefficient: 1970-2008



**Note**: This figure plots the Gini coefficient at the household level. Source: U.S. Census Bureau, *Historical Income Inequality Tables*, table H-4 (http://www.census.gov/hhes/www/income/histinc/ineqtoc.html).

#### Income Share of the Top 1 Percent: 1913-2007



**Source**: Piketty and Saez, "Income Inequality in the United States, 1913-1998 (Tables and Figures Updated to 2007)," Figure 2 (<u>http://elsa.berkeley.edu/~saez/TabFig2007.xls</u>).

Notes: Income is defined as market income (including capital gains but not government transfers).

#### FIGURE 4





**Source**: Congressional Budget Office, "Changes in the Distribution of Workers' Annual Earnings Between 1979 and 2009" (2009), Figure 8, p. 27. The data are from the Social Security Administration's Continuous Work History Sample.

**Notes**: The sample that CBO used consisted of people ages 25 to 54 with earnings, which included wages and salaries, tips, and other forms of compensation but excluded self-employment income and deferred compensation. Earnings were adjusted for inflation using the price index for personal consumption expenditures.

To examine mobility, CBO arrayed workers ages 25 to 54 by their earnings in the first year of a period and separated them into five equally sized segments (or quintiles). It did the same for workers ages 25 to 54 five years later. Workers who "changed quintiles" were in a different quintile in the later year than in the earlier year.

#### Family Income of Adult Children, by Parents' Family Income



**Source**: Julia B. Isaacs, Isabel V. Sawhill, and Ron Haskins, *Getting Ahead or Losing Ground: Economic Mobility in America* (The Brookings Institution and The Pew Economic Mobility Project, 2008), figure 4, p. 19.

**Notes:** Columns may not add to 100 due to rounding. Family incomes are five-year averages from the Panel Study of Income Dynamics (PSID) for 1967-1971, when parents were 41-years-old on average, and again in 1995-2002 when their adult children were 39-years-old on average.

#### FIGURE 6

#### Intergenerational Earnings Elasticity



**Source**: Anna Cristina D'Addio, "Intergenerational Transmission of Disadvantage: Mobility or Immobility across Generations? A Review of the Evidence for OECD Countries," Working Paper No. 52 (OECD Social, Employment and Migration Working Papers, 2007).

**Notes:** A lower level of earnings elasticity between fathers and sons equates with a higher level of intergenerational mobility.



**Source**: Congressional Budget Office, "Changes in the Distribution of Workers' Annual Earnings Between 1979 and 2009" (2009), Figure 9, p. 28. Earnings data are from the Social Security Administration's Continuous Work History Sample and the data on the timing of recessions are from the National Bureau of Economic Research.

**Notes**: The sample that CBO used consisted of people ages 25 to 54 with earnings, which included wages and salaries, tips, and other forms of compensation but excluded self-employment income and deferred compensation. Earnings were adjusted for inflation using the price index for personal consumption expenditures. The percentage change in earnings is defined here as  $((e_t - e_{t-1})/((e_t + e_{t-1})/2)*100)$ .

#### FIGURE 8

Average Weekly Wage by Educational Attainment: 1965-2008



**Source**: Brookings tabulations of the Current Population Survey, Annual Social and Economic Supplement.

**Notes**: The sample includes noninstitutionalized, civilians ages 25 to 64 who worked at least 13 weeks in the year. Individuals with a weekly wage that is less than 5 times the hourly minimum wage in that year are excluded. Each data point above is the mean weekly wage for these individuals by the level of educational attainment.



## Family Income by Family Composition: 1967-2008

**Source**: Brookings tabulations of the Current Population Survey, Annual Social and Economic Supplement.

**Notes**: The sample includes noninstitutionalized, civilian heads of household ages 16 to 64 with a child under age 18 living in their house and a nonnegative family income (those with zero income are included). Each data point above is the mean family income for heads that are presently married; divorced widowed, or separated; and never married.

Never-Married Mothers by Educational Attainment: 1968-2009



**Source**: Brookings tabulations of the Current Population Survey, Annual Social and Economic Supplement.

**Notes**: The sample includes noninstitutionalized, civilian women ages 16 to 64 with a child under age 18 living in their house. Never-married mothers are those who have never been married. Mothers who are not currently married are those who are never-married, divorced, widowed, or separated.

## References

Gregory Acs, Pamela Loprest, and Austin Nichols, "Risk and Recovery: Understanding Changing Risks to Family Incomes," Paper 14 (Low-Income Working Families, Urban Institute, 2009).

Alberto Alesina and George-Marios Angeletos, "Fairness and Redistribution," *The American Economic Review* 95, no. 4 (2005), pp. 960-980.

Alberto Alesina, Rafael Di Tella, and Robert MacCulloch, "Inequality and happiness: are Europeans and Americans different?" *Journal of Public Economics* 88 (2004), pp. 2009-2042.

Alberto Alesina and Eliana La Ferrara, "Preferences for redistribution in the land of opportunities," *Journal of Public Economics* 89 (2005), pp. 897-931.

Dan Andrews and Andrew Leigh, "More inequality, less social mobility," *Applied Economics Letters* 16 (2009), pp. 1489-1492.

Kenneth J. Arrow, "An Extension of the Basic Theorems of Classical Welfare Economics," *Proceedings of the Second Berkeley Symposium on Mathematical Statistics and Probability* (1951): pp. 507-532.

Gadi Barlevy and Daniel Tsiddon, "Earnings inequality and the business cycle," *European Economic Review* 50, no. 1 (2006), pp. 55-89.

Rebecca M. Blank and David Card, "Poverty, Income Distribution, and Growth: Are They Still Connected?" *Brookings Papers on Economic Activity*, no. 2 (1993), pp. 285-339.

Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves, "Introduction," in *Unequal Chances: Family Background and Economic Success*, edited by Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves (Princeton: Princeton University Press, 2005), pp. 1-22.

Richard V. Burkhauser et al., "Recent Trends in Top Income Shares in the USA: Reconciling Estimates from March CPS and IRS Tax Return Data," Working Paper 15320 (National Bureau of Economic Research, 2009).

Richard V. Burkhauser and Kosali I. Simon, "Measuring the Impact of Health Insurance on Levels and Trends in Inequality," Working Paper 15811 (National Bureau of Economic Research, 2010)

Gary Burtless, "Globalization and Income Polarization in Rich Countries," Issues in Economic Policy 5 (Brookings, 2007).

Gary Burtless and Christopher Jencks, "American Inequality and Its Consequences," in *Agenda for the Nation*, edited by Henry J. Aaron, James M. Lindsay, and Pietro S. Nivola (Washington: Brookings, 2003), pp. 61-108.

Gary Burtless and Pavel Svaton, "Health Care, Health Insurance, and the Distribution of American Incomes," *Forum for Health Economics & Policy* 13, no. 1 (2010).

Colin Camerer and Richard H. Thaler, "Ultimatums, Dictators and Manners," *The Journal of Economic Perspectives* 9, no. 2 (1995), pp. 209-219.

Congressional Budget Office, "Changes in the Distribution of Workers' Annual Earnings Between 1979 and 2009" (2009).

Congressional Budget Office, "Historical Effective Federal Tax Rates: 1979 to 2005" (2007).

Congressional Budget Office, "Trends in Earnings Variability Over the Past 20 Years" (2007).

Anna Cristina D'Addio, "Intergenerational Mobility: Does It Offset or Reinforce Income Inequality?" in *Growing Unequal? Income Distribution and Poverty in OECD Countries* (OECD, 2008), pp. 203-221.

Anna Cristina D'Addio, "Intergenerational Transmission of Disadvantage: Mobility or Immobility across Generations? A Review of the Evidence for OECD Countries," Working Paper No. 52 (OECD Social, Employment and Migration Working Papers, 2007).

Gerard Debreu, *Theory of Value: An Axiomatic Analysis of Economic Equilibrium* (New Haven: Yale University Press, 1959).

Greg J. Duncan, Ariel Kalil, and Kathleen M. Ziol-Guest, "Economic Costs of Early Childhood Poverty," Issue Paper 4 (Washington: Partnership for America's Economic Success, 2008).

Dynan, Karen, "The Income Roller Coaster: Rising Income Volatility and Its Implications," *Pathways* (Spring 2010), pp. 3-6.

Karen E. Dynan, Douglas W. Elmendorf, and Daniel E. Sichel, "The Evolution of Household Income Volatility," (Brookings Institution and Federal Reserve Board, 2008).

Daniel T. Ellwood and Christopher Jencks, "The Spread of Single-Parent Families in the United States Since 1960," in *The Future of the Family*, edited by Daniel P. Moynihan, Timothy M. Smeeding, and Lee Rainwater (New York: Russell Sage Foundation, 2004), pp. 25-65.

Eurostat, "Inequality of income distribution: Gini coefficient" (http://nui.epp.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\_sic2&lang=en).

Ernst Fehr and Urs Fischbacher, "The Nature of Human Altruism," *Nature* 425 (2003), pp.785-791.

Gary S. Fields, "Does Income Mobility Equalize Longer-Term Incomes? New Measures of an Old Concept," working paper (Cornell University, ILR Collection, 2008).

Benjamin M. Friedman, *The Moral Consequences of Economic Growth* (New York: Alfred A. Knopf, 2005).

Claudia Goldin and Lawrence F. Katz, *The Race between Education and Technology* (Cambridge, MA: Harvard University Press, 2008).

Peter Gosselin, *High Wire: The Precarious Financial Lives of American Families* (New York: Basic Books, 2008).

Peter Gottschalk and Robert Moffitt, "The Rising Instability of U.S. Earnings," *Journal of Economic Perspectives* 23, no. 4 (2009), pp. 3-24.

Jacob Hacker, The Great Risk Shift (New York: Oxford University Press, 2008).

Jacob Hacker and Elisabeth Jacobs, "The Rising Instability of American Family Incomes, 1969-2004: Evidence from the Panel Study of Income Dynamics," Briefing Paper #213 (Economic Policy Institute, 2008).

David J. Harding et al., "The Changing Effect of Family Background on the Incomes of American Adults," in *Unequal Chances: Family Background and Economic Success*, edited by Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves (Princeton: Princeton University Press, 2005), pp. 100-144.

Ron Haskins and Isabel Sawhill, *Creating an Opportunity Society* (Washington: Brookings Institution Press, 2009).

Robert Haveman, "What Does It Mean to Be Poor in a Rich Society?" in *Changing Poverty, Changing Policies*, edited by Maria Cancian and Sheldon Danziger (New York: Russell Sage Foundation, 2009), *pp.* 384-408.

Robert Haveman and Barbara Wolfe, *Succeeding Generations: On the Effects of Investments in Children* (New York: Russell Sage Foundation, 1994).

Tom Hertz, "Understanding Mobility in America" (Center for American Progress, 2006).

Julia B. Isaacs, Isabel V. Sawhill, and Ron Haskins, *Getting Ahead or Losing Ground: Economic Mobility in America* (The Brookings Institution and The Pew Economic Mobility Project, 2008).

Louis S. Jacobson, Robert J. LaLonde, Daniel G. Sullivan, "Earnings Losses of Displaced Workers," *The American Economic Review* 83, no. 4 (1993), pp. 685-709.

Christopher Jencks and Laura Tach, "Would Equal Opportunity Mean More Mobility?" in *Mobility and Inequality: Frontiers of Research in Sociology and Economics*, edited by Stephen L. Morgan, David B. Grusky, and Gary S. Fields (Stanford: Stanford University Press, 2006), pp. 23-58.

Lisa B. Kahn, "The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy," working paper (Yale School of Management, 2009).

Wojciech Kopczuk, Emmanual Saez, and Jae Song, "Earnings Inequality and Mobility in the United States: Evidence from Social Security Data Since 1937," *The Quarterly Journal of Economics* 125, no. 1 (2010), pp. 91-128.

Simon Kuznets, "Economic Growth and Income Inequality," *The American Economic Review* 45, no. 1 (1955), pp. 1-28.

David Leonhardt, "In Health Bill, Obama Attacks Wealth Inequality," *The New York Times*, March 24, 2010, p. A1.

John C. Loehlin, "Resemblance in Personality and Attitudes between Parents and Their Children: Genetic and Environmental Contributions," in *Unequal Chances: Family Background and Economic Success*, edited by Samuel Bowles, Herbert Gintis, and Melissa Osborne Groves (Princeton: Princeton University Press, 2005), pp. 192-207.

Susan E. Mayer, *What Money Can't Buy: Family Income and Children's Life Changes* (Cambridge, MA: Harvard University Press, 1997)

Bhashkar Mazumder, "Fortunate Sons: New Estimates of Intergenerational Mobility in the United States Using Social Security Earnings Data," *The Review of Economics and Statistics* 87, no. 2 (2005), pp. 235-255.

Sarah McLanahan, Elisabeth Donahue, and Ron Haskins, "Introducing the Issue," *The Future of the Children* 15, no. 2 (2005), pp. 3-12.

Daniel P. McMurrer and Isabel V. Sawhill, *Getting Ahead: Economic and Social Mobility in America* (Washington: Urban Institute Press, 1998).

National Public Radio, Kaiser Family Foundation, and Harvard University Kennedy School, "Poverty in America," (2001; <u>http://npr.org/programs/specials/poll/poverty/summary.html</u>).

Austin Nichols, "Trends in Income Inequality, Volatility, and Mobility Risk," (Urban Institute, 2008).

Austin Nichols and Seth Zimmerman, "Measuring Trends in Income Variability," (Urban Institute, 2008).

Pew Research Center for the People and the Press, "Trends in Political Values and Core Attitudes: 1987-2007" (Washington: 2007).

Thomas Piketty and Emmanuel Saez, "Income Inequality in the United States, 1913-1998," *The Quarterly Journal of Economics* 118, no. 1 (2003), pp. 1-39.

Thomas Piketty and Emmanuel Saez, "How Progressive is the U.S. Federal Tax System? A Historical and International Perspective," *Journal of Economic Perspectives* 21, no. 1 (2007), pp. 3-24.

Matthew Rabin, "Incorporating Fairness into Game Theory and Economics," *The American Economic Review* 83, no. 5 (1993), pp. 1281-1302.

John Rawls, A Theory of Justice (Cambridge, MA: Harvard University Press, 1971).

Emmanuel Saez, "Striking it Richer: The Evolution of Top Incomes in the United States (Update with 2007 estimates)," (<u>http://elsa.berkeley.edu/~saez/saez-UStopincomes-</u>2007.pdf, 2009).

Isabel V. Sawhill, "Trends in Intergenerational Mobility," in *Getting Ahead or Losing Ground: Economic Mobility in America*, edited by Julia B. Isaacs, Isabel V. Sawhill, and Ron Haskins (The Brookings Institution and The Pew Economic Mobility Project, 2008), pp. 27-35.

Isabel Sawhill, Adam Thomas, and Emily Monea, "An Ounce of Prevention...Policy Presciptions for Reducing the Prevalence of Fragile Families," *The Future of Children* (forthcoming).

Amartya Sen, Inequality Reexamined, (New York: Russell Sage Foundation, 1992).

A. F. Shorrocks, "The Measurement of Mobility," *Econometrica* 46, no. 5 (1978), pp. 1013-1024.

Ann Huff Stevens, "Persistent Effects of Job Displacement: The Importance of Multiple Job Losses," *Journal of Labor Economics* 15, no. 1 (1997), pp. 165-188.

Adam Thomas and Isabel Sawhill, "For Richer or for Poorer: Marriage as an Antipoverty Strategy," *Journal of Policy Analysis and Management* 21, no. 4 (2002).

Amos Tversky and Daniel Kahneman, "Loss Aversion in Riskless Choice: A Reference-Dependent Model," *The Quarterly Journal of Economics* 106, no. 4 (1991), pp. 1039-1061.

U.S. Census Bureau, *Historical Income Inequality Tables*, table H-4 (<u>http://www.census.gov/hhes/www/income/histinc/ineqtoc.html</u>).

Till von Wachter, Jae Song, and Joyce Manchester, "Long-Term Earnings Losses due to Mass Layoffs During the 1982 Recession: An Analysis Using U.S. Administrative Data from 1974 to 2004," working paper (2009).

Richard G. Wilkinson and Kate E. Pickett, "Income inequality and population health: A review and explanation of the evidence," *Social Science & Medicine* 62, no. 7 (2006), pp. 1768-1784.