

# INEQUALITY BY DESIGN: Myths, Data, and Politics\*

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The gap between rich and poor Americans is wider now than at any point in the last fifty years.<sup>1</sup> The cold, statistical facts of the matter are not in dispute, but partisans and social scientists alike debate what these numbers mean. One prominent view dismisses inequality as inevitable and beyond the reach of regulation, at least in open societies. Another view – just as fatalistic in its own way – accepts inequality as a reflection of Americans’ unequal talents. Others decry inequality but accept it as the necessary pain that leads to economic gain. A variant of the pain/gain point of view links inequality to falling wages and lost productivity. Even among those who think that narrowing the gap between rich and poor might be a good idea, there is concern that reducing inequality will require prohibitively expensive federal programs.

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All of these views are based on myths about the causes of inequality and the tools we have to fight it. Our goal is to debunk each of these five myths. Neither the current level of inequality nor its rapid rise are inevitable. While the economy rewards talent, fluctuations in the rate of return on “human capital” reflect society’s values, not nature’s laws. Inequality is not necessary for economic growth; it may even hold back the economy. Nor can we blame productivity problems for the “uneven tides” that have boosted some workers and shoved others down.<sup>2</sup> Finally, progressives who want to reduce inequality ought to look beyond federal programs and pursue institutional reforms.

Our analysis indicates that inequality is rising because the United States has replaced the institutions that once linked Americans’ economic fortunes together with new ones that reward divisive behavior.<sup>3</sup> The politics of the 1970s and 1980s wrought changes in schools, colleges, and workplaces that gave employers and managers unprecedented power while disenfranchising parents, workers, and others who used to share power. It follows then, that the remedy to America’s inequality problem lies in the classrooms, boardrooms, and workplaces of the United States – not in Washington. The good news is that institutional reforms could reverse the inequality trend without increasing the tax burden.

### **The inequality numbers**

The richest one million households in the United States made an average of \$412,000 in 1994 while the poorest one million households had to get by on less than \$3,000 according to the U.S. Census Bureau’s March 1995 Current Population Survey (the most recent data available).<sup>4</sup> The richest one million American households hold – on average – \$140 for every dollar in the pockets of the poorest one million households. The rest of the U.S. income distribution echoes this level of inequality. The 9 million households closest to the very rich averaged incomes of \$143,000 for 1994 – roughly one third the \$412,000 income of the very rich; the 9 million households with incomes closest to the poorest Americans averaged \$4,650 income for 1994 – about 59 percent more than the \$2,930 income of the very poor.

A household at the middle of the US income distribution made \$31,272 in 1994. That is ten times the incomes of the poorest 10 percent and one-sixth the incomes of the richest 10 percent. Figure 1 shows the whole distribution. Each bar represents a segment of the U.S. population; the height of its bar is proportional to its income in 1994. These bars show how much money separates the rich and poor in American society. Superimposed on the chart is a

circle that represents the total income of all U.S. households in 1994. The wedges show the share of that total that went to the top 10 percent, the next 10 percent (the 81st through 90th percentiles), the middle 60 percent (the 21st through 80th percentiles), and the bottom 20 percent. The top 20 percent of U.S. households took in slightly over half of the income (51 percent). The poorest 20 percent – most of whom fell below the poverty line<sup>5</sup> – got just 3 percent of the total.

(Figure 1 about here)

The poor are getting by on next to nothing while the rich are far more than merely “comfortable.” The a person in the poorest million households, a \$5 meal at a fast food restaurant is the same share of his minuscule income as a \$725 weekend at a resort is for someone from one of the million richest households. A \$45 pass for a month of riding the city bus is the same share of that very poor person’s income as the \$6,300 monthly maintenance on a private jet would be for a rich person.

### **Myth #1: Inequality is inevitable.**

Every society has its rich and poor. In this absolute sense there is some truth to the assertion that some inequality is inevitable. But inequality is also a matter of degree; it is not just an absolute. There can be more or less inequality. Right now the United States has more; the gap between the richest and poorest Americans is wider than at any point since the Great Depression and New Deal deflated the inequalities of 1920s. In 1974 – the year of least inequality in U.S. history – the top 10 percent of households had incomes 31 times those of the poorest tenth and 4 times those of the median income household. By 1994 those ratios had grown to 55 times the poorest and 6 times the middle.

Not only is inequality growing; its growth is accelerating. Department of Labor economist Paul Ryscavage (1995) reported a “surge” in inequality between 1991 and 1993 as the most recent recession lowered incomes for all but the richest Americans. If incomes in the United States were significantly more equal just 20 years ago than they are today, then the inequality we have now can hardly be inevitable.

Inequality of income in the United States is also greater than the inequality of income in any other populous industrialized country. Figure 2 (from Smeeding and Gottschalk 1996) ranks countries from least unequal to most unequal according to total inequality (the longer

the bar, the greater the inequality). The United States is at the bottom among “established market economies” showing that it is the most unequal. U.S. inequality stands out slightly on the right side (rivaled by Ireland) because the gap between the rich and the middle is slightly higher in the United States than anywhere but Ireland. On the other side, the gap between the middle and the poorest is far greater in the United States than elsewhere. These comparisons are not distorted by the higher income of the average American household; the average American household makes about the same income as the average household in France, Germany, the Netherlands, Italy, or the United Kingdom. Nor can the comparison be faulted for failing to account for public amenities which Americans enjoy but Europeans have to pay for because it is the Europeans who enjoy more public amenities than Americans. If other populous industrial nations have so much less inequality than we find in the United States, then U.S. inequality can hardly be inevitable.<sup>6</sup>

(Figure 2 about here)

### **Myth #2: Inequality reflects differences in intelligence.**

In the controversial book *The Bell Curve*, the late Richard Herrnstein and Charles Murray (1994) made news with their claim that U.S. inequality is on the rise because “a new class structure emerged in which it became more consistently and universally advantageous to be smart” (p. 27). While the first round of critiques excoriated their book for its racist overtones and lack of scientific peer review, few critics actually challenged their evidence. Now we know that they are wrong there, too. My colleagues and I reanalyzed their data and discovered that Herrnstein and Murray made several critical errors in their analysis. Correcting their errors reverses their conclusions.

We report the details of their errors and our corrections in *Inequality by Design*, but our conclusions are:

- Herrnstein and Murray use the Armed Forces Qualifying Test (AFQT) as the measure of IQ. The AFQT assesses an array of cognitive skills that is much broader than what they mean by “intelligence.” To the extent to which they define intelligence at all, they consider it to be a general capacity for learning, distinct from particular knowledge of facts or formulas. The AFQT contains vocabulary words and advanced mathematics questions. To know the correct answer young persons would not only

have to be “smart,” they would also have to take the kinds of courses that some high schools offer and others do not. Thus, even when test scores correlate with important outcomes, the interpretation is ambiguous. The correlations show that cognitive skills matter but do not necessarily show that it is intelligence that makes the difference. The results are more consistent with the proposition that students cannot learn material that they are not taught. It is a lack of knowledge, not a lack of intelligence, that gets them into trouble.

- Herrnstein and Murray’s measure of socioeconomic background systematically understates the effect of this important variable on poverty and out-of-wedlock childbearing. The index combines young peoples’ reports of their parents’ educations, jobs, and incomes. Income is more important for poverty while parents’ educations are more important for high school dropout. By treating these separate elements of background equally in all analyses, Herrnstein and Murray always get statistical estimates that are too low. Compounding this problem of combining elements, many young people reported only some of the information. Herrnstein and Murray assume that the ones with missing data are average young people. From their answers to other questions it is clear that they are not. Treating them as “average” further biases the statistical results – always in the direction of low estimates. Correcting the errors reveals that socioeconomic background – especially parents’ income – is as important as cognitive skills in who gets ahead and who ends up poor. Our corrections also revise the estimates of how income affects nonmarital fertility upward. The effect of cognitive skills on nonmarital fertility is so weak that a poor young woman would have to raise her test score 55 points (on the 105-question test) to counteract the effect of her poverty.<sup>7</sup>
- Herrnstein and Murray exaggerate the importance of intelligence by excluding education from the analysis. Education – simple years of schooling – affects wages, poverty, nonmarital fertility, and being incarcerated directly as well as through its effect on cognitive skills. Leaving education out of the analysis and ascribing its indirect effects to immutable intelligence misstates the causes of important social problems and deflects attention away from potential solutions.
- Herrnstein and Murray are wrong when they say that it is better to be born smart than to be born rich. Regrettably, having rich parents is as much an advantage as being

“smart.” Other environmental influences – growing up in a safe community and attending well-endowed schools – help, too.<sup>8</sup>

- Herrnstein and Murray ignore the role of gender in poverty. Young women and their children are the majority of the poor in the United States in the 1990s. Only by ignoring that fact can Herrnstein and Murray make their argument that intelligence is the main factor in social problems seem credible. The effects of all cognitive skills combined pale in comparison to the effect of gender. Our estimates show that a young woman would have to score 41 points (out of 105) higher on the AFQT than her *brother* in order to reduce her risk of poverty down to his risk.

Cognitive skills and educational credentials are both important for earnings and poverty; make no mistake about that. College graduates’ earnings have risen in the past ten years while high school dropouts’ earnings have fallen. Among college graduates, the earnings of the ones with advanced degrees have risen faster than those with B.A. degrees. Controlling for years of schooling completed, test scores affect wages and poverty. But *The Bell Curve* made two key claims. It said that social class no longer shapes Americans’ life chances, and that the talents reflected in test scores and educational credentials are largely bred not taught. Both of these claims are wrong. As the evidence in *Inequality by Design* shows, growing up poor reduces the chances young people might have of escaping poverty regardless of how well or poorly they score on achievement tests. It is also true that schools routinely teach the cognitive skills that the tests measure. The problem is that some schools do better than others. The tendency for the schools that serve poor children and African American children to provide less education than the schools that serve well-off students compounds the problem. These well-known tendencies show up in *The Bell Curve* by way of the AFQT because that is the only place that Herrnstein and Murray look. They read the evidence their way, dismissing the alternatives with rhetoric, not statistics. The research record shows clearly that to the extent that AFQT affects important outcomes in the lives of young people at all, it does so by capturing aspects of their educational experience that a simple measure like years of schooling misses.

### **Myth #3: Inequality is necessary to promote economic growth.**

Some commentators straightforwardly defend our current level of inequality. A congressional report in 1995 conceded that the recent trends toward inequality were real, but argued (as

quoted in the *New York Times* on 4 August 1995), “All societies have unequal wealth and income dispersion, and there is no positive basis for criticizing any degree of market-determined inequality.” Disparities in income and wealth, some argue, encourage hard work and saving. The rich, in particular, can invest their capital in production and thus create jobs for all. This was the argument of “supply-side” economics in the 1980s, that rewarding the wealthy – for example, by reducing income taxes on returns from their investments – would stimulate growth to the benefit of all. George Will, for example, wrote in his column on 24 April 1995: “the problem of increasing inequalities of wealth is not a problem we will pay just any price to remedy, and may not be a problem at all... [I]ncreasingly unequal social rewards can conduce to a more truly egalitarian society....” The 1980s did not work out that way. The rich gained, but little trickled down to the middle class. The poor lost out completely; they are worse off now than before. Experience notwithstanding, the theory is still influential. Forcing more equal outcomes would, these analysts say, reduce living standards for all Americans, not just the rich.

Does inequality lead to growth? Our review of the latest economic research in *Inequality by Design* concludes that it does *not*. Some studies even suggest that inequality may retard economic growth. Historically, societies that had more inequality of earnings tended to have *lower*, not higher, subsequent economic growth (Alesina and Perotti 1994; Alesina and Rodrik 1994; Persson and Tabellini 1994; Birdsall, Ross, and Sabot, 1995). That fits more casual observations as well. In the United States, the era of greatest recent growth – 1955-74 – was also an era of greater equalization. As Edward N. Wolff wrote in *The American Prospect* (1995, p. 64): “Analyses of historical data on the U.S. as well as comparative international studies confirm a positive association between equality and growth.”

Inequality may actually be impeding growth right now. Classical markets reward investors in a pattern that is, in the long term, proportional to the investment itself. “Winner-take-all” markets provide huge rewards to the top few and none to others. According to Robert Frank and Phillip Cook (1995), winner-take-all markets are proliferating in the United States. These kinds of markets are harmful because investors go after the possibility of huge reward, ignoring the absence of any pay-off to even those who finish second. “[T]his pay-off structure had led too many people to abandon productive alternatives” (p. 101). Worse yet, it encourages overinvestment in non-productive activities and draws money away from investments that have more growth potential for society as a whole. “The difficulty is that

whereas from society's point of view we want investments to be driven by their effect on the value of the final product, the primary concern from each contestant's point of view is their effect on who will be the winner" (p. 128).

Frank and Cook cite many examples in education and athletics, but their most telling example comes from capital markets. Firms that buy and sell large blocks of stock net huge gains by making transactions a few days or even hours ahead of the other big traders. Dumping an "overpriced" stock while it is still overpriced or buying many shares of a bargain stock before the price rises can pay-off in millions of dollars. For that reason all big traders invest in analysts and technologies that allow them to make accurate and timely forecasts. Since their payoff comes less from the absolute accuracy of the forecasts (they really only have to know if the price will go up or down) than from having the same forecast everybody else does *before* anybody else does, billions of dollars are invested in generating forecasts. "But relatively little is lost, from society's perspective, by small delays in timing, or marginal declines in accuracy, of earnings forecasts. Society's scarce capital resources would still be allocated to the right companies if all current forecasts were delayed a few days" (p. 139). The point is not that some investors reap big rewards and others virtually none but that all investors divert funds from productive activities to activities that simply maintain their position *viz a viz* their competition. Since only the wealthiest investors can play on this field, it is an important example of how the concentration of wealth retards long-term growth.

Close examination of detailed policies also suggest that greater equality helps, or at least does not harm, productivity. Rebecca Blank examined the effects on economic flexibility (that is, the ability to shift resources to more productive uses) of several redistributive policies used by Western nations – job-security laws, home-owner subsidies, health plans, public child-care, and so on. She found that such programs did not inhibit the functioning of firms in those economies (Blank 1994). Indeed, in their study of over one hundred U.S. businesses Cowherd and Levine (1993) found that firms that have a smaller wage gap between managers and workers have higher product quality.

A related concern for Americans is whether "leveling" stifles the drive to get ahead. Americans prefer to encourage Horatio-Alger striving and to provide opportunities for everyone. Lincoln once said, "that some would be rich shows that others may become rich." Twenty years of data from the General Social Surveys show that many if not most Americans believe that inequality is needed to encourage people to work hard (Davis and Smith 1995).

The 1992 General Social Survey also shows that Americans are comfortable with CEOs making five or six times as much as regular workers; they now make 200 times as much.

Neither the economic studies nor the public opinion data support the idea that the United States needs as much inequality as there is today. In fact, the assumption that considerable inequality is needed for, or even encourages, economic growth appears to be false. Americans do not need to choose between more affluence and more equality. Growth and more equality are compatible.

**Myth # 4: Workers are not as productive as they were when wages were increasing.**

The 1996 *Economic Report of the President* says, “The stagnation of wages over the past two decades, particularly for the lower part of the income distribution, is cause for concern. Ultimately, however, the only way in the long run to raise real wages is to raise productivity.” Before blaming the workers for digging their own economic hole, it is a good idea to confirm that productivity is as stagnant as wages. The Bureau of Labor Statistics keeps data on output per hour worked in manufacturing and services and “multifactor productivity” that combines labor and capital input units. Their time series go back to 1949.

The productivity news may surprise you. American manufacturing workers have broken productivity records every year from 1984 to 1994. Nor is the rate of productivity growth slowing down. The five years from 1984 to 1989 and the two years from 1992 to 1994 are the periods of fastest productivity growth in manufacturing in the whole series. They are also years of above-average productivity growth in services. Figure 3 shows multifactor productivity since 1949 (indexed so that 1974 = 100) for both manufacturing and services.

(Figure 3 about here)

Comparing the trend in productivity to the trend of wages in manufacturing and services reveals 1974 to be a watershed year for U.S. workers in both sectors of the economy. Between 1949 and 1974, increases in productivity were rewarded by increases in wages. Since 1974, productivity increased 68 percent in manufacturing and 50 percent in services while wages stagnated. The gains in productivity fueled executive compensation, the stock market, and corporate profits. But not wages. The CEOs of Fortune 500 firms have raised their own pay 600 percent while holding down wages for workers. The Dow Jones industrial

average climbs to record heights practically every week; it is up over 250 percent since 1974. Corporate profits as a share of GDP took a big hit in the late 1970s falling from 8 percent in 1974 to 4 percent in 1982, but have rebounded since – 8.4 percent in 1995 (*Economic Report of the President*, 1996). The American pie is growing. Capital is getting a bigger slice, but workers are not.

Productivity aggregated across the whole economy is not up as much as productivity in manufacturing and services taken separately. That is the result of a profound restructuring that has been going on since the late 1960s. For twenty-five years now more new jobs are in services. Productivity has always been lower in services and improvement has been slower. For that reason the growth of service-sector employment depresses overall productivity. Even from that perspective – and it is less accurate than the more detailed focus on each sector separately – productivity grew in the 1980s and early 1990s, but overall real wages did not (*Economic Report of the President*, 1996, p. 61).

Wages stagnate in the United States because management has broken the historic link between productivity and wages. Workers no longer get a stake in their own growing productivity.

Despite the clear evidence to the contrary, prominent recent discussions, such as the one in the *Economic Report of the President*, 1996 and another in the *New York Times* in May 1996, continue to lay the blame for stagnant wages on workers' lack of productivity. The President makes the argument that wages have stagnated because there is little left for workers once other costs have been deducted. The key to that argument is an adjustment known as the "real product wage." The real product wage adjusts the wage series for changes in producer prices (the prices producers get for their goods, i.e., wholesale prices). Producer prices rose much more slowly than consumer prices between 1981 and 1986 (actually falling between 1985 and 1986) and again in 1990, 1991 and 1992. Producer prices rose faster than consumer prices between 1974 and 1976 and between 1987 and 1988. Deflating wages for producer prices instead of consumer prices makes a smaller adjustment to the nominal wage series. As a result, the real product wage series tracks productivity just as well since 1979 as before 1974.

Two objections to replacing real wages adjusted for consumer prices with real product wages come to mind. First, the issue at hand is standard of living. Workers spend their wages on consumer goods at consumer prices; very few can "get it wholesale." The real wage series

as adjusted for changes in consumer prices is for that reason a better index of standard of living than the real product wage series is. Second, the productivity series is adjusted for changes in consumer prices; adjusting it for changes in producer prices would cancel out the impact of the real product wage adjustment.

The other argument for ignoring the evidence that management has broken the link between productivity and wages focuses on the difference between productivity in manufacturing and services. The argument, known as the “restructuring argument,” is that pay within sectors still follows the productivity of the sectors, but the restructured American economy has shifted workers out of high-productivity manufacturing jobs and into low-productivity service jobs. If restructuring was the correct explanation, then the tie between productivity and wage might appear broken when we look at all industries at once, but it should still be intact within sectors. As Figure 3 showed, it has not stayed together within sectors either. The wages of the manufacturing workers are nearly as flat as all other workers’ while their productivity breaks records. Even when some workers migrate from manufacturing to services, the workers left behind in manufacturing should see their wages rise in response to the increasing productivity. They do not. There is more to the story than restructuring can account for.

Real wealth is being produced. Workers are playing an important role in producing it, but they are not being rewarded for their contribution. Inequality is increasing because capital and management used to have to share the wealth with workers but are no longer required to give labor a cut.

#### **Myth #5: Reducing inequality will require huge federal programs.**

Does the federal government have to tax and spend to bring down inequality? The United States used to spend more on social programs than it has recently; other countries currently spend more and have less inequality. The research record shows that many programs can effectively reduce inequality. But it also reveals that many practices promote equality without involving social programs.

As an illustration, let us look at the poverty rates of children in populous industrial democracies (the dark bars in Figure 4). America’s children look deprived in this comparison. At 22 percent the child poverty rate in the United States far exceeds that of other

well-off nations. Australia and Canada are next in line behind the United States, but child poverty in these two countries is almost one-third less than it is in the United States.

(Figure 4 about here)

Do the Europeans, Canadians, and Australians keep children out of poverty by transferring a lot of money to families with children? Some of the countries do; some don't. To see how it works, we compare the actual childhood poverty rates with what they would be if there were no taxes and no welfare in any of these countries (gray bars). Childhood poverty would be substantially higher in France and the United Kingdom, but not so much in Germany and Italy. That is because France and the United Kingdom would have a level of inequality exceeding that in the United States if they did not redistribute income. Germany and Italy have much lower inequality to begin with – and consequently, less need to redistribute. They do not have to correct for inequality in their income distributions with expensive welfare programs. They just have less inequality from the start.

Reining in run-away inequality is not easy, but the European experience shows how institutional reforms hold down inequality without requiring the government to spend large sums of money. Italy and Germany keep inequality in check through wage policies that affect the distribution of income before it is actually distributed. First of all, they boost the lower end of the income distribution with a mandated minimum wage high enough to guarantee that the children of full-time workers will not be poor. By way of contrast, the proportion of 25-34 year old men in the United States who work full-time but do not escape poverty has almost tripled since 1975; it was 5 percent then it is 14 percent in 1994 (*Inequality by Design*, p. 112). The new minimum wage of \$5.15 that will help some two-earner families, but by itself it is not high enough to raise a full-time worker's children above the poverty line.<sup>9</sup>

Many European countries also use national wage agreements to control inequality. In countries like Austria and Norway, national employer associations, made up of employers in different industries, bargain with representatives of all the national unions to determine wage levels for workers in each sector of the economy. In other countries, notably Germany and Italy, bargaining goes on between unions and employers' associations in each industry or region; the government then routinely extends the terms of these collective agreements to non-union workers and firms.

In the United States, workers' wages are negotiated either by an individual employee with his or her employer or by a local union with a specific employer. In many jobs, the

employer simply offers the job at a preset wage; little or no negotiation is involved. This extremely decentralized system results in wide disparities in the wages of workers doing the same job at different locations. Comparisons by Freeman and Katz (1994b) show that the distribution of wages for workers of the same age, education, occupation, and gender is much wider in the United States than in countries with more centralized wage-setting systems.

Thus inequality determines the cost of fighting poverty. Two nations with the same standard of living but very different degrees of inequality would have different poverty rates. Likewise an increase in inequality raises a nation's poverty rate; a decrease in inequality lowers poverty. Danziger and Gottschalk (1995, p. 107) estimate that the falling inequality contributed 5.5 percentage points to the reduction of poverty in the United States from 1949 to 1969 and rising inequality added 2.0 percentage points to the poverty rate since 1973.

It follows that more inequality means paying more to fight poverty. That is what we see when we compare France or the United Kingdom with Italy or Germany; we see it, too, when we compare the United States in the 1970s with the United States in the 1990s. Even in the 1970s the United States had more inequality than any of these European nations, and never got the poverty rate down as low as the Europeans did. With inequality so high in the 1990s, the overall poverty rate of 15 percent (and 22 percent among children), approaching the level of economic justice found throughout Europe would be prohibitively expensive. Conversely, bringing inequality to the level of that in Italy or Germany would dramatically reduce the cost of fighting poverty.

### **Workers' Bottom Line**

Productivity goes up, profits go up, stocks go up, executive compensation goes up. Wages stagnate. Workers have been left out of one of the biggest booms in American history. Their political disaffection shows that they are not patiently waiting for "trickle down" to start, either.

Wage policy can correct this injustice and reverse the tide of inequality. The bad news is that it will be politically difficult to reverse twenty years of wage suppression. The good news is that a wage policy does not cost taxpayers much. The National Labor Relations Board (NLRB) barely registers as an item in the federal budget. It affects inequality directly

without passing the money through the tax-and-spend mill. The United States can reverse the trend toward greater inequality without raising taxes or federal spending by:

raising the minimum wage high enough to lift a work-time worker's family out of poverty,

expanding the earned income tax credit,

empowering workers to bargain collectively for their share of the wealth that flows from rising productivity, and

broadening the scope of labor-management relations,

Unions can play a vital role in these programs. But American unions are in decline. So much so that Card and Freeman (1994) estimate that at least one-fifth of the growth in males' wage inequality during the 1980s can be attributed to the decline of unions since the mid-1970s. In the United States in the 1980s there were simply too few unions and union members to offset the other pressures that were increasing inequality. Between 1970 and 1990, the proportion of the labor force belonging to unions dropped 45 percent to only 11 percent of the private sector, virtually the lowest unionization rate in the industrialized world. Many factors have contributed to the demise of the American unions, not the least of which were lax enforcement of the existing laws by the Reagan and Bush administrations and the union-busting example set by President Reagan's executive order to fire striking air traffic controllers in 1982.

Inequality rises as unions decline. Unions are effective in lowering inequality because they make management accountable to workers. Without unions, management must answer only to stockholders. In figure 3 we saw how the historic link between productivity gains and wage increases was broken in the 1980s and 1990s. Productivity set records while wages rose very slowly, if at all. Executives and stockholders captured the wealth that growing productivity created. With unions to bargain with, management must keep down their own pay in order to satisfy organized labor. Without unions there is no effective check on management compensation. In direct proportion to the demise of unions, management compensation has skyrocketed while workers' wages have failed to grow. Business writer Graeff Crystal has been tracking executive compensation. He reports in the *S.F. Chronicle* that in 1974 the typical CEO of a U.S. company received \$35 pay for every dollar the average worker in manufacturing earned. By 1988, the typical American CEO received \$120 for

every worker's dollar. By 1995 the ratio had ballooned to \$224 to \$1. That is a 640 percent increase in twenty-one years. By way of comparison Crystal notes that CEOs in Japan earn ¥16 for every yen earned by a worker; German CEOs make DM21 for every Duetschmark earned by the average working person. While top American managers might claim that their contribution to their firms' productivity justifies their enormous compensation packages, Crystal's data show only a weak relationship – weaker than that between the salaries of free agent baseball players and their statistics (Crystal 1991).

All the while, stocks have increased in value by over 900 percent. The Dow Jones industrial average reached a low point of 585 in December 1974, rebounded to 800 by the end of 1975, cycled between 800 and 1,000 until 1982, then began its stunning climb to 6,000 in October 1996 (with time out for a crash in October 1987). But workers get a piece of the stock action, don't they? The pensions of workers who have them are invested in the stock market, so we all win when stock prices rise, right? Wrong. Even if it were true that pensions increase with rising stock prices, a shrinking fraction of workers are covered by union or company pensions – our calculations from the March 1973 and March 1994 Current Population Surveys show a drop in pension coverage from 62 percent to 48 percent of U.S. employees. More to the point, though, in most cases the individual worker's benefit is tied to his wages, not to the value of the pension fund that pays those benefits. A worker gains by earning more in the years before retirement. Employers and unions gain when stock prices go up because they do not have to contribute as much to pension funds to keep them solvent. But under most plans workers do not earn bigger benefits when the value of the plan's holdings rise. Workers would be much better off with higher wages; they would have more cash today and be entitled to more benefits when they retire.

National wage policy can redress this imbalance between capital and labor by putting the power to affect inequality directly into workers' hands. In wage-setting systems workers get the wage increases that they can win at the bargaining table. The inequality crisis can be abated in this way without transfer payments. It gives workers the political muscle to regain their leverage over the distribution of economic spoils. Given the choice, American workers usually prefer to take matters into their own hands rather than accept a handout. A national wage policy should be popular among employees. Employers and managers traditionally oppose any proposal to increase employees' bargaining power. Their incentive to do so now – when they have been able to increase their own pay so freely – is especially high.

## **Inequality and Opportunity**

Inequality is a politically charged topic now because the gap between the rich and poor has led some Americans to question whether or not the United States is still “the land of opportunity.” In the land of opportunity, people should have the chance to develop their talents fully, to achieve what their abilities and effort merit. Many Americans think the game of life seems rigged – in a June 1995 poll, NBC News found that 45 percent of whites and 58 percent of blacks agreed that “the political and economic systems of this country are stacked against people like me.” Whether or not the game is rigged, the stakes are unquestionably high with the richest million American households making 140 times more than the poorest million American households.

Many commentators see these inequalities as inevitable or driven by impartial forces like talent or markets. They are not. Inequality in the United States results from explicit and invisible political choices that voters make. Citizens who participate in national politics choose the level of inequality in the nation through their representatives who choose to make the tax burden regressive, flat, or progressive, to subsidize home ownership or renters, to regulate business or unions, and to finance health care or not. As the New Deal is dismantled, it is well to recall the words of its architect. In 1937 Franklin Delano Roosevelt said, “The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have too little.” “Provide” may mean handouts to some. But the historical and comparative data show the efficiency of institutions that put labor, management, and ownership on equal footing. Holding inequality in check can make solving the problems of poverty and economic insecurity less expensive and less intrusive.

## **APPENDIX: Some Details of Our Reanalysis of *The Bell Curve* Data**

Herrnstein and Murray used the National Longitudinal Survey of Youth (NLSY) for their original data analyses. It is an on-going national survey of about 12,500 young people who were 14-22 years old when the survey started in 1979.<sup>10</sup> At various interviews, the NLSY obtained information from the young people in the sample on their backgrounds (e.g., their race, their parents' income, their living conditions while growing up) and on important events in their lives – degrees earned, jobs won or lost, marriages, moves from house-to-house or across the country, the birth of children, trouble with the law. In 1980, the NLSY administered the Armed Forces Qualifying Test (AFQT) to its respondents (when they were 15-23 years old). The NLSY also contacted schools that the young respondents were attending (or attended in the past) and obtained records of grades and test scores as well as measures of the social environment surrounding the school. Likewise, the NLSY kept track of the unemployment rate and other important social indicators in each young person's place of residence.

Herrnstein and Murray base their substantive claims on comparisons between IQ (as measured by the AFQT) and socioeconomic background as predictors of who has unfortunate outcomes in life, e.g., being poor, having a baby out of wedlock, and being sentenced to a term in jail. We focus on their analysis of who is poor in 1990. Poverty is a key consequence of the wide disparity in wages and earnings in the United States, and its causes imply important things about its possible solutions.

### *Intelligence and Cognitive Skills*

Herrnstein and Murray use the AFQT as their measure of IQ. Considering that this is the variable on which their whole thesis rests, *The Bell Curve* contains surprisingly few details about the AFQT. Herrnstein and Murray assure us “the AFQT qualifies not just as an IQ test but [as] one of the better ones psychometrically” (Herrnstein and Murray 1994, p. 580). And they provide correlations between the components and the main factor the items share – “g.” They do not provide example questions. The precise questions used in the test are confidential, but Bock and Moore (1986) produce prototype questions. We append the prototypes of “average difficulty” questions (see Box A). The AFQT consists of four batteries from a larger, 13-battery, 333 item test that lasts three and a half hours.<sup>11</sup> The four AFQT batteries are arithmetic reasoning (the second subtest in the sequence of 13, 30 “word problems” in a 36-minute time limit), word knowledge (third subtest, 35 vocabulary words in

an 11-minute time limit), paragraph comprehension (fourth subtest 15 questions about four paragraphs in a 13-minute time limit), and mathematics knowledge (eighth subtest, 25 algebra, geometry, and trigonometry problems in a 24-minute time limit).

“Intelligence” – as Herrnstein and Murray define it – is the ability to learn. On first reading, the components of the AFQT look more like assessments of what people have learned in school than of the ability to learn. Our analyses support that first impression (Fischer et al. 1996, pp. 40-44, 55-69). For example, we found that AFQT scores were more closely correlated with years of education up to the time of the test ( $r = .54$ ) than with years of schooling after the test ( $r = .33$ ). If AFQT simply measures the ability to learn – as Herrnstein and Murray contend – rather than what was actually learned in school, then those two correlations should be about equal. If, as we argue, AFQT measures what was taught and learned in school, then the fact that AFQT predicts the past better than the future is not too surprising.<sup>12</sup>

These results are enough to overturn their claims about racial differences in intelligence accounting for racial differences in cognitive skills. Our reanalyses of data on racial and ethnic differences in performance on academic tests from ten countries takes our critique of *The Bell Curve* a step farther. The test scores of African Americans and Latinos in the United States resemble a world-wide pattern. In every country we examined, lower-caste groups score below other groups. Lower-caste-like groups come from every race and ethnic group; they include the Dutch in South Africa in the 1930s, Koreans in Japan, Irish in England, Ashkenazi Jews in the United States in the first decades of this century, and Mizrahi Jews in Israel in the 1960s. They share experiences of socioeconomic deprivation, segregation, and a stigmatized lower-caste identity. Once groups make socioeconomic progress, their test scores improve contradicting their supposed genetic disadvantage. The gap between whites and African and Latino-Americans is closing by several IQ points a generation, as it closed for other groups as they moved from the periphery of society to its economic mainstream.

### *The Components of Socioeconomic Background*

The measure of socioeconomic background Herrnstein and Murray use is even more flawed than their measure of IQ. Reasonably enough, they began with mother’s education, father’s education, the socioeconomic status of the main earner’s occupation, and parents’ income. Then they made two serious errors. Parental occupation and income are missing from the

data file for many young people (mainly because the family was split up but also because some of the older respondents were already living on their own). Herrnstein and Murray substituted the average occupational score or income for the missing data. This is a well-known source of bias in statistical analysis (Korenman and Winship 1995). More importantly, the bias from this source is always toward finding no effect. Even if parents' occupation and income are the same – on average – among respondents with and without data, treating a variable as a constant (which is what happens when a single value is used for all cases) produces the bias. Our results show that, in fact, respondents with missing data come from backgrounds that are more disadvantaged than the backgrounds of the young people who report their parents' occupations and incomes. We corrected the missing data problem in the simplest and least controversial way and got results that showed background to be more important than it appeared to be in *The Bell Curve*.<sup>13</sup>

Herrnstein and Murray further decreased the prospect of finding the true effect of socioeconomic background by giving mother's education, father's education, parental occupational status, and parental income equal weight in their measure of socioeconomic background. Equal weights are appropriate for an index when the components of the index all affect the outcome equally. Past research has shown that different components of socioeconomic background affect socioeconomic outcomes differently. A commonplace finding in this research is a version of "like goes with like," i.e., parental education affects young peoples' educations more than parental occupation or income does, parental occupation affects young peoples' occupations more than parental education or income does, and parental income affects young peoples' incomes more than parental education or occupation does (e.g., Duncan, Featherman, and Duncan 1972; Jencks et al. 1972). Since young peoples' poverty is largely a function of their incomes, we would expect parental income to be a more important determinant of the NLSY respondents' poverty in 1990 than any of the other background components. That is what we found.

When we redid Herrnstein and Murray's analysis in a way that allowed each component of socioeconomic background to find its own weight in determining young peoples' poverty outcome, we found substantial variation in weights. The effect of parental income dominates the equation. Here are the coefficients for white and African American respondents:<sup>14</sup>

<i>effects</i>	<i>Absolute effects</i>		<i>Proportional</i>	
	Whites	African Americans	Whites	African Americans
Parental income	-.404	-.277	.80	.46
Parental occupation	-.051	-.225	.10	.37
Mother's education	.005	-.115	-.01	.19
Father's education	-.057	.015	.11	-.02

SOURCE: Authors' estimates from NLSY micro data. See Appendix Tables A2a and A2b.

By constructing an index that gave these four variables equal weight, Herrnstein and Murray produced results that averaged the large effect of parental income (eight times greater than the other three coefficients for whites) with the much smaller effects of parental education (and, for whites, occupation). The effect of that error was to understate systematically the impact of background on poverty and other outcomes.

Redoing the analysis with the weights that the data themselves provide, we find that socioeconomic background affects poverty far more than Herrnstein and Murray claimed.<sup>15</sup> Our estimate of the effect of socioeconomic background on whites' risk of being in poverty in 1990 is 66 percent higher than theirs; our estimate for African Americans is 53 percent higher than theirs. Even in the 1990s, well-off parents can buy their children a brighter future and poor parents cannot keep their children out of poverty.

#### *Accounting for Education, Gender, and the Social Environment*

Our complete analysis of the probability of being poor in 1990 enriches the measure of socioeconomic background by adding two more family-related variables and by taking account of environmental influences outside the family. These adjustments do not matter much for our estimates of either IQ effects or the effects of the other background factors.<sup>16</sup> Table A1 presents the results of three logistic regressions separately for whites and for African Americans.

(Table A1 about here)

In our most significant correction to Herrnstein and Murray's statistical work, we adjust the AFQT results for the direct effects of education. To do so we add three variables to the poverty equation: years of schooling completed prior to the AFQT, years of schooling completed subsequent to the AFQT, and an indicator of whether or not the respondent pursued an academic curriculum in high school. These adjustments make a huge difference in

both the overall fit of the model and in the estimate of how IQ affects poverty. Comparing the AFQT coefficients in Table A1 before (A1 and B1) and after (A2 and B2) adjusting for the direct effects of education on poverty risks we learn that even if Herrnstein and Murray had measured socioeconomic background better they would have overstated the effect of IQ on young whites' risk of falling into poverty by **61 percent**. Their overestimate of the effect of IQ among African Americans would be **74 percent**.

We also take account of the so-called “feminization” of poverty. Herrnstein and Murray ignore gender in their empirical work, except when they exclude men from the analysis of births and women from the analysis of incarceration.<sup>17</sup> The effect of gender swamps the effect of AFQT. The coefficient of -.866 for white men (column A2 of Table A1) implies that a white woman would have to score 41 points higher on the AFQT than her *brother* in order to reduce her odds of being poor to a level as low as his.

These results present a fuller picture of the social dimensions of young peoples' poverty. They show that class – properly measured – matters more than Herrnstein and Murray let on, that test scores represent in-school experiences at least as much as “ability,” and that gender plays a far greater role in poverty than either class or test scores. Gender matters, of course, because women's wages and hours lag far behind men's, and their child-care responsibilities are far greater. Poverty reflects income relative to family size, so when a mother and her children must live on her wages alone, they are far more likely to be poor than they would be if either women earned what men do or men cared for children as women do.

## BOX A: Examples of AFQT Questions

### Arithmetic Reasoning:

If a cubic foot of water weighs 55 lbs., how much weight will a  $75\frac{1}{2}$  cubic foot tank trailer be carrying when fully loaded with water?

- a) 1373 lbs.    b) 3855 lbs.    c) 4152.5 lbs.    d) 2231.5 lbs

### Word Knowledge:

**Solitary** most nearly means

- a) sunny    b) being alone    c) playing games    d) soulful

### Paragraph Comprehension:

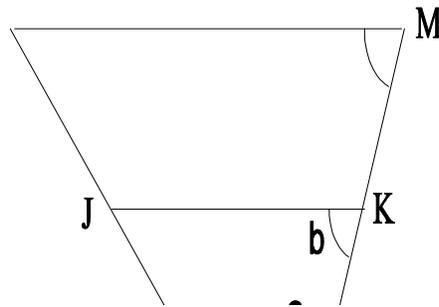
People in danger of falling for ads promoting land in resort areas for as little as \$3000 or \$4000 per acre should remember the maxim: You get what you pay for. Pure pleasure should be the ultimate purpose in buying resort property. If it is enjoyed for its own sake, it was a good buy. But if it was purchased only in the hope that land might someday be worth far more, it is foolishness.

Land investment is being touted as an alternative to the stock market. Real estate dealers around the country report that rich clients are putting their money in land instead of stocks. Even the less wealthy are showing an interest in real estate. But dealers caution that it's a "hit or miss" proposition with no guaranteed appreciation. The big investment could turn out to be just so much expensive desert wilderness.

**The author of this passage can best be described as:**

- a) convinced    b) dedicated    c) skeptical    d) believing

### Math Knowledge:



In the drawing above, JK is the median of the trapezoid. All of the following are true EXCEPT

- a)  $LJ=JN$     b)  $a=b$     c)  $JL=KM$     d)  $a\neq c$

TABLE 1 - Effects of Selected Variables on the Odds of Being Poor by Race:  
Persons 25-33 Years Old, United States, 1990

<i>VARIABLE</i>	<u>WHITES ONLY</u>			<u>BLACKS ONLY</u>		
	(A1)	(A2)	(A3)	(B1)	(B2)	(B3)
zzAFQT	-.693*	-.431*	-.371*	-.691*	-.398*	-.366*
zFamily Income	-.404*	-.373*	-.338*	-.277*	-.273*	-.246*
zParent's SEI	-.051	.027	-.004	-.225*	-.238*	-.191*
Mother's Education	.005	.027	.056	-.115	-.042	-.017
Father's Education	-.057	.010	-.024	.015	.074	.065
Siblings (1979)	.190*	.149*	.047	-.056	-.071	-.049
Farm Background	-.272	-.242	-.270	-.210	-.161	-.273
Two Parent Family	-.135	-.125	-.044	-.072	-.034	.101
Education pre-AFQT		-.243*	-.279*		-.375*	-.338*
Education post-AFQT		-.233*	-.201*		-.258*	-.211*
H.S. Academic Track		-.461 <sup>†</sup>	-.202		-.391*	-.359*
High school Composition		-.246*	-.276*		-.240*	-.245*
Missing School Report		.413*	.184		.522*	.498*
Male		-.866*	-.998*		-.993*	-.676*
Children in 1990			.724*			.424*
Married in 1990			-3.074*			-2.030*
Married Man in 1990			-.506*			-.090
Intercept	-2.872*	-.092	1.443	-1.325*	2.977*	2.529*

\*p < .05 (two-tailed test); <sup>†</sup> p < .05 (one-tailed test).

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## ENDNOTES

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1. The data are unequivocally stated in Ryscavage (1995), Danziger and Gottschalk (1995), Fischer et al. (1996), and Farley (1996) and several other recent books and articles.
2. The “uneven tides” metaphor reverses President Kennedy’s famous remark about the “rising tide that lifts all boats.” We got the reversal from Sheldon Danziger and Peter Gottschalk (1993).
3. Labor Secretary Robert Reich (1993), in his own way, shares this diagnosis.
4. We made this calculation using the public access data file from the March 1995 CPS available on the U.S. Census Bureau’s web page ([//http:www.census.gov](http://www.census.gov)).
5. The poverty line is a calculation of the income needs of families. It varies by number of adults and number of children. For a family with two adults and two children, the poverty line in 1994 was \$15,029.
6. If we were to insert the ratios for the United States in 1974 (the year of least inequality in the United States) into the chart, it would fall between Canada and Taiwan (Republic of China), i.e., the United States at its best had a high level of income inequality compared to other developed nations today.
7. By “counteract the effect of her poverty” we mean reduce her chances of a nonmarital birth to as low as that of a young woman whose parents have an average income. Lawrence Wu (1996) has also reanalyzed these data. Using his approach – which factors in the timing of income changes and nonmarital births – it becomes even clearer that money matters most. For young white women, an increase of only \$1,100 in annual income would be sufficient to overcome the handicap of scoring one standard deviation below average on the AFQT, but it would take an increase of 82 AFQT points (out of 105) to overcome the disadvantage of being poor.
8. Teams at the Brookings Institution (Dickens, Kane, and Schultz 1996) and the National Bureau of Economic Research (Korenman and Winship 1996) report the same results.

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9. Economic theory says that raising the minimum wage hurts workers in the long run because it decreases the number of jobs available (some employers cannot afford to hire workers at the threshold established by the minimum wage but would hire them for less if they could). But recent experience indicates that this is not a problem. According to David Card and Alan Krueger (1994), either the theory is wrong or the U.S. minimum wage is so low that raising it does not affect employers' hiring decisions. In an historical footnote on the debate, Sweeney (1996) points out that the same argument was used in the 1920s to fight against legislation reducing the working day from eight to ten hours.
  10. The 1991 follow-up was the most recent data available to Herrnstein and Murray, so we have not used the subsequent ones. Most analyses refer to the respondent's poverty status in 1990 since poverty status is based on income for the whole preceding year; thus the 1991 follow-up yields data on the 1990 poverty status of respondents. Over time the NLSY has lost touch with about 15 percent of the original study subjects – an excellent retention rate by the standard of studies like this. In addition to a “cross-sectional sample” representative of young people in the nation as a whole, the 12,500 original cases included supplemental samples of African Americans, Latinos, and military personnel. Most of the analyses in *The Bell Curve* and all of the analyses presented in this paper refer to the 4,346 whites in the “cross-sectional sample” and the 2,785 African Americans in either the cross-sectional or African American supplemental samples.
  11. The NLSY subjects took all 13 batteries of the larger test – the Armed Services Vocational Aptitude Battery.
  12. Herrnstein and Murray (1994, pp. 589-592) argue the opposite. They note that a regression of AFQT scores on prior IQ scores (available for about 20 percent of their sample) and years of education between the IQ test and the AFQT reveals that only prior score, not intervening years of schooling, affect AFQT score. However, redoing the analysis after correcting for the correlation between prior IQ score and errors in the AFQT equation, Neal and Johnson (1995) show that years of schooling has a sizeable effect on AFQT, net of prior IQ score. They replace Herrnstein and Murray's estimate of .07 (not significant at the .05 level) with a much larger one of .23 (significant). That implies that each year of school is worth about 3.5 IQ points.

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13. We simply added one dummy variable (equal to one if the background measure was missing and zero otherwise) for each component of the background measure to the logistic regression equation. The coefficients for these dummy variables indicate how far the poverty rate for people who have missing data deviates from that of people who come from the average background.
  14. We follow Herrnstein and Murray's practice of presenting the results for whites and African Americans separately.
  15. When confronted by our results, Mr. Murray told a reporter for *Lingua Franca* that parental socioeconomic standing is just a proxy for parental IQ. His argument is not consistent with the data at hand, however. If parental IQ were the main factor in socioeconomic background, then parental education would garner more weight than parental income or occupation. In the data, parental education gets *zero* weight. It has no effect. It is this null weight of parental education that drags down the combined index, leading Herrnstein and Murray to underestimate the role of socioeconomic background in the persistence of poverty and other problems. In contrast, parental income – and, for blacks, parental occupation – receive substantial weight.
  16. This important result actually replicates findings first reported by Duncan et al. (1972) almost 25 years ago.
  17. Excluding gender does not bias their estimates of the effects of IQ or SES because gender is uncorrelated with these other independent variables, but had they included gender, the minor role of IQ in poverty would have been evident to all readers.

**TABLE 1 - Effects of Selected Variables on the Odds of Being Poor by Race:  
Persons 25-33 Years Old, United States, 1990**

<i>VARIABLE</i>	<u>WHITES ONLY</u>			<u>BLACKS ONLY</u>		
	(A3)	(A7)	(A8)	(B3)	(B7)	(B8)
zzAFQT	-.693*	-.431*	-.371*	-.691*	-.398*	-.366*
Family Income (Z-scored)	-.404*	-.373*	-.338*	-.277*	-.273*	-.246*
Parent's SEI (Z-scored)	-.051	.027	-.004	-.225*	-.238*	-.191*
Mother's Education	.005	.027	.056	-.115	-.042	-.017
Father's Education	-.057	.010	-.024	.015	.074	.065
Siblings (1979)	.190*	.149*	.047	-.056	-.071	-.049
Farm Background	-.272	-.242	-.270	-.210	-.161	-.273
Two Parent Family	-.135	-.125	-.044	-.072	-.034	.101
Education pre-AFQT		-.243*	-.279*		-.375*	-.338*
Education post-AFQT		-.233*	-.201*		-.258*	-.211*
H.S. Academic Track		-.461 <sup>†</sup>	-.202		-.391*	-.359*
High school Composition		-.246*	-.276*		-.240*	-.245*
Missing School Report		.413*	.184		.522*	.498*
Male		-.866*	-.998*		-.993*	-.676*
Children in 1990			.724*			.424*
Married in 1990			-3.074*			-2.030*
Married Man in 1990			-.506*			-.090
Intercept	-2.872*	-.092	1.443	-1.325*	2.977*	2.529*

\*p < .05 (two-tailed test); <sup>†</sup>p < .05 (one-tailed test).

TABLE A1 - Descriptive Statistics of All Variables by Race

VARIABLE	WHITES ONLY			BLACKS ONLY		
	Mean	S.D.	N	Mean	S.D.	N
<i>TEST RESULTS:</i>						
AFQT	71.688	20.505	4346	46.083	18.469	2785
zzAFQT (normalized and z-scored)	0.176	0.897	4346	-0.896	0.794	2785
<i>INDIVIDUAL CHARACTERISTICS AND SOCIAL BACKGROUND:</i>						
SES (Z-scored)	0.193	0.884	4341	-0.670	0.944	2763
Family Income (1978-79) <sup>1</sup>	48.309	27.165	3409	24.691	19.486	2337
Parent's SEI (Z-scored)	0.115	0.946	4118	-0.583	0.980	2247
Mother's Education	11.995	2.433	4174	10.769	2.636	2542
Father's Education	12.328	3.270	4067	10.147	3.511	2043
Two Parent Family	0.902	0.297	4346	0.657	0.475	2785
Pre-1981 Poverty	0.166	0.372	4346	0.573	0.495	2785
Male	0.497	0.500	4346	0.493	0.500	2785
Age	17.557	2.257	4346	17.496	2.195	2785
Siblings (1979)	2.996	1.906	4344	4.751	2.979	2776
Northeast Region	0.223	0.416	4263	0.167	0.373	2747
West Region	0.143	0.350	4263	0.060	0.237	2747
Central Region	0.375	0.484	4263	0.186	0.389	2747
Farm Background	0.058	0.235	4346	0.029	0.167	2785
Independent (Miss. Income)	0.141	0.348	4346	0.097	0.296	2785
Missing Family Income	0.074	0.262	4346	0.064	0.245	2785
Missing Parent's SEI	0.027	0.162	4346	0.050	0.218	2785
Missing Mother's Education	0.040	0.195	4346	0.087	0.282	2785
Missing Father's Education	0.064	0.245	4346	0.266	0.442	2785
<i>SCHOOL BACKGROUND:</i>						
Years Educ. pre-AFQT	11.806	1.761	4346	11.358	1.696	2785
Years Educ. post-AFQT	1.583	1.968	4313	1.269	1.594	2747
H.S. Academic Track	0.337	0.473	4234	0.276	0.447	2690
High School Composition	0.182	0.651	4346	-0.669	1.022	2785
Missing School Reports	0.212	0.409	4346	0.333	0.471	2785
<i>1990 INDIVIDUAL CHARACTERISTICS AND SOCIAL CONTEXT:</i>						
Children in 1990	0.909	1.091	4195	1.086	1.271	2708
Married (1990)	0.616	0.486	3980	0.327	0.469	2550
Married Man (1990)	0.279	0.449	3980	0.155	0.362	2550
Rural (1990)	0.238	0.426	3677	0.186	0.389	2437
Unemployment Rate (1990)	8.374	5.699	3850	7.180	5.196	2469
Central City (1990)	0.096	0.294	3677	0.255	0.436	2437
<i>INDIVIDUAL OUTCOMES:</i>						
No Illegitimate First Birth	0.896	0.306	873	0.360	0.480	486
No Illegitimate First Child	0.947	0.224	1703	0.625	0.484	829
Never Interviewed in Jail	0.980	0.140	2149	0.892	0.310	1329
Not in Poverty (1990)	0.926	0.262	3422	0.739	0.440	1920

<sup>1</sup> In thousands, 1990 dollars.

TABLE A2a: Logistic Regression on Likelihood of a Person Being in Poverty in 1990 (Whites Only)

	(A1)	(A2)	(A3)	(A4)	(A5)	(A6)	(A7)	(A8)	(A9)
zzAFQT <sup>1</sup>	-0.871* (0.077)	-0.716* (0.086)	-0.693* (0.088)	-0.665* (0.090)	-0.426* (0.105)	-0.426* (0.105)	-0.431* (0.108)	-0.371* (0.115)	
SES <sup>1</sup>		-0.305* (0.080)							
Age <sup>1</sup>		-0.061 (0.077)	-0.095 (0.088)	-0.032 (0.088)	-0.066 (0.113)	-0.062 (0.113)	-0.010 (0.114)	0.009 (0.124)	0.026 (0.123)
Family Income <sup>1</sup>			-0.404* (0.109)	-0.392* (0.110)	-0.377* (0.111)	-0.369* (0.111)	-0.373* (0.119)	-0.338* (0.120)	-0.352* (0.120)
Parent's SEI <sup>1</sup>			-0.051 (0.083)	-0.025 (0.085)	-0.050 (0.096)	-0.039 (0.096)	0.027 (0.097)	-0.004 (0.098)	-0.032 (0.097)
Mother's Education <sup>1</sup>			0.005 (0.088)	-0.035 (0.090)	0.006 (0.092)	0.004 (0.092)	0.027 (0.093)	0.056 (0.101)	0.033 (0.100)
Father's Education <sup>1</sup>			-0.057 (0.095)	-0.061 (0.096)	0.005 (0.101)	0.012 (0.101)	0.010 (0.103)	-0.024 (0.111)	-0.049 (0.111)
Siblings (1979) <sup>1</sup>			0.190* (0.065)	0.179* (0.067)	0.149* (0.068)	0.152* (0.069)	0.149* (0.070)	0.047 (0.077)	0.043 (0.076)
Farm Background			-0.272 (0.312)	-0.348 (0.317)	-0.349 (0.317)	-0.373 (0.322)	-0.242 (0.323)	-0.270 (0.359)	-0.324 (0.356)
Two Parent Family			-0.135 (0.230)	-0.037 (0.237)	-0.138 (0.245)	-0.139 (0.246)	-0.125 (0.248)	-0.044 (0.267)	-0.025 (0.264)
School Composition				-0.250* (0.067)	-0.247* (0.067)	-0.242* (0.068)	-0.246* (0.069)	-0.276* (0.075)	-0.300* (0.075)
West Region				0.909* (0.225)	0.884* (0.228)	0.844* (0.233)	0.875* (0.235)	0.589* (0.257)	0.586* (0.256)
Northeast Region				0.059 (0.276)	0.114 (0.278)	0.115 (0.285)	0.129 (0.287)	-0.022 (0.309)	-0.046 (0.307)
Central Region				0.604* (0.202)	0.608* (0.204)	0.515* (0.213)	0.528* (0.215)	0.313 (0.233)	0.314 (0.233)
Years of Ed. pre-AFQT				-0.179* (0.074)	-0.179* (0.074)	-0.180* (0.074)	-0.243* (0.077)	-0.279* (0.083)	-0.391* (0.076)
Years of Ed. post-AFQT				-0.229* (0.068)	-0.229* (0.068)	-0.234* (0.068)	-0.233* (0.068)	-0.201* (0.071)	-0.257* (0.069)
H.S. Academic Track				-0.483 (0.256)	-0.483 (0.256)	-0.471 (0.257)	-0.461 (0.257)	-0.202 (0.272)	-0.320 (0.268)
Unemployment Rate (1990)				0.029* (0.015)	0.029* (0.015)	0.029* (0.015)	0.029* (0.015)	0.022 (0.017)	0.022 (0.017)

Central City (1990)	0.492 (0.267)	0.553 (0.269)	0.470 (0.284)	0.415 (0.283)
Rural (1990)	0.062 (0.194)	0.071 (0.196)	0.081 (0.216)	0.075 (0.215)
Male		-0.866* (0.165)	-0.998* (0.224)	-1.023* (0.222)
Children (1990)		0.724* (0.089)	0.724* (0.089)	0.719* (0.088)
Married (1990)		-3.074* (0.257)	-3.074* (0.257)	-3.112* (0.257)
Married Man (1990)		-0.506* (0.181)	-0.506* (0.181)	-0.534* (0.180)
Missing Family Income	0.017 (0.334)	0.073 (0.336)	0.037 (0.365)	0.050 (0.362)
Independent (Miss. Inc.)	0.298 (0.225)	0.047 (0.234)	-0.235 (0.263)	-0.283 (0.262)
Missing Parents' SEI	-0.141 (0.431)	-0.180 (0.331)	0.154 (0.473)	-0.232 (0.473)
Missing Mother's Ed.	-0.023 (0.353)	-0.042 (0.352)	0.123 (0.405)	0.221 (0.397)
Missing Father's Ed.	0.314 (0.267)	0.333 (0.267)	0.167 (0.309)	0.150 (0.306)
Missing School Report		0.465* (0.165)	0.184 (0.191)	0.188 (0.191)
Intercept	-2.855* (0.089)	-2.887* (0.090)	1.473 (1.077)	2.996* (0.968)
Pseudo R <sup>2</sup>	0.090	0.099	0.322	0.315

<sup>1</sup> z-scored

\* p < .05

N = 3031

TABLE A2b: Logistic Regression on Likelihood of a Person Being in Poverty in 1990 (African-Americans Only)

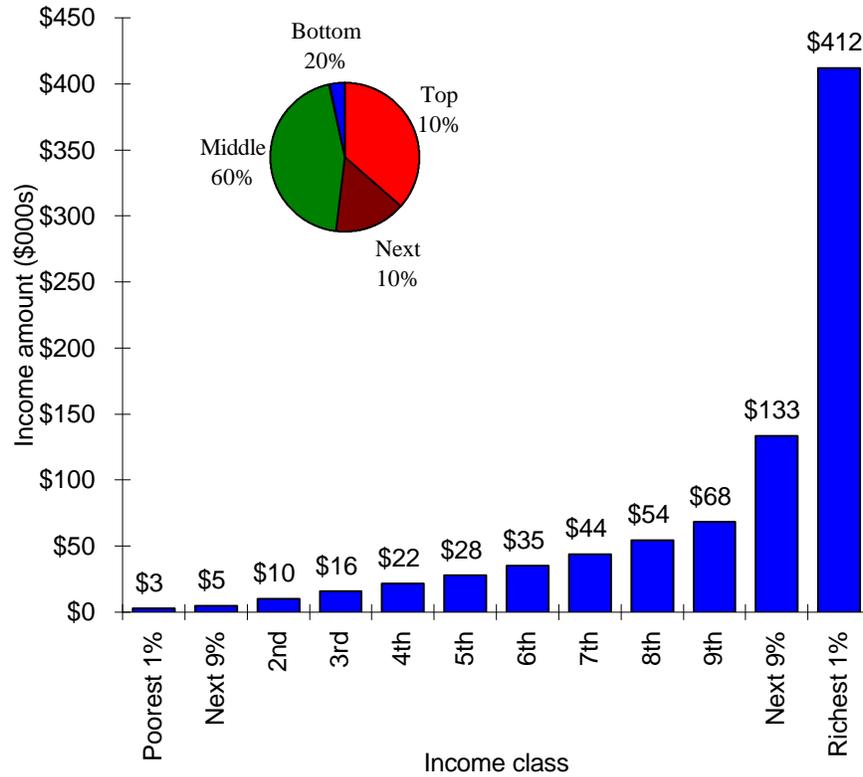
	(B1)	(B2)	(B3)	(B4)	(B5)	(B6)	(B7)	(B8)	(B9)
ZZAFQT <sup>1</sup>	-0.807* (0.068)	-0.679* (0.071)	-0.691* (0.073)	-0.677* (0.075)	-0.379* (0.086)	-0.378* (0.086)	-0.398* (0.089)	-0.366* (0.095)	
SES <sup>1</sup>		-0.394* (0.065)							
Age <sup>1</sup>		-0.042 (0.062)	-0.060 (0.068)	-0.043 (0.070)	-0.015 (0.087)	-0.008 (0.088)	0.014 (0.090)	-0.001 (0.096)	0.001 (0.095)
Family Income <sup>1</sup>			-0.277* (0.092)	-0.338* (0.097)	-0.320* (0.098)	-0.314* (0.099)	-0.273* (0.097)	-0.246* (0.102)	-0.258* (0.103)
Parent's SEI <sup>1</sup>			-0.225* (0.074)	-0.190* (0.075)	-0.211* (0.074)	-0.211* (0.074)	-0.238* (0.076)	-0.191* (0.084)	-0.220* (0.083)
Mother's Education <sup>1</sup>			-0.115 (0.070)	-0.153* (0.071)	-0.081 (0.074)	-0.082 (0.074)	-0.042 (0.076)	-0.017 (0.082)	-0.037 (0.081)
Father's Education <sup>1</sup>			0.015 (0.074)	0.018 (0.075)	0.062 (0.078)	0.070 (0.078)	0.074 (0.080)	0.065 (0.086)	0.058 (0.085)
Siblings (1979) <sup>1</sup>			-0.056 (0.063)	-0.038 (0.064)	-0.061 (0.066)	-0.066 (0.066)	-0.071 (0.068)	-0.049 (0.072)	-0.027 (0.072)
Farm Background			-0.210 (0.354)	0.002 (0.355)	-0.118 (0.363)	-0.199 (0.367)	-0.161 (0.382)	-0.273 (0.428)	-0.232 (0.422)
Two Parent Family			-0.072 (0.139)	0.031 (0.142)	-0.046 (0.150)	-0.043 (0.151)	-0.034 (0.154)	0.101 (0.159)	0.124 (0.158)
School Composition				-0.256* (0.069)	-0.246* (0.070)	-0.262* (0.072)	-0.240* (0.073)	-0.245* (0.078)	-0.265* (0.078)
West Region				0.625* (0.260)	0.693* (0.264)	0.718* (0.267)	0.739* (0.275)	0.617* (0.288)	0.655* (0.286)
Northeast Region				0.426* (0.187)	0.347 (0.194)	0.270* (0.204)	0.347 (0.206)	0.199 (0.214)	0.109 (0.212)
Central Region				0.818* (0.155)	0.809* (0.158)	0.774* (0.163)	0.812* (0.167)	0.578* (0.179)	0.521* (0.177)
Years of Ed. pre-AFQT					-0.318* (0.056)	-0.307* (0.057)	-0.375* (0.059)	-0.338* (0.063)	-0.424* (0.059)
Years of Ed. post-AFQT					-0.246* (0.056)	-0.240* (0.056)	-0.258* (0.057)	-0.211* (0.061)	-0.264* (0.059)
H.S. Academic Track					-0.421* (0.164)	-0.421* (0.165)	-0.391* (0.167)	-0.359* (0.176)	-0.448* (0.174)
Unemployment Rate (1990)					0.029* (0.012)	0.029* (0.012)	0.031* (0.012)	0.031* (0.013)	0.031* (0.013)

Central City (1990)	0.145 (0.153)	0.142 (0.157)	0.043 (0.166)	0.068 (0.165)
Rural (1990)	0.226 (0.167)	0.214 (0.171)	0.297 (0.183)	0.316 (0.182)
Male		-0.993* (0.134)	-0.676* (0.170)	-0.675* (0.169)
Children (1990)			0.424* (0.061)	0.420* (0.061)
Married (1990)			-2.030* (0.226)	-2.070* (0.225)
Married Man (1990)			-0.090 (0.181)	-0.101 (0.180)
Missing Family Income			0.023 (0.323)	0.144 (0.321)
Independent (Miss. Inc.)			0.194 (0.264)	0.196 (0.262)
Missing Parents' SEI			-0.039 (0.301)	-0.015 (0.302)
Missing Mother's Ed.			0.072 (0.247)	0.114 (0.247)
Missing Father's Ed.			0.073 (0.174)	0.095 (0.172)
Missing School Report			0.498* (0.174)	0.567* (0.172)
Intercept			2.529* (0.829)	3.628* (0.777)
Pseudo R <sup>2</sup>			0.289	0.281

<sup>1</sup> z-scored

\* p<.05

N = 1,726



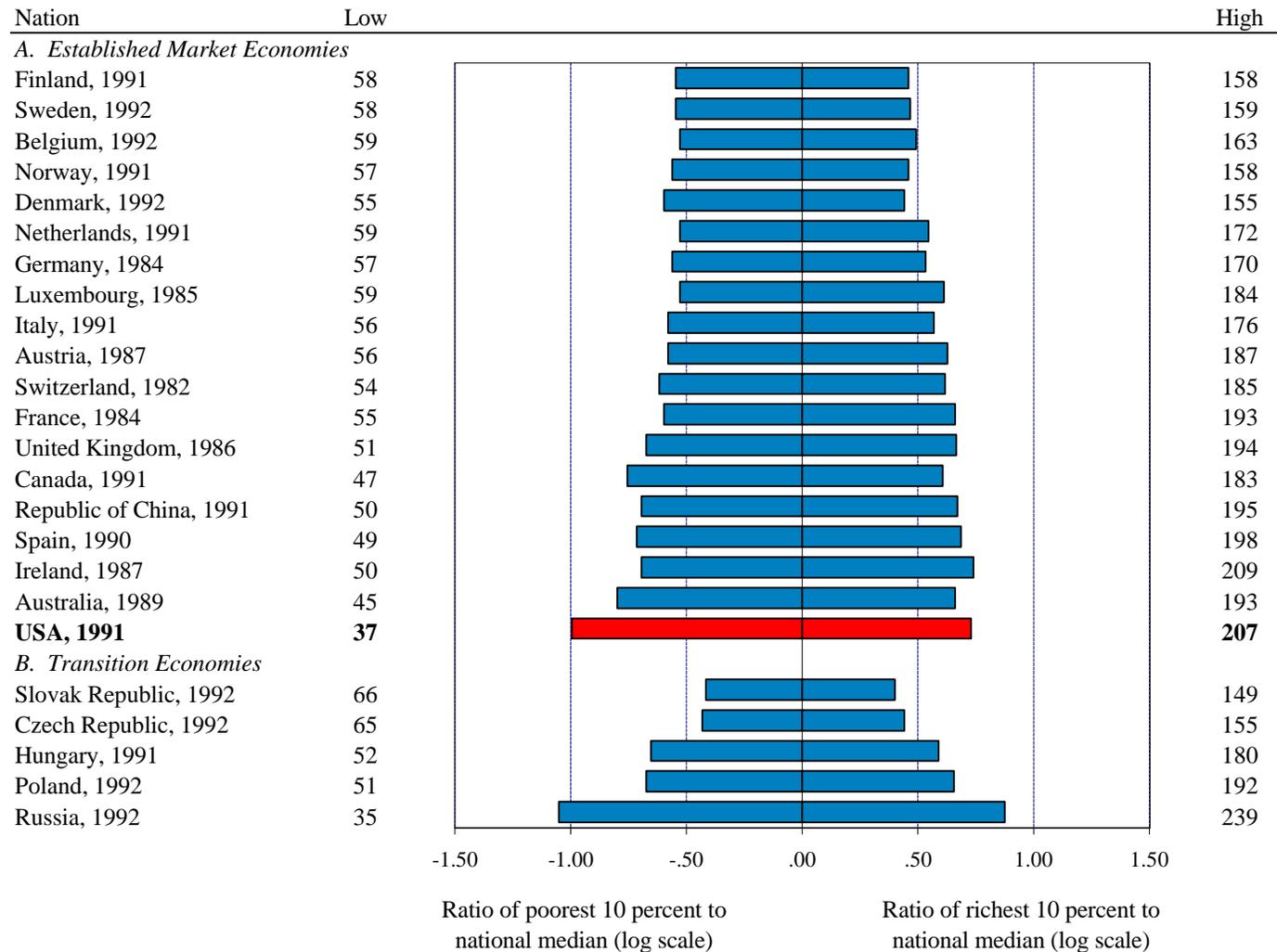
**Figure 1. Distribution of Household Income and Shares of Total Income Going to Four Income Classes: United States, 1994**

NOTE: The share of income going to the four income classes is:

Class	Share (%)
Top 10%	36%
Next 10%	15%
Middle 60%	45%
Bottom 20%	3%

Source: Current Population Survey, March 1995

**Figure 2. Gap Between Poor and Rich in 24 Nations**



[Source: Smeeding and Gottschalk, "The International Evidence on Income Distribution in Modern Economies." Population Association of America meetings, New Orleans, May 1996.]

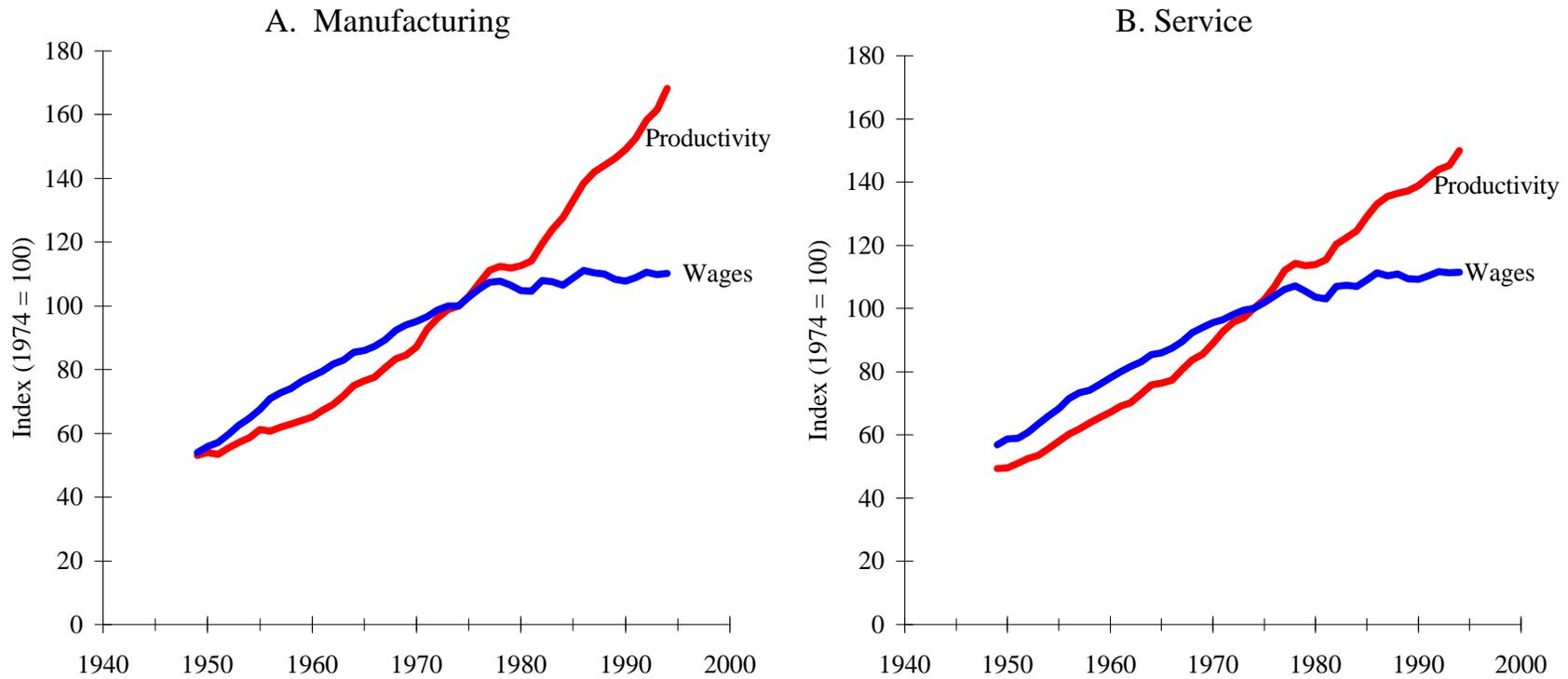


Figure 3. Wages and Productivity (Output per hour worked) by Economic Sector: United States, 1947-1993  
 Source: U.S. Bureau of Labor Statistics, 1996.

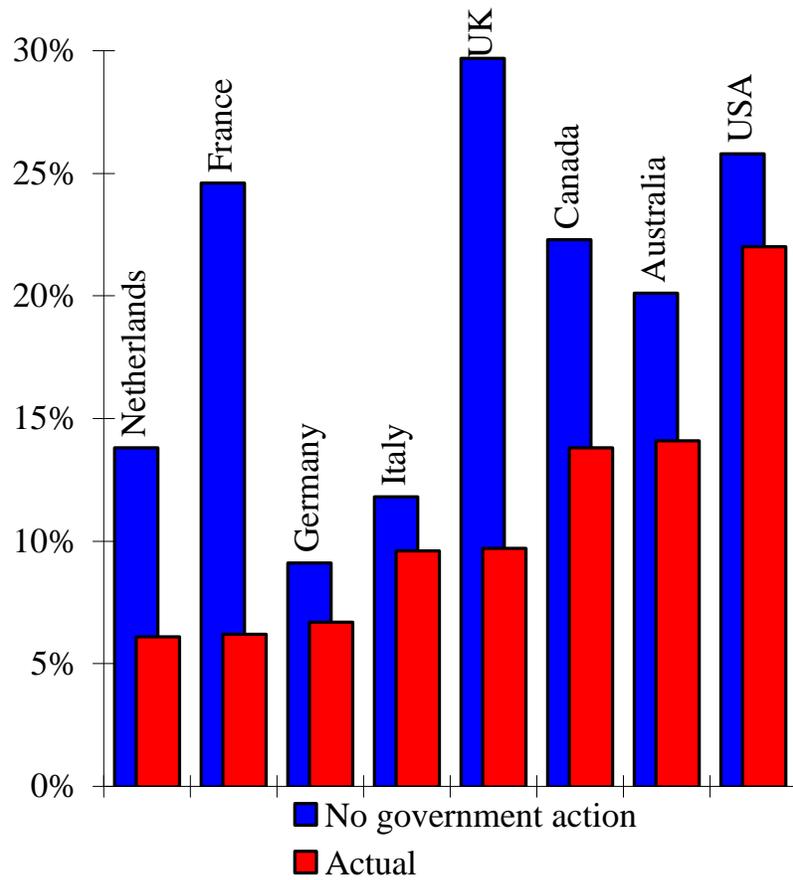


Figure 4  
 Actual Poverty of Children and What It Would Be  
 Without the Redistributive Action of Government:  
 Eight Populous Industrial Nations

Source: Luxembourg Income Study