

Inequality of Wealth and Income in a Technologically Advanced Society

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The author notes that inequality of wealth and income is increasing in the United States of America despite the fact that nationwide the level of education, which has traditionally been associated with higher income, has risen. He discusses attempts to reduce economic inequality, but concludes that in an economy which is energized by high levels of technology a reduction in disparities of income is not easy to obtain.

Key Words: Education, technology, wealth, income, inequality, unemployment, redistributive taxation, welfare.

Many are aware that inequality of income and wealth in the U.S.A. has increased considerably especially since around 1980; this trend has continued even during a period of low unemployment and high growth. The top quintile of households increased their share of income from 43.7 to 49.6% between 1980 and 2000, whereas the bottom quintile experienced a drop in their share from 4.3 to 3.6%. The gains in relative share of the top five percent (from 15.8 to 21.9%) and one percent are more newsworthy but perhaps less important and less lasting. Some regard this degree of inequality as a problem, although there is no consensus on what would be a better distribution of income, nor on whether or what measures could be taken to reduce inequality of income. Some see the issue in terms of poverty and its alleviation; others in terms of the overall distribution of income and its implications for levels of living and opportunity.

Reduced inequality is possible, and is potentially compatible with a thriving economy, but an economy perhaps condemned to high unemployment, as in most West European countries with social safety nets finer-meshed and more extensive than that of the U.S.A. The United States has a more unequal income distribution than nearly all other advanced nations. Sweden and Norway achieve a much more egalitarian outcome by government intervention: spending more than half their GDP and redistributing a large share of it; France and Italy are not far behind (Muth 1997). Nevertheless, the increase in inequality has not been peculiar to the United States; many other industrial

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countries have also been experiencing it. Nine of 13 members of the OECD studied also experienced increased inequality; only France, Finland and Denmark experienced a decrease, while Canada remained unchanged (Burniaux et al. 1998, Table 2.2).

Table 1.

*Share of Aggregate Income Received by each Quintil
and Top 5% of Households*

Year	Quintiles					
	Lowest	Fourth	Third	Second	Highest	Top 5%
1970	4.1	10.8	17.4	24.5	43.3	16.6
1975	4.4	10.5	17.1	24.8	43.2	15.9
1980	4.3	10.3	16.9	24.9	43.7	15.8
1985	4.0	9.7	16.3	24.6	45.3	17.0
1990	3.9	9.6	15.9	24.0	46.6	18.6
1995	3.7	9.1	15.2	23.3	48.7	21.0
2000	3.6	8.9	14.9	23.0	49.6	21.9

Source: Bureau of the Census, Current Population Report P60-213, *Money Income in the United States 2000*, Table A-2

By contrast, the U.S. federal government spends less than 20 percent of GDP, applying a much smaller share of resources for redistribution. State and local governments spend an additional 13 percent, of GDP, but most of this is not available for redistribution. Since states vary widely in per capita income and poverty, any desired reduction in inequality of income must be accomplished on a national basis if it is to address large interstate inequalities. Both parties in the recent election called for tax cuts, not increases, to be implemented over the next ten years.

Of thirteen OECD members studied, only Japan has not found it desirable to reduce poverty. The United States reduced poverty (defined as half the median household disposable income) through taxes and transfers of 20 percent. of GDP. The other twelve OECD countries, except Japan, reduced poverty much more, with Sweden lowering it by 80 percent (Burniaux et al 1998, Tables 5.4, 5.7).

The unintended consequences of high taxes and a large share of income unearned could be greater in the U.S. than in Scandinavia. But greater or not, there is no political prospect of taxing away more than half of income and reallocating much of it to the poorer half of the U.S. population even temporarily, much less on an indefinitely continuing basis. Such a policy conflicts with the core beliefs of the nation. The U.S. accepts more inequality than many nations because of a prevalent belief

in the benefits of economic growth and progress for the society and upward mobility for individuals. Were this a zero-sum society, one person's gain would be viewed as another's loss and distribution would become a dominant concern. In a positive-sum society the attitude toward government is focused on taxes; in a zero-sum society it is fixated on benefits, with greater pressure for and tolerance of high taxes.

Intergenerational concentration of wealth and its derivative income is likely to grow, even without repeal of the estate tax, because in the past families averaged four or five children whereas now families average just two. Furthermore, the impact of massive immigration of relatively unskilled labor tends to keep wages low at the lower end of the income scale.

Proponents of wealth equalization claim that inherited wealth lacks the ethical appeal of wealth earned. There are other conflicts of values. At one extreme, an egalitarian sect objects to any inequality, including meritocracy; at the other a Social Darwinian sect believes in unimpeded economic selection. Egalitarians with a regard to outcome conflict with egalitarians with a regard to process. Others are in the muddled middle which favors in terms of abstract nouns a degree of inequality compatible with equality of opportunity and meritocratic rewards, but disagree on the meaning of equal opportunity – is it limited to income, or does it extend to other desiderata? In the radical camp there is disagreement on the rewards merited by individuals, even on their property rights over the abilities, ambitions, and energies that differentiate them. Kolm describes the polar case of equality of satisfaction: “..no individual is *a priori* entitled to the particular benefit of any resource, notably his own, including his consumption capacities and in particular his satisfaction capacities.” (Kolm 1995, p.66) Other egalitarians reject a reward structure set by free enterprise labor markets. Then there are disagreements on the role of government in reducing inequality, reflecting different attitudes toward authority and beliefs about the unintended consequences of some redistributive policies.

Even without consensus amongst egalitarians on desirable distribution, there is general agreement on the desirability on some kind of other of policy designed to reduce inequality. The U.S. federal government has concentrated on reducing inequality *ex post*: redistribution via progressive income taxes and government transfer policies such as unemployment compensation, welfare, food stamps, housing subsidies. These have not prevented inequality increasing, nor even were intended to, despite the fact that spending on most of these policies

grew; but they have done much to alleviate economic hardship. The share of income of the bottom quintile rose from 3.6 to 4.8 percent in 2000 after subtracting taxes and adding transfers, in a year of high employment and low unemployment.

Now the U.S. is shifting emphasis to *ex ante* policies, designed to reduce inequality of income before taxes and transfers, in particular policies on education and health, which are regarded as long run determinants of income. This is a shift from short term reactive policies to longer-term preventive policies that would reduce inequality permanently. But over three decades characterized by increased inequality, access to both health care and higher education has become more equally distributed. This inverse relation between inequality in income and equalization in health care and education raises serious questions about long term policies and their implications.

Policies Redistributing Income

Redistributive policies include wages, taxes, and transfers or expenditures. The main public wage policy is the federal minimum wage first enacted in 1938 when unemployment was still in double digits. Its effect is limited. The legal minimum wage must balance earnings increases against risks to domestic jobs from their transfer abroad and from labor-saving technology, both of which have been significant factors in recent decades.

Progressive taxes take from the rich and the well-to-do, but until recently did nothing for the poor. That pleases some egalitarians, but others are concerned with the incomes of the poor, not just the inequality of distribution. Now many low income earners benefit from the earned income tax credit enacted in 1975. Tax progressivity is more a means of raising needed revenue than redistributing income. Tax rates that are too high on the better-off may harm the poor through adverse effects on investment as well as on consumer demand. Few propose eliminating taxes on consumption, which would increase purchasing power of the poor directly and immediately, or cutting the payroll tax, a greater burden on lower income workers than income taxes. Federal income taxes were reduced in the 1980s and raised in the 1990s; inequality increased in both decades, though more in the 1980s. In particular, the share of income after taxes of the top quintile of households rose not only following tax cuts but also slightly even following tax increases. (Bureau of the Census 2001, Table RDI-7)

The main distributional policies are transfers: government spending

to benefit needy individuals and families. Their intent is to provide a safety net for those in need, incidentally reducing inequality. Financing of transfers at the federal level is progressive, but many states and localities have tax systems – property, sales, excise taxes – which proportionately take more from the poor than from the rich. Major transfers to the low income members of society have included AFDC (Aid to Families with Dependent Children), food stamps, housing subsidies, unemployment compensation. Long-standing concerns about counter-productive consequences especially of AFDC have increased since the major reform of welfare in 1996. Spending on transfer programs increased in real terms even during the recent period of low unemployment and decline in unemployment. There is little basis for claims that increased inequality is to any degree the result of declines in these programs.

Were this a static society, it would be easy to assess the net contribution of its redistributive policies, however, today's poor are not necessarily yesterday's, nor possibly tomorrow's. There is too much mobility for that. All intertemporal comparisons are flawed. Nevertheless, the long term increase in income inequality continues to attract attention.

As to Social Security, its aim was limited to improving the economic lot of the aged through contributions during their working years, redistributing individual income over a lifetime. Most recipients receive far more than their contributions for a number of reasons, particularly their increased longevity. Social Security remains a current subsidy from workers to retirees. The income of retirees would have been lower than that of the rest of the population without Social Security. Payments reduce inequality among retirees. Thus Social Security reduces inequality at a point in time, and over a lifetime, but not by much.

The net change in share of income as a result of taxes and cash payments is quite modest, as shown in Table 2. Over the past 22 years the gain of the bottom quintile is surprisingly stable, varying little between recession and boom years. One would not expect it to be affected much by changes in federal income tax rates. The loss of the top quintile shows greater variability, reflecting tax cuts in the 1980s and tax increases in the 1990s but not so much the level of economic activity. 1986 is an outlier, apparently a response of high-income individuals to the Tax Reform Act of 1986. Declines in rates provided an incentive for everyone who could to postpone taxable income from 1986 to later years. But the main explanation was a large increase in capital gains

reported in 1986, in response to impending increases in rates.

Inequality of *consumption* is a more fundamental concern than inequality of income. The linkage between consumption and income is loosened not just by free food and medical care and subsidized housing for the poor, but by free education and free access to a wide variety of public goods: parks, libraries, playgrounds, some museums.

Table 2.

Change in Percent Share of Aggregate Income Received by each Quintile of Households by Subtracting Taxes and Adding Transfers

Year	Quintiles				
	Lowest	Fourth	Third	Second	Highest
1979	+1.1	+1.6	+0.2	+0.1	-3.0
1980	+1.3	+1.4	+0.8	-0.2	-3.2
1981	+1.2	+1.5	+0.7	-0.3	-3.2
1982	+1.3	+1.5	+0.6	-0.4	-3.0
1983	+1.2	+1.3	+0.3	-0.3	-2.4
1984	+1.2	+1.2	+0.4	-0.7	-2.2
1985	+1.2	+1.1	+0.5	-0.5	-2.2
1986	+0.9	+0.9	-0.3	-1.0	-0.4
1987	+1.2	+1.3	+1.1	-0.6	-3.0
1988	+1.2	+1.4	+0.6	-0.7	-2.5
1989	+1.2	+1.5	+0.4	-0.2	-2.8
1990	+1.2	+1.6	+0.6	-0.2	-3.1
1991	+1.2	+1.6	+0.5	-0.2	-3.4
1992	+1.1	+1.6	+1.0	-0.3	-3.6
1993	+1.3	+1.6	+1.0	-0.1	-3.8
1994	+1.2	+1.5	+1.0	+0.3	-4.0
1995	+1.3	+1.7	+1.1	-0.1	-4.1
1996	+1.2	+1.9	+1.0	0.0	-4.0
1997	+1.2	+1.7	+0.9	0.0	-3.7
1998	+1.1	+1.4	+1.1	-0.2	-3.2
1999	+1.0	+1.4	+0.7	-0.3	-2.8
2000	+1.0	+1.3	+0.9	-0.3	-3.0

Source: Estimated from Bureau of the Census, *Historical Income Tables: Experimental Measures*, Table RDI-7, 2001.

Policies Redistributing the Determinants of Income

Health care and education and training programs and policies are expected to reduce inequality *ex ante*, by improving the earning ability of lower income groups. These are long term expectations, but some programs have been in place long enough for a preliminary assessment. One should add changes in behavior, since not all improvements in health (low-fat diets, reduced smoking), not all increases in high school

completion and college attendance, are the result of public policies. Outcomes combine the impacts of public policies and autonomous changes in behavior. In the case of health care, technical progress is also a factor. The relation between health and income is not unidirectional. The impact of health on income refers to the individual worker during working years. The main impact of income (ignoring genes) on health refers to parental income and the health of their children: it is intergenerational (Smith 1998; Smith 1999). Education and income also influence each other; it is not a simple causal relation. The impact of education on income refers to the individual worker, whereas the impact of income on educational attainment and on the quality of education is intergenerational, referring to parental income primarily.

Health

The share of GDP spent on health care in the U.S. has increased from 5.1 percent in 1960 to 14 percent in 2000 and has become more equally distributed as a result of new government programs. Some of this increased share of income reflects an aging population, but most of it reflects improved quality and increased quantity per capita, not price increases (Cutler and McLelland 1998, p.1016; Triplett 2001). The principal health policies are Medicare and Medicaid, both enacted in 1965. Medicare is partially contributory, heavily subsidized, for the elderly, most of whom are not working, hence its impact on earnings via better health is small. It does have a significant impact on levels of living, by reducing out of pocket medical costs, and no doubt reduces inequality of living levels among recipients.

Medicaid is another matter; most recipients are below retirement age, many are young children. There are no out of pocket costs to the recipients. It increases income available for non-medical spending among the poorer members of society, contributing toward lower inequality of consumption if not of income. This is the short run effect. The long run effect is that better access to medical care improves chances for educational achievement and performance in school and in the work force. Thirty-five years have passed since Medicaid was instituted. It has greatly access to medical care among the poor, and thereby reduced inequality of consumption. But although the United States spends a much larger share of GDP on health care than any other nation, and has nearly tripled that share since 1960, economic inequality has increased.

Education

Education has been widely viewed as the open sesame to good jobs, desirable occupations and careers, as well as to income. Some have been puzzled by the fact that they can point to an increase in educational attainment and a large reduction in inequality of attainment in the work force and the adult population as a whole but that inequality of wages has still increased. Others would point out that it does not take into account the effect of the addition of large numbers of less educated and less skilled immigrants to the work force, which serves to keep down the wages of unskilled workers. But even apart from that, this vision fails to distinguish between individual and collective opportunities and gains. More education and training may benefit specific individuals but have little effect on the occupational structure.

A large increase in educational attainment began much earlier than Medicaid and Medicare, immediately after WWII, with enactment of the GI Bill of Rights. The generation that benefited from it is now past retirement age, but its example has been followed by the generations that came after. The proportion of the population 25 years of age and older without a high school diploma sank from 45 percent in 1970 to 16.6 percent in 1999, the proportion with four or more years of college jumped from 11 to 25.2 percent (U.S. Dept. of Education 2000, Table 8). This trend is continuing, since young adults 25-29 have a higher attainment than their seniors, 28.2 percent have college degrees. (Others finish two-year programs, most of which are job training programs, which in the not so distant past were taught in high school.) Inequality in educational attainment has been substantially reduced. In 1999, the attainment of 80 percent of persons 25 to 64 years of age was concentrated in a four-year range, from high school graduation to a bachelor's degree (U.S. Dept. of Education 2000, Table 377). In 1970, to reach an equivalent concentration, 78 percent, the range of educational attainment must be extended to seven years, from the 7th grade through the second year of college (U.S. Dept. of Education 1972, Table 364).

Increasing educational attainment of the employed labor force was a bottom-up process, greatly reducing differences in attainment. The difference in median educational attainment between the most educated occupation, professional, and the least educated, farming, shrank dramatically from 7 years in 1970 to 4.5 in 1991; for non-farm laborers, the gap narrowed from 5.8 to 4.4 years (U. S. President 1976, Table B-12; U.S. Dept. of Education 1992, Table 364). Changes in occupational classification make it impossible to extend this time series to a more

recent year, but the median has risen further and the expectation is that differences in the level of educational attainment have been further reduced.

Since educational attainment has risen and become much more equally distributed than before 1970, many have expected a decline in wage and income differences; but the reverse has happened: earnings differences, in particular between college graduates and others, far from declining, have increased. There was a large increase in wage differential between college graduates and others in the 1980s (Blackburn and Neumark 1993), further widening in the 1990s. Possible supply-side explanations: a reduced correlation between college education and ability, or a lower level of ability, would reduce the supply of workers with both high educational attainment and a high level of ability, increasing the wage premium. However, neither happened, if anything the reverse took place.

There are many possible reasons for rising wage inequality, not mutually exclusive, and their relative importance is a matter for speculation (Stewart 1998: pp. 57-92). But it is important to learn why equalization in educational attainment has coexisted with increasing instead of decreasing economic inequality. Correlation is not causation. But how to account for it? One possible explanation is that the increase in educational attainment lagged behind the increase in share of jobs and occupations requiring higher education, which in turn implied a decrease in share of jobs not requiring a college education. In fact the increased inequality of wages was attributable predominantly to a decline in real wages for less-educated workers, not an increase for college graduates. This suggests no shortfall in college graduates for jobs requiring college, but substantial excess supply of workers with only a high school education or less. (Temporary shortages in highly skilled workers have been met by selective immigration of qualified workers.)

Perhaps some of the increased wage inequality is a decades-long adjustment to increased labor force participation of women and higher educational attainment of women and minorities. Only 42.6 percent of females 16 and older were in the labor force in 1970. In 1999 the participation rate was 59.5 percent, higher for every age group under 65, including females 16-19 years of age. For the age group 25-54, the increase was from 50.1 to 76.8 percent (Purcell 2000, p. 21). The beneficiaries of the GI Bill of Rights were predominantly white males. The biggest increases in college attendance and completion in recent decades have been females (who now outnumber males) and minorities.

For a number of reasons: job and wage discrimination, younger average age than male workers, and choice of majors leading to limited job opportunities and/or low wages, the increased percentage of females may have contributed to wage inequality among college graduates. At the same time, college graduates became a much larger share of the labor force. If we have been witnessing a temporary adjustment, then we should be seeing by now a phasing out of this adjustment, a trend toward reduced inequality of wages and incomes. Such a reversal is not in sight at this time.

A partial explanation for increasing wage inequality is that differences in ability between college graduates and others have increased. The evidence includes the difference in high school senior class standing between those who go to college and those who do not, as well as in IQ. Before the GI Bill of Rights, there was little difference; socioeconomic status was the main determinant of college attendance; in recent decades the difference has been large (Taubman and Wales 1972). As determinants of college admission and graduation have shifted from socioeconomic to ability criteria, differences in ability between college graduates and non-graduates have widened (Bishop 1991; Herrnstein and Murray 1994: pp.45-48). With some 88 percent completing high school, that high school graduation is no longer selective by meritocratic criteria. Two-thirds of graduates enter college at some point.

Greater equalization of educational opportunity in recent decades has enlarged the share of high-ability students who go to college and graduate, perhaps increasing inequality among graduates. Discriminatory entry barriers not only to college but also to well-paid jobs and occupations have greatly diminished, and financial aid and education loans have reduced economic obstacles to college admission. This has been especially important for women, who are more than half the population.

The relation between educational attainment and wages differs by the level of ability. According to Grogger and Eide (1993), this increased wage differential cannot be explained by increases in standardized test scores of college grads or in their high school grades, at least not for men. All the increase in the differential wage has been for workers with high academic ability (Blackburn and Neumark 1993). College graduate workers with below average academic ability experienced a decline in wage differential. For men, one quarter of the increased wage differential can be explained by changes to high wage-potential majors; for women, increased returns to math ability are important in explaining the

increased wage premium (Grogger and Eide 1993). Blackburn and Neumark [1995] estimate that failure to consider ability differentials overstates the return to education by about 40 percent.

Grogger and Eide (1995) found that the wage premium rose between 1977-79 and 1986, 13.5 percent for men, 7.7 percent for women. But the wage premium varies greatly by major, which serves as an indicator of skills acquired in college. Even standardizing for occupation, major-specific wage premiums vary greatly. The trend away from low-skill majors such as education to high-skill majors such as engineering (their categorization) account for one fourth of the increase in the wage premium for men, and one third for women. The wage differential noted above between college graduates and others, and among college graduates of different levels of ability, continues to widen throughout working life. Hence what became noticeable in the 1980s will likely continue until the 2020s and 2030s at least. This is the result of greater opportunity and higher educational attainment.

Accordingly, it is a mistake to focus only on wage differences between college and high school graduates, ignoring the large differences among college graduates. The differences in GRE (Graduate Record Examination, taken by one third of college seniors) subject scores by major are very large: math majors scored 775 in 1997-8; the sciences (geology excepted), engineering and economics scored above 600. At the other extreme, sociology scored 425 and most of the humanities scored in the 400s and low 500s (U.S. Dept. of Education 1990, Table 279; Educational Testing Service, unpublished data). The differences have widened; twenty years earlier the range was from 450 to 692. The high-wage premium majors tend to be the majors with high GRE scores.

These numbers are not strictly comparable. The cognitive requirements for achievement are multiple, diverse and vary widely between majors. What these numbers tell us is what leading professionals in each field think about seniors majoring in that field. However, very large differences do suggest substantial differences in ability. The high scoring majors are related to well-paid occupations; the low-scoring majors face few openings in related occupations, education excepted, but teaching is one of the lower-paid professions. Whatever the reasons for these large differences in achievement of college seniors or for choice of majors, and for the relations between scores, majors, and subsequent jobs and earnings, they raise doubts about higher education as blanket guarantee of high income or as means of reducing inequalities in earnings.

When college graduate workers were asked a year after graduation

whether their job was related to their degree, and whether a degree was required for their job, 56 percent felt a degree was required, and 75 percent that their degree was related to their job (U.S. Dept. of Education 2000, Table 385). But there was a big difference between majors in math, physical sciences, computers, engineering, education, and majors in health sciences, who predominantly answer yes to both questions; and history, humanities and social sciences, the majority of whom said a degree is not required and nearly half of whom said their job was not related to their degree. (By implication, for many of the latter there is only a tenuous relation between degree, jobs and wages.) Most business majors find their job related to their degree, but nearly half say the degree is not necessary. (When asked whether their jobs are possibly career-related, the differences between majors are much smaller.)

The high-wage premium majors happen to be the ones most likely to find jobs in their fields, as well as the ones whose GRE subject matter scores are high. One might suggest that it is job prospects in their field that explain the high-premium wages. Conversely, low-wage premium majors are in oversupply. The distribution of occupational opportunities is dictated not by personal preferences or abilities, but by prevailing technology and composition of demand. Even if all workers were equal, all work is not. Jobs and occupations vary in productivity, as do their occupants. This is the immovable obstacle to egalitarianism. However, the fact that the wage premium varies widely by major even after adjusting for occupation does imply that the differences in subject matter GRE scores by major are indicators of labor market-relevant ability.

A plausible but troubling possibility is that the nationwide increase in educational attainment, whatever happens to educational distribution, has itself promoted inequality: differentials in ability, interest, energy, associated with differential educational achievement are magnified by additional education. In the words of St. Matthew 25-29, "For unto everyone that hath shall be given and he shall have abundance; but from him that hath not shall be taken away, even that which he hath." Education acts like a lever; the longer the lever, the greater the level of achievement of the student, and this leverage enhances individual performance more than in proportion to the individual's initial ability, motivation, energy. Becker (1975, p. 101) assumes that ability increases the marginal benefit the individual acquires from schooling, one reason for the positive correlation between ability and educational attainment.

This is consistent with a college wage differential that has increased almost exclusively for the abler college graduates. But it applies also to increased educational attainment across the board: the best benefit much more than the worst. The higher the educational attainment of the population, the greater the inequality in performance (ability plus schooling). The expectations of many students are not realized: frustration will prevail, for achievement is seen in relative terms, in comparison with one's peers.

Why did the gap between the wages of college graduates and others begin to widen around 1980, and why has it continued to widen for two decades? It did not begin earlier because the large increases in graduating classes in the 1960s and 1970s depressed the wages of college graduates. Also, selectivity of college admissions declined between 1961 and 1972, rising continuously thereafter (Bishop, 1991), with a lagged effect on wages. It has not ended because inequality of earnings by educational attainment and by level of ability continues to increase throughout working life. Thus it is not necessary to identify causes persisting over decades or coincident with the growth in inequality. Taking 1980 as an approximate starting date for rising inequality of earnings, the youngest cohort affected would have been born in the late 1950s. This college graduating class, or better, the higher ability group in this class, would then contribute to increasing inequality of earnings, a process which still has at least two decades to run its course.

In sum, the reduction in inequality of educational attainment should reduce wage inequality; but the higher average level of educational attainment and increased inequality in ability between college graduates and others contribute to increased wage inequality. I can quantify neither the effect, nor the net effect of their sum, beyond noting that wage and income inequality overall, and by level of educational attainment, have been increasing, not falling.

Finally there is the observation, and prediction, of Will and Ariel Durant, among others: "Every advance in the complexity of the economy puts an added premium upon superior ability, and intensifies the concentration of wealth, responsibility, and political power." (Durant 1968, p.77) This view is independent of educational attainment and its distribution. It refers to the demand for ability and skill, based on the higher productivity of persons engaged in technologically advanced work roles, whereas the previous changes refer only to their supply. Technological advance increasing demand for highly skilled and able workers widens wage differentials by skill, occupation, ability, and

education. It accounts for some of the increased wage differential accruing to abler college graduates, who are concentrated in the majors most affected by technological change. But technical change is a gradual continuing process, whereas educational attainment and the role of ability in attainment have experienced much more abrupt changes.

The belief that the achievement and income of individuals can be improved by education, as well as by health care, is well-founded in experience. But the hope that raising standards of education will reduce inequalities in achievement assumes implicitly that there are no inequalities in ability as determinants of achievement. Only then will all benefit equally from equal opportunities. Education is not just about market skills, jobs, occupations, and income. Raising the floor on educational attainment and improving its quality may contribute to productivity and levels of living and to the non-economic aims of education. But there is no evidence that it has reduced inequality.

Problems with Egalitarian Policies:

Alternative Strategies and their Inherent Difficulties

To consider alternative means of reducing inequality of income one would need to ask, what are the determinants of differences in income, other than the fortunate choice of parents and random dispensations of Lady Luck? An adequate answer would be book-length. But we can make do with five generic determinants. Little can be done about the distribution of income-relevant abilities and propensities. Policy makers have tended to associate eugenics with National Socialist Germany of the 1930's and 1940's and so have rejected genetic policies, but they are practiced by individuals, in their choice of mates, in decisions whether to have children. On the other hand, emphasis on environments encourages us to place blame, but also offers less controversial opportunities for remedial action.

A second determinant is promotion of abilities through education and training. There is much we can do individually and as a society, but as suggested above, the result could well be increased inequality. At some point, reduced inequality can only be achieved by lowering the marginal benefit of increased educational attainment, either by advancing those whose benefit from additional education is small, or by restraining further attainment for those whose benefit is large. This road to equality sacrifices efficiency and growth to the egalitarian god. It violates our values as enshrined in the Declaration of Independence: "All men [and women] are created equal ... endowed with the right to

life, liberty, and the pursuit of happiness.” It was another country that proclaimed liberty, equality, fraternity. Meritocracy spells inequality.

Years of educational attainment is an insufficient indicator of investment in human capital. Schools vary greatly in quality. Since abler students are likely to go to better schools and to be taught by better teachers, differences in quality of education magnify differences in achievement. Differences in quality can be reduced. But we should not expect too much.

Rising educational attainment as an indicator of economic competence has been compromised by Henry Ford, who made possible the geographic segregation by income and, incidentally, by other characteristics which differentiate central city from suburban schools. It has been weakened by a shift in school agenda toward sports, self-esteem, recreation and cultural indoctrination to the neglect of cognitive skills, an agenda now prominent in many college campuses as well as in lower schools.

Third, schools are only one factor in achievement. Even the worst schools graduate the occasional over-achiever. Family environment, peer groups, community values influence what schools can accomplish. The influence of extended family and community is of great importance: single-parented and latch-key students even of impressive genetic endowment may labor under disadvantage. Behavior must change. These factors are largely beyond the reach of public policy instruments.

Fourth, income and the way it is spent it helps shape demand for diverse abilities and influences the direction of education and training. Prospects of persuading consumers to spend less on doctors and lawyers and more on the services of high school dropouts are bleak. Hypochondria, conspicuous over-consumption and designer labels carry the day.

Finally, and perhaps most important, products available through new technology influence consumer demand, which together with prevailing production technologies, determines the skills required to produce the goods demanded. Some would say that technology is autonomous, that society has no control over changes in demand for diverse skills. Others deny this, pointing out that development of much technology responds to existing shortages of labor and particular skills, in the same way that students and workers adjust their education and training to perceived market opportunities. But new products: electronics, computers, pharmaceuticals, plastics, which have dominated technological progress recently, are not developed in response to labor force skills, though their production adjusts somewhat to labor

availabilities both here and abroad.

In the United States, new technology has increased the demand for new and high level skills, contributing to economic inequality. We do not know what future technology will imply for wage differences. Past efforts to control the rate and direction of technological change have concentrated on protecting the jobs or wages of skilled craftsmen, or of low skill factory workers. They never succeeded in the long run. Today efforts are directed to minimize social costs - the unintended impact of technological change on health, environment, community. Any influence on inequality is incidental and its direction uncertain. There is no reason to believe that there is the will or ability to control the direction of technology toward a goal as abstract as that of reducing inequality.

By default what remains are the *ex post* policies of income redistribution followed in the USA, perhaps enhanced in scale, as in West European countries. But they would have to be improved in effectiveness to avoid inducing the double-digit unemployment rates which have plagued many European nations, requiring increased transfer payments.

Greater equality of consumption is a feasible goal, even if equalization of incomes appears to be unattainable. A shift of focus from equalization of income, with its hidden ingredient of envy, toward equalization of consumption, leveling up instead of leveling down, has some claim to moral superiority. But attaining greater equality of consumption by increased public expenditure would require taxation of incomes. With the current distribution of income it would have to be progressive in practice, otherwise it could not generate sufficient revenues. According to the law of unintended consequences, incentives to work and to invest would decline.

If society does not choose to allocate a larger share of resources for redistribution, an alternative is to preserve the conditions under which inequality is widely accepted. These are open if not equal opportunity, and growth in the supply of desiderata that are unequally distributed. Without growth, opportunity is limited, no matter how equal. Continuing growth and opportunity is possible for some desiderata, but not for physically or socially limited goods, nor for those desiderata whose growth imposes serious negative externalities. Equality and opportunity conflict, and attempts to manage this conflict will undoubtedly continue to affect the shape of the society in which our children will live.

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BOOK REVIEW ARTICLE

IQ and the Wealth of Nations

Richard Lynn and Tatu Vanhanen

Praeger, Westport Connecticut 2002

256 pp., U.S. \$64.95, ISBN 0-275-97510-X

Differential Intelligence and National Income

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That populations which possess high average IQ (probably for genetic reasons) tend to have high incomes is an obvious hypothesis, but a very politically incorrect one. Hence it is one that has seldom been even mentioned in the literature on economic development. However, Richard Lynn and Tatu Vanhanen in their *IQ and the Wealth of Nations* have not only put forward this hypothesis, but tested it. Lynn, a United Kingdom psychologist, is probably the world's leading expert on international comparisons of intelligence. In the course of other work he has accumulated a massive database of studies in which IQ tests were given in different countries. Because there are a variety of different tests, scored in different ways, an appreciable amount of work had to be done to make all of the scores compatible. Because tests scores appear to be increasing over time (for reasons that are unknown, although Lynn has speculated that improved nutrition is a major part of the explanation), scores also had to be adjusted for when the tests were given. Vanhanen, a Finnish political scientist, has specialized in comparisons of different nations with different political systems. The result of this international collaboration is a highly provocative book that is a major contribution to the literature on economic development.

Most readers who are interested in why some nations are more highly developed than others (economists, sociologists, political scientists) know little about intelligence. Lynn and Vanhanen start by summarizing the literature on the nature of intelligence, material that is found in books by Jensen (1998), Seligman (1992) and Snyderman and Rothman (1988). While many mental abilities have been identified, these all prove to be correlated with each other. With factorial analysis a

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