

Education and economic equality

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HOWEVER much they may differ on other matters, the left, the center, and the right all affirm the central importance of education as a means of solving our social problems, especially poverty. To be sure, they see the education system in starkly contrasting terms. The left argues that the inferior education of the poor and of the minorities reflects a discriminatory effort to prevent them from competing with better-educated groups, to force them into menial, low-income jobs. The right argues that the poor are poor because they have failed to work hard and get the education which is open to them. Moderates usually subscribe to some mixture of these arguments: The poor are poor because they have gotten bad educations, partly as a result of inadequately funded and therefore inferior school systems, but partly also as a result of sociological factors (e.g., disrupted families) that prevent poor children from absorbing the education that is available. Yet despite these differences, people at all points of the political spectrum agree that, if they were running the country, education policy would be the cornerstone of their effort to improve the condition of the poor and the minorities: If the poor or the minorities were better educated, they could get better jobs and higher income. This idea has had a profound influence on public policy in the last decade.

This acceptance of the efficacy of education is itself derived from a belief in the standard economic theory of the labor market. According to this theory, the labor market exists to match labor demand with labor supply. At any given time, the pattern of matching and mismatching gives off various signals: Businesses are "told" to raise wages or redesign jobs in skill-shortage sectors, or to lower wages in skill-surplus sectors; individuals are "told" to acquire skills in high-wage sectors and are discouraged from seeking skills and jobs in sectors where wages are low and skills are in surplus. Each skill market is "cleared," in the short run, by increases or reductions in wages, and by a combination of wage changes, skill changes, and production-technique changes over the long run. The result, according to the theory, is that each person in the labor market is paid at the level of his marginal productivity. If he adds \$3,000 to total economic output, he is paid \$3,000; if he adds \$8,000, he is paid \$8,000.

This theory posits *wage competition* as the driving force of the labor market. It assumes that people come into the labor market with a definite, pre-existing set of skills (or lack of skills), and that they then compete against one another on the basis of wages. According to this theory, education is crucial because it creates the skills which people bring into the market. This implies that any increase in the educational level of low-income workers will have three powerful—and beneficial—effects. First, an educational program that transforms a low-skill person into a high-skill person raises his productivity and therefore his earnings. Second, it reduces the total supply of low-skill workers, which leads in turn to an increase in *their* wages. Third, it increases the supply of high-skill workers, and this lowers their wages. The net result is that total output rises (because of the increase in productivity among formerly uneducated workers), the distribution of earnings becomes more equal, and each individual is still rewarded according to merit. What could be more ideal?

Empirical studies seemingly have confirmed this theory. The economic literature on "human capital" is full of articles that estimate the economic rate of return for different levels of education; while the results differ slightly depending on the data and methods used, most studies find a rate of return on higher education slightly above 10 per cent per year for white males. This rate of return, as it happens, is approximately the same as that of investments in "physical capital" (e.g., new machines). From these findings, two conclusions seem to follow. First, educational investment produces just as much

additional output as physical investments in plant and capital; and second, education is a powerful tool for altering the distribution of income in society. Such calculations are in common use in discussions of public education policy, and they form a major justification for heavy public investment in education.

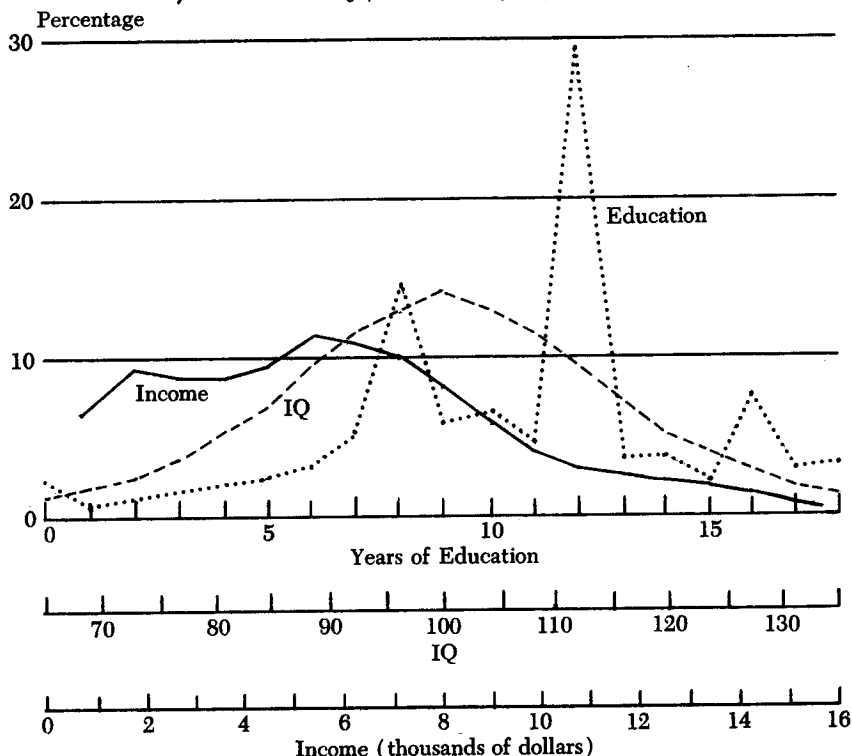
Yet, despite this seeming confirmation, there is reason to doubt the validity of this view of the labor market and the importance of the economic role it assigns to education. As we shall see, a large body of evidence indicates that the American labor market is characterized less by wage competition than by *job competition*. That is to say, instead of people looking for jobs, there are jobs looking for people—for “suitable” people. In a labor market based on job competition, the function of education is not to confer skill and therefore increased productivity and higher wages on the worker; it is rather to certify his “trainability” and to confer upon him a certain status by virtue of this certification. Jobs and higher incomes are then distributed on the basis of this certified status. To the extent that job competition rather than wage competition prevails in the American economy, our long-standing beliefs about both the economic benefits of education and the efficacy of education as a social policy which makes for greater equality may have to be altered.

Defects of the “wage competition” theory

While it is possible to raise a number of theoretical objections against the “human capital” calculations which seem to confirm the wage competition theory, it is more instructive to see if in our actual post-war experience, existing educational programs have had the effects that the wage competition theory would predict. In fact, there are a number of important discrepancies. The first arises from the fact that, in the real world, the distributions of education and IQ are more equal than the distribution of income, as Figure I indicates. The usual explanation for this disparity is that income is disproportionately affected by the *combination* of education and intelligence. This would explain the wider *dispersion* of income than of education or intelligence—but it cannot explain the markedly different *shapes* of the distributions. Clearly, other factors are at work.

A second discrepancy is revealed by the fact that, while the distribution of education has moved in the direction of greater equality over the post-war period, the distribution of income has not. In 1950, the bottom fifth of the white male population had 8.6 per cent of the total number of years of education, while the top fifth had 31.1 per

FIGURE I. *Distribution of Income, Education, and Intelligence (IQ) of Males Twenty-five Years of Age and Over in 1965.*



Sources: Income data from U.S. Bureau of the Census, *Current Population Reports*, Series P-60, No. 51 "Income in 1965 of Families and Persons in the United States" (1967), p. 34; education data estimated from U.S. Bureau of the Census, *Statistical Abstract of the United States: 1967*, p. 113; IQ data from David Wechsler, *Wechsler Adult Intelligence Scale Manual* (Psychological Corp., 1955), p. 20.

cent (See Table 1). By 1970, the share of the bottom fifth had risen to 10.7 per cent and that of the top fifth had dropped to 29.3 per cent. According to the wage competition theory, this should have led to a more equal distribution of earnings, whereas in fact the distribution of income among white males has become more *unequal*, as Table 2 indicates. From 1949 to 1969, the share of total income going to the lowest fifth has dropped from 3.2 per cent to 2.6 per cent while the share going to the highest fifth rose from 44.8 per cent to 46.3 per cent. Empirically, education has not been having the equalizing impact that the rate-of-return calculations would have led one to expect.

Black/white income gaps reveal the same discrepancies. From 1952 to 1968, the mean education of black male workers rose from 67 per cent to 87 per cent of that of white male workers—yet median

TABLE 1. *Distribution of Education Among Adult White Males*

	PERCENTAGE SHARE OF YEARS OF EDUCATIONAL ATTAINMENT	
	1950	1970
Lowest Fifth	8.6	10.7
Second Fifth	16.4	16.4
Middle Fifth	19.0	21.3
Fourth Fifth	24.9	22.3
Highest Fifth	31.1	29.3

TABLE 2. *Distribution of Income Among Adult White Males*

	PERCENTAGE SHARES OF TOTAL MONEY INCOME	
	1949	1969
Lowest Fifth	3.2	2.6
Second Fifth	10.9	9.4
Middle Fifth	17.5	16.7
Fourth Fifth	23.7	25.0
Highest Fifth	44.8	46.3

wage and salary incomes rose only from 58 per cent to 66 per cent. Most of this increase, moreover, can be traced to black emigration from the South, with its lower relative incomes for blacks. As a result, education does not seem to have equalized black and white incomes in the manner that the rate-of-return calculations would indicate.

Similarly, a more rapid rate of growth of education should have led to a more rapid growth of the economy. In the early 1950's, the college-educated labor force was growing at a rate of 3 per cent per year. In the late 1960's, it was growing at a 6 per cent rate. Yet there does not seem to be any evidence that the rate of growth of productivity of the economy as a whole has accelerated correspondingly. If anything, the opposite has happened. Productivity today may be increasing more slowly than its historic rate of growth of 2.9 per cent per year.

Moreover, the entire theory assumes a labor market where wage competition is the most important short-run method for equilibrating the supplies and demands for different types of labor. Yet the real world reveals very sluggish wage adjustments in most sectors of the economy. Not only is there considerable variance in wages for different individuals with the same skills; there is also little tendency for the existence of unemployment to lower wages. There may be many unemployed airline pilots or engineers today, but their joblessness does not lead to lower wages for those lucky enough to remain employed. In fact, wage competition simply is not the all-pervasive force that economic theory supposes it to be.

Perhaps the most devastating problem with the simple wage competition view is that it cannot explain the existence of unemployment. When the demand for labor falls, wages are supposed to fall until enough jobs have been generated to keep everyone fully employed at the new lower wages. Yet the real world is full of unemployed workers whose presence does not seem to have led to falling wages for those who are employed.

The absence of wage competition is also indicated by employers' lack of interest in relative wage differentials when designing new plants. In the several cases investigated by Piore and Doeringer, plant designers typically did not take account of (or even know) the relative prices of different types of labor when designing new plants. They could not economize on expensive skills since they did not know which skills were expensive and which cheap. They simply used an average wage rate in making their calculations.

Now there are plausible *ad hoc* explanations for all of these aberrant observations—but the necessity for so many *ad hoc* explanations is itself suspicious. Our experience with large investments in higher education entitles us to have doubts about the value of education as a means of altering the distribution of income. In the post-war years, this experience has not been encouraging. Large investments have been made. What little has happened to the post-war distribution of adult white male incomes has been contrary to expectation. Before further investments are made for such purposes, we should first get clear on why past investments have not had the expected and desired results.

The “job competition” model

Governmental education and training policies have not had the predicted impact because they have ignored the “job competition” elements in the labor market. In a labor market based on job competition, an individual's income is determined by (a) his relative position in the labor queue and (b) the distribution of job opportunities in the economy. Wages are based on the characteristics of the job, and workers are distributed across job opportunities on the basis of their relative position in the labor queue. The most preferred workers get the best (highest-income) jobs. According to this model, labor skills do not exist in the labor market; on the contrary, most actual job skills are acquired informally through on-the-job training *after* a worker finds an entry job and a position on the associated promotional ladder.

As a matter of fact, such a training process is clearly observable in the American economy. A survey of how American workers acquired their actual job skills found that only 40 per cent were using skills that they had acquired in formal training programs or in specialized education—and, of these, most reported that some of the skills they were currently using had been acquired through informal on-the-job training. The remaining 60 per cent acquired all of their job skills through such informal on-the-job training. More than two thirds of the college graduates reported that they had acquired job skills through such informal processes. When asked to list the form of training that had been most helpful in acquiring their current job skills, only 12 per cent listed formal training and specialized education.

Thus the labor market is primarily a market, not for matching the demands for and supplies of different job skills, but for matching trainable individuals with training ladders. *Because most skills are acquired on the job, it is the demand for job skills which creates the supply of job skills.* The operative problem in a job competition economy is to pick and train workers to generate the desired productivity with the least investment in training costs. For new workers and for entry-level jobs, it is the "background characteristics" of the workers that form the basis of selection. Those workers whose backgrounds promise the lowest training costs will be hired. For workers with previous job experience, existing job skills (including skills like reliability and punctuality) are relevant to the selection process to the extent that they might lead to lower training costs.

In such a system, depending as it does on informal on-the-job transmission of knowledge and skills, the absence of direct wage competition and the restriction of any job competition to entry-level jobs are absolutely necessary. If workers feel that they are training a potential wage or job competitor every time they show another worker how to do their job, they have every incentive to stop giving such informal training. Each man, under the circumstances, would try to build his own little monopoly by hoarding skills and information and by resisting any technical improvements that would reduce the number of job opportunities in his occupation. But in a training system where no one is trained unless a job is available (which is what on-the-job training means), where strong seniority provisions exist, and where there is no danger of some competitor bidding down your wages, employees can freely transmit information to new workers and more readily accept new techniques. If anyone is made

redundant by such techniques, it will be a clearly defined minority—new workers.

In a labor market governed by job competition, employers rank workers on a continuum from the best potential worker (trainee) to the worst potential worker (trainee) on the basis of estimated potential training costs. (Such costs certainly include the costs of inculcating norms of industrial discipline and good work habits.) But because employers rarely have direct and unambiguous evidence of the specific training costs for specific workers, they end up ranking workers according to their background characteristics—age, sex, educational attainment, previous skills, performance on psychological tests, etc. Each of these is used as an indirect measure of the costs necessary to produce some standard of work performance.

Entirely subjective and arbitrary elements may also affect the labor queue. If employers discriminate against blacks, blacks will find themselves lower in the labor market queue than their training costs would warrant. To some extent, the smaller the actual differences in training costs, the more such subjective preferences can determine the final ordering. If every individual had identical training costs, blacks could be placed at the bottom of the labor queue with no loss in efficiency.

The national labor queue depends upon the distribution of these background characteristics and upon employers' ranking of different background characteristics. While no two workers may be exactly alike, the costs of discovering small differences are so large that individuals are ranked on a finite number of background characteristics. This means that there are a finite number of rankings in the labor queue and that many individuals have identical rankings.

Jobs and their corresponding training ladders are distributed to individuals in order of their rank, working from those at the top of the queue down to those at the bottom. The best jobs go to the best workers and the worst jobs to the worst workers. Given a need for untrained labor, some workers at the bottom of the queue will receive little or no training on their jobs. In periods of labor scarcity, training will extend farther and farther down the queue as employers are forced to train more costly workers to fill job vacancies. In periods of labor surplus, it is those at the bottom of the labor queue who will be unemployed.

To the extent that education and formal training are an important background characteristic used for screening individuals, alterations in the distribution of education can have an important impact on the shape of the labor queue. This queue can be skinnier at the top,

at the bottom, or in the middle. The relevant empirical question is the weight that is attached to education in screening, relative to the weight that is attached to other factors. Although this obviously differs from job to job, educational screening tests are in fact ubiquitous. But although education can affect the shape of the labor queue, this does not necessarily mean that it can change the actual distribution of income. This is a function, not only of the labor queue, but also of the distribution of job opportunities. An equal group of laborers (with respect to potential training costs) might be distributed across a relatively unequal distribution of job opportunities. After receiving the resultant on-the-job training, the initially equal workers would have unequal productivities since they would now have unequal skills. As a result, the distribution of incomes is determined by the distribution of job opportunities and not by the distribution of the labor queue, which only determines the order of access—and the distribution of access—to job opportunities.

The distribution of job opportunities

The shape of the job distribution (and hence of the income distribution) across which individual laborers will be spread is governed by three sets of factors: (1) the character of technical progress, which generates certain kinds of jobs in certain proportions; (2) the sociology of wage determination—trade unions, traditions of wage differentials, etc.; and (3) the distribution of training costs between employees and employers, which will influence the wage that is associated with each job. The interaction among these factors is exceedingly complicated—and little studied.¹ The outcome of such studies would tell us with some assurance where exactly the American economy is to be located on a continuum between a wage competition economy and a job competition economy. Let me point out, however, that observed changes over the post-war period are in accordance with a job competition model.

If, at the beginning of the post-war period, an observer had been told that the composition of the adult white male labor force was going to change from 47 per cent with a grade school education, 38 per cent with a high school education, and 15 per cent with a college education, to 20 per cent with a grade school education, 51 per cent with a high school education, and 28 per cent with a college

¹Further discussion of this matter may be found in Lester C. Thurow, "The American Distribution of Income: A Structural Problem," Committee Print, U.S. Congress Joint Economic Committee, 1972.

education (the actual 1949 to 1969 changes), expectations about the distribution of income would have been very different depending upon whether the observer subscribed to a job competition model or a wage competition model. Assuming there were no offsetting changes on the demand side of the market, the observer subscribing to a wage competition model of the economy would have predicted a substantial equalization of earnings. But the observer subscribing to the job competition model would have predicted something quite different. He would have expected an equalization of income within the most preferred group (college-educated workers), a rise in its incomes relative to other groups, and a decrease relative to the national average. He would have reasoned as follows: As the most preferred group expanded, it would filter down the job distribution into lower-paying jobs. This would lead to a fall in wages relative to the national average. As it moved into a denser portion of the national job (income) distribution, it would, however, experience within-group equalization of income. By taking what had previously been the best high school jobs, college incomes would rise relative to high school incomes.

Such a prediction would have been correct. The proportion of college incomes going to the poorest 25 per cent of white male college-educated workers rose from 6.3 to 9.0 per cent from 1949 to 1969, while the proportion going to the richest 25 per cent fell from 53.9 per cent to 46.0 per cent. While the median income of college-educated workers was rising from 198 per cent to 254 per cent of the median for grade-school-educated workers and from 124 per cent to 137 per cent of the median for high-school-educated workers, it was falling from 148 per cent to 144 per cent of the national median.

As the least preferred group (those with a grade school education) contracted in size, a job competition observer would have expected it to be moving out of the denser regions of the income distribution and becoming more and more concentrated on the lower tail of the income distribution. Given the shape of the lower tail of the American income distribution, such a movement would have led to falling relative incomes and increasing income equality. In fact, the incomes of grade school laborers have fallen from 50 per cent to 39 per cent of college incomes and from 63 per cent to 54 per cent of high school incomes. The income going to the poorest 25 per cent of all grade school laborers has risen from 2.9 per cent to 6.6 per cent of the group's total, and the income going to the richest 25 per cent has fallen from 53.5 per cent to 49.4 per cent.

Predictions of the position of the middle group (the high-school-

educated) would have depended upon an analysis of the relative densities of the income distribution at its margin with the college-educated and the grade-school-educated. Since the American income distribution is denser on the margin with the grade-school-educated than on the margin with the college-educated, an expansion in the size of the middle group should have led to more within-group equality, an income rise relative to the grade-school-educated, and an income fall relative to the college-educated. In fact, the proportion of income going to the poorest 25 per cent of all the high-school-educated has risen from 8.2 per cent to 10.2 per cent, while the proportion going to the highest 25 per cent has fallen from 46.0 per cent to 41.6 per cent. High school incomes have risen relative to grade school incomes (from 160 per cent to 185 per cent) and fallen relative to college incomes (from 81 per cent to 73 per cent).

An alternative method for viewing the same changes is to look at the probability each of these educational groups has of holding a job at different levels in the American job hierarchy. The increasing economic segregation based on education can be seen in Table 3, where each cell has been adjusted for changes in the proportions of those with college, high school, and grade school educations. (The table is constructed so that each cell would have the number 1.000 if incomes were randomly drawn with respect to education.) In 1949, a college graduate was six times as likely to hold a job in the top tenth of jobs as a grade school graduate, but by 1969 he was 15 times as likely to hold a job in the top tenth. Conversely, the probability of a grade school graduate holding a job in the lowest tenth has risen from three to six times that of a college graduate. Similarly, probabilities of holding the best job have risen for college graduates relative to high school graduates (from 2.5 to 4 times those of high school graduates), while there has been a rise in relative probabilities of holding the worst jobs for high school graduates (from 1.2 to 1.5 times those of college graduates). Extrapolation of these trends for another 20 years would lead to a world where income was almost perfectly segregated according to education.

Although the job competition model seems to "post-cast" accurately what happened to the American distribution of income in the post-war period, post-casting is not a definitive test, and there are other possible explanations for what happened in the post-war period. One explanation would be that increasing technical progress has simply made education more necessary for acquiring income-producing skills. Training costs differentials have risen, and this could explain the increasing economic segregation based on educa-

TABLE 3. *Normalized Probabilities (Adult White Males).*¹

Quality of Jobs (Determined By Income of Total Males with Income, 25 Yrs. & Older)	Per Cent of Total Males in Each Job Class, in 1950 & 1970, by Educational Attainment (Divided by Per Cent of Total Males with that Educational Attainment that Year)					
	Elementary (1950)	Elementary (1970)	High School (1950)	High School (1970)	College (1950)	College (1970)
10% Best Jobs—1950: \$5,239.3 & up 1970: \$15,000 & up	.436	.1714	1.066	.648	2.715	2.549
2nd Best 10%—1950: \$4,028.84-\$5,239.2 1970: \$12,506.26-\$14,999	.599	.3535	1.337	1.130	1.523	1.468
3rd 10%—1950: \$3,519.7-\$4,028.83 1970: \$10,012.9-\$12,506.25	.772	.3535	1.354	1.130	.940	1.468
4th 10%—1950: \$3,025.2-\$3,519.6 1970: \$8,752-\$10,012.8	.776	.621	1.354	1.248	.927	.960
5th 10%—1950: \$2,553.6-\$3,025.1 1970: \$7,573.9-\$8,751	.952	.692	1.221	1.251	.649	.881
6th 10%—1950: \$2,101-\$2,553.5 1970: \$6,449.6-\$7,573.8	1.079	.871	1.069	1.238	.5695	.704
7th 10%—1950: \$1,530-\$2,100 1970: \$5,148.3-\$6,449.5	1.193	1.128	.910	1.148	.5629	.586
8th 10%—1950: \$706-\$1,529 1970: \$3,576.6-\$5,148.2	1.328	1.564	.708	.933	.5827	.500
9th 10%—1950: \$270.6-\$705 1970: \$2,008.2-\$3,576.5	1.500	1.960	.527	.712	.4304	.468
10% Worst Jobs—1950: \$0-\$270.5 1970: \$0-\$2008.1	1.458	2.303	.564	.552	.4768	.3818

¹Figures for: 1950—Money Income in 1949, Population in 1950; 1970—Money Income in 1969, Population in 1970.

tion. Another explanation would be that higher education has become more meritocratic in the post-war period (i.e., it is becoming more perfectly correlated with other income-producing factors), which would create the appearance of more economic segregation based on education. Still another explanation would be that the American economy has become more of a "credential society," in which education is used as a cheap (or defensible) screening device even though it is not very closely related to training costs.

Economic implications

While education has many non-economic benefits, its strictly economic benefits may be of three types: First, education directly increases the productivity of a country's labor force and indirectly increases the productivity of its physical capital. The result is more output and a higher real living standard. Second, by altering the distribution of individual productivities, education can lead to changes in the distribution of earned income between rich and poor. It can help the poor to catch up with the rich. Third, education can lead to economic mobility. Black earnings may catch up with white earnings, and the children of low-productivity parents need not themselves be low-productivity individuals. It is important to recognize, however, that each of these three impacts is merely possible. They may or may not occur. Whether they do or do not is an empirical question.

Even on the wage competition view of the labor market, education can be expanded to the point where it no longer increases a country's productivity. Nevertheless, large observed earnings differentials between the high-school-educated and the college-educated (after standardization for other factors such as IQ) have been taken as evidence to substantiate the fact that there are actual gains to be made. But if there is a substantial element of job competition in the economy, education's impact on individual productivity cannot be determined simply with rate-of-return calculations based on normalized income differentials. The exact impact on productivity of an alteration in the distribution of education depends upon a set of factors beyond the scope of this essay, but large observed income differentials could persist after the productivity impact of education was exhausted. An increasing supply of the college-educated would lead them to accept jobs farther down the job opportunities distribution. In the process, they would take the best high school jobs and thus bring down average high school incomes. This would preserve the observed wage differential between college and high school la-

bor, but the differential would not indicate potential productivity gains or opportunities to equalize incomes between rich and poor.

There is, then, a need to be much more agnostic about the productivity impacts of education than public rhetoric would indicate to be our present inclination. In the wage competition view of education, additional education for someone with more education than I can never hurt my prospects. If anything, it must raise my potential earnings. From the job competition point of view, however, education may become a defensive necessity. As the supply of educated labor increases, individuals find that they must improve their educational level simply to defend their current income positions. If they don't, others will, and they will find their current job no longer open to them. Education becomes a good investment, not because it would raise people's incomes above what they would have been if no one had increased his education, but rather because it raises their income above what it will be if others acquire an education and they do not. *In effect, education becomes a defensive expenditure necessary to protect one's "market share."* The larger the class of educated labor and the more rapidly it grows, the more such defensive expenditures become imperative. Interestingly, many students currently object to the defensive aspects of acquiring a college education. This complaint makes no sense from a wage competition point of view, but it makes good sense from a job competition point of view.

While the current public policy emphasis on on-the-job training programs seems to fit in with the job competition view of the world, on-the-job training programs can have an impact only if they really lead to the training of a different class of workers than would ordinarily have been trained through the job market. Unfortunately, many government training programs have simply led to the training of the groups that would have been trained in any case; the only operative difference is that government foots the training bills.

Based on a wage competition view of the labor market, government programs to equalize incomes and to raise the productivity of low-income individuals have been almost entirely devoted to changing the labor characteristics that an individual brings into the labor market. This is done in spite of the fact that individual labor characteristics typically do not explain more than half of the observed income differences between black and white, rich and poor, or male and female. Thus the emphasis has been entirely on changing the supplies of different types of workers rather than the demands for different types of workers.

In addition to being uncalled for by economic theory, this empha-

sis on altering labor supplies is at variance with our own history. To find a period of increasing income equality it is necessary to go back to the Great Depression and World War II. From 1929 to 1941 the share of total income going to the bottom 40 per cent of the population rose from 12.5 per cent to 13.6 per cent, while the share of income going to the top 5 per cent fell from 30.0 per cent to 24.0 per cent and the share of income going to the top 20 per cent fell from 54.4 per cent to 48.8 per cent. From 1941 to 1947 the share going to the bottom 40 per cent rose to 16.0 per cent, while the share going to the top 5 per cent fell to 20.9 per cent and the share going to the top 20 per cent fell to 46.0 per cent. In both cases alterations in the demand side, rather than the supply side, of the market seem to have provided the mechanism for equalizing incomes.

In the Great Depression an economic collapse was the mechanism for changes. Individual fortunes were lost, firms collapsed, and a wage structure emerged that was noticeably more equal than before the collapse. While interesting, the deliberate collapsing of an economy in order to equalize the distribution of income is not a policy that commends itself.

The World War II period is more interesting from this vantage point. As a result of an overwhelming consensus that the economic burdens of the war should be shared equally, the federal government undertook two major actions. First, it instituted a very progressive income tax (more progressive than the current federal income tax) that converted a regressive tax system into a mildly progressive tax system. Second, it used a combination of wage controls and labor controls to equalize market wages. This was accompanied by a conscious policy of restructuring jobs to reduce skill requirements and to make use of the existing skills of the labor force. To some extent, old skill differences were simply cloaked with a new set of relative wages and, to some extent, skill differentials were actually collapsed. Together the two factors led to an equalization of market incomes that was not dissipated after the war ended.

To some extent the wage policies of World War II were a deliberate—and successful—attempt to change the sociology of what constitutes “fair” wage differentials. As a result of the war, our judgments as to what constituted fair differentials changed, and this was reflected in wage patterns. As a consequence of the widespread consensus that wage differentials should be reduced, it was possible to make a deliberate attempt to reduce wage differentials. After they had been embedded in the labor market for a number

of years, these new differentials came to be regarded as the "just" differentials and stuck after the egalitarian pressures of World War II disappeared.

From this experience, I would suggest that any time a consensus emerges on the need for more equality, it can be at least partly achieved by making a frontal attack on wage differentials. Elaborate educational programs are not necessary. Without such a consensus, I would suggest, massive educational investments are apt to be wasted. They simply will not bring about the desired equalization.

In addition to a frontal attack on wage differentials, programs to alter the demands for different types of employees would include research and development efforts to alter the skill-mix generated by technical progress; guaranteed government jobs; fiscal and monetary policies designed to create labor shortages; public wage scales designed to pressure low-wage employers; and incentives to encourage private employers to compress their wage differentials. If quick results are desired, quotas must seriously be considered since they are the only technique for quickly altering the types of laborers demanded.

In any case, I would argue that our reliance on education as the ultimate public policy for curing all problems, economic and social, is unwarranted at best and in all probability ineffective.