

Schooling and success

Long considered a laggard in guaranteeing an adequate level of social welfare, the United States has nevertheless been a leader in providing its citizens with open access to higher education. The median number of grades completed in this country has risen from 8.6 for those born in the first five years of the century to 12.8 for persons born at mid-century (Robert Mare, *Focus*, 3:2). And around 1960, the chance of an upper-stratum youth studying in an American university was 5 times greater than that of a lower-stratum youth; in the United Kingdom, Sweden, and Germany, the comparable chances were 8, 26, and 58 times, respectively. These striking differences lend force to the argument that the United States has in effect substituted educational opportunity for social welfare programs; by contrast, European countries have more heavily relied upon social insurance to compensate for the effects of inequality.¹

In America, high school and college education have long been regarded as prominent routes to improved social status and greater economic success. Shortly after the turn of the century, secondary schools became a significant channel of upward mobility for the children of the poor. In the post-World War I period, a college degree began to assume its importance for mobility prospects, as witness the higher rate of college completion—though not of college entrance—among freshmen from poorly educated families in comparison with those from well-educated families.² In the 1960s and 1970s, the intensity of the attack mounted by blacks and women upon the barriers that hindered their access to career tracks in law, medicine, or engineering and to occupational apprenticeships or training programs demonstrates the value still placed upon open access to education. Similarly, when seeking ways to end poverty in the United States, the Johnson administration placed special emphasis on improving the opportunities for education and training for children and adults in poor families.

Thus the American educational system has traveled with a heavy freight of expectations. Continually expanding, it has carried more and more people farther along a road that was presumed to lead to higher levels of living. From a social perspective, the rationale for this expansion has been twofold: first, the more highly educated a population is, the more productive it is; second, expansion of education is the most logical route to greater equality of opportunity, a goal reached when criteria of personal merit replace the advantages of one's family or origin.

The system is, however, now under heavy attack from different quarters. The dissatisfaction of some critics reflects a sense that a system which still has the potential for ef-

fectiveness is now failing to keep abreast of the demands imposed upon it by demographic and technological change; this certainly is the view of many educators. Or criticism may arise from a sense that today's educational system no longer mirrors the morality and values of the critic. For many others, the issue is secular and economic: despite massive expansion of the educational system, relative inequality persists and may even be increasing in American society.

Perhaps the view that expanded education inevitably generates greater equality is a fundamental misconception, and was never justified in the United States. It is easy to see that persistent inequality might lead people to blame the schools, from which so much is expected, for not teaching children the information and skills necessary for adult success. But it is equally possible that the effectiveness of the educational system in generating greater equality of opportunity, higher social status, and economic success in adult life is indeed diminishing.

Understanding these issues is no simple matter, and the complexity of the task is reflected in the competing theories about the function of schooling in the passage to adult life in the United States. Institute sociologists have long been concerned with more precise characterization of the relationships between education and socioeconomic attainment. Recently Michael Olneck, Associate Professor of Educational Policy Studies and Sociology and an Institute affiliate, looked at two of the more prominent competing views. He asked:

1. Is education in the United States the linchpin of an "IQ meritocracy," in which intelligence and ability, as measured by ability testing and as certified through school achievement, determine material rewards and status in later life?
2. Rather than certifying ability, does the school system function primarily to develop differential characteristics in workers that are necessary to maintain a hierarchic labor force—in Marxist terms, to maintain the social relations of production in a capitalist world?

Determining whether either theory has validity holds some importance for the future course of American educational and social welfare policy. For if the first hypothesis does not hold—if family still conveys very great advantages in adult life—and if the second does hold—if education restricts and channels opportunity rather than opening it up—then American society must make a choice. It must either recognize that there are real limits to the ability of even an expanding educational system to

generate greater equality, or it must determine how to alter the situation. Choosing the second course will require even more accurate understanding of the way the educational system works. For instance, what levels of schooling are the most critical when rewards are allotted? How important is it to complete high school, or to go to college? Olneck has some preliminary answers to these questions; they will briefly be considered in the conclusion of this article.

The IQ meritocracy

In both educational practice and research, the formal manifestation of the meritocracy in the United States in the twentieth century fairly rapidly became the intelligence or aptitude test—IQ tests, college entrance tests. By the 1960s testing had become a focus of educational controversy, but it is still widely used in the civil service, the military, and private industry, and it is itself big business. In the discussion that follows, the term “cognitive ability” will be used to describe the qualities that these tests measure. This should not be equated with “intelligence,” a term loaded with moral and political overtones. Rather, it refers to the abilities to manipulate words and numbers, to assimilate information, and to make logical inferences—all skills that schools purport to teach. Such abilities constitute varieties of intelligent behavior, but are by no means the whole of it.³

Olneck and a colleague, James Crouse, set out to evaluate the claims that in the United States merit, as certified by educational achievement, has become the dominant force for social and economic advancement. Making empirical tests of propositions concerning the relationships among family background, IQ test scores, educational attainment, occupational status, and earnings, they were able to exploit two recent data sets that are richer than earlier ones: the Project Talent follow-up survey, and the Kalamazoo Brothers data.

Project Talent. In 1960, questionnaires and aptitude tests covering academic and nonacademic subjects and skill areas were administered to ninth through twelfth grade students in a sample of 1600 schools across the nation. About 90,000 of the students were juniors; in 1972 a follow-up questionnaire was mailed to most of them. Nearly 25 percent responded, and to make the sample more representative a random sample of nonrespondents was followed up. Olneck and Crouse analyzed data from all the initial nonrespondent sample, and from a random sample of the respondents.

The Kalamazoo Brothers Sample. Between 1928 and 1950, the Kalamazoo public school system annually administered aptitude tests to sixth graders and preserved the records. In 1973-1974 Olneck identified a sample of 2782 brothers drawn from 1224 families, then traced and

interviewed 1243 of them about a broad range of family and occupational issues. This unique assemblage of sibling data makes it possible to correlate family background, aptitudes, and achievement over a much longer span of time than any previous source.

Is family background less important?

If society's premium upon greater cognitive ability (“high IQ”) is increasing, we would expect to find that the traditional bases of social and economic standing—influences often subsumed under the term “family background”—are eroding.

Some aspects of family background can be quantified, among them father's occupation and education, and family size. As a man over 25 grows older, the effects of these variables upon his occupational status rarely change significantly. Nor does it seem likely that the effects of cognitive ability upon that status would change much once a man's career stabilizes. Thus by examining older and younger cohorts of men in the Kalamazoo and Project Talent samples, it should be possible to determine if the influences of family background and ability on adult success have changed significantly over the last few decades.

In the United States, the direct influence of family background upon adult success has indeed declined. The occupation that a man's father held no longer alone confers so large an advantage as it did previously, nor is it important, compared with other factors, in determining the status of the son's first job. The effect of family size on attainment in school (children from larger families tend to perform more poorly) has also diminished, but not so markedly.

These indications that the United States is tending toward a more meritocratic society are, however, countered by the growing importance of a father's education for his son's schooling. Men with better-educated fathers receive more schooling than those whose fathers are more poorly educated, even when their performance on ability tests is no better. That relationship is becoming more pronounced, and as we will see later, more schooling is, up to a point, strongly related to occupational and economic success.

Even when father's occupation and education, and other measurable socioeconomic circumstances, are similar among families, elements of pure chance, such as different family values or genetic endowments, can affect an individual's adult success. When the effects of these unmeasured family influences are taken into account in a model that already incorporates socioeconomic and ability measures, the proportion of adult success that can be explained is increased by one-third to one-half. Clearly family background, broadly considered, remains very important.

Does school achievement signal ability?

In a meritocratic society, high achievement in school should be a clear signal of intelligence and ability. Does this hold true for American society? The answer that Olneck and Crouse uncovered is, like the evidence for family background, quite mixed.

On the one hand, high-IQ individuals seem to have no corner on more schooling. Other factors, in particular family background, are more important in determining how far a youth will go in school. There is, besides, a large overlap in test scores between men who completed college and men who only completed high school: men with high tested ability are found in both groups. Can we argue, then, that the marked preference of employers for men with college degrees simply implies a belief that educational attainment and ability are more closely linked than they actually are? No doubt, there is some truth in this speculation. But when we look at the problem from another perspective, it becomes clear that if employers are anxious primarily to screen out men with low tested ability, rather than precisely to match men with particular jobs, college completion is a useful criterion. Far more college graduates than high school graduates show especially high levels of ability, and few college graduates have especially low test scores. In the Project Talent sample, 58 percent of college graduates have IQ test scores over 110, and only 3 percent have scores below 90. Among high school graduates, in contrast, only 12 percent have scores over 110, and 35 percent have scores below 90. The process, it appears, is less one of selecting men with higher ability than it is one of avoiding men with lower ability—perhaps not quite what advocates of the meritocratic society had in mind, but nonetheless tending to the same effect.

Is ability consistently linked with adult success?

In a meritocratic society, men with greater ability should consistently achieve higher levels in school and work, and should earn more.

For achievement in school, this cannot be demonstrated. Olneck's Kalamazoo data suggest that only about 10 percent of the variation in educational attainment observed among individuals can be attributed to the causal effects of IQ. Men with higher scores are typically somewhat more successful: they acquire more schooling, and work in higher-status occupations. But when brothers are examined, almost half of the apparent advantages conferred by higher test scores evaporate; they appear, rather, to be the product of family background.

Once again, however, it proves impossible to draw definitive conclusions, for when the links between earnings and IQ are examined, results contrast markedly with those for schooling or occupation. The men with the higher sixth-grade test scores tend to earn more as adults. This is true

even for brothers, whose backgrounds are surely very similar, even though not identical. Even when brothers have the same amount of schooling, and work in similar occupations, a 15-point difference in test scores in school will be reflected later in an 11 to 17 percent difference in earnings.

In an IQ meritocracy, schooling differences not associated with ability differences should be of minimal consequence. But in the data examined by Olneck and Crouse, more schooling was frequently associated with higher-status occupations and greater earnings. In the Project Talent sample, for instance, men who completed four years of college held occupations of much higher status and, despite their relative youth, earned on average 21 percent more than men whose ability was ranked at the same level, but who did not go to college. Furthermore, men who have different test scores but the same amount of schooling do not appear to differ in terms of early occupational advantages. Clearly, schooling does not merely reflect and channel IQ, but has an independent association with success. "The vast preponderance of inequality in schooling, occupational status, and earnings," the authors conclude, "has no relationship to differences in measured cognitive ability. A significant fraction of the apparent effect of cognitive ability on educational attainment is spurious."

The model of an IQ meritocracy can be applied to the United States only with many qualifications. Family still conveys substantial advantages in life, although these are increasingly channeled through ability and education rather than being directly exerted. The large results for educational attainment that have been observed do not support the assumption that the American educational system has failed to prepare its graduates for success in the adult world. But it may well be true that education is less a channel for ability than it is for family advantages, and that it works to reinforce those advantages almost as much as it compensates for their absence, contrary to the hopes for an expanding educational system.

The correspondence theory of education

The competing theory of schooling that Olneck and his colleagues have examined is generally known as the "correspondence theory," from its central argument that there are important correspondences between the world of school and the world of work. Education, from this perspective, is a crucial agent in the development of a work force appropriately "schooled" to the acceptance of different, but in important ways fixed, roles in a stratified technological society. Under these assumptions, the widespread dissatisfaction with the American educational system seems to be misplaced—the root of the problem really lies with a social system that restricts opportunity in ways that are incompatible with the egalitarian ideologies

that have bulked so large in American history and rhetoric. But the accuracy of the correspondence hypothesis itself is so far unproven.

In *Schooling in Capitalist America*, two prominent advocates of the correspondence theory, Samuel Bowles and Herbert Gintis, rejected cognitive ability as the primary source of the links between success in school and adult success. The links, they argued, have very little to do with cognitive characteristics at all, and a great deal to do with the way a child's experience in school is organized along different curriculum tracks, at different grade levels, often in schools of differing socioeconomic composition. These differences, they argue, combine to produce a labor force within which differences in personality or attitude are not simply random individual variations, but run roughly parallel to family background, educational credentials, and authority requirements of job levels. The relationships of authority and control within the schools replicate those of the work force; the same types of behavior are similarly rewarded at school and at work, and teachers socialize or reward students in accordance with their perceptions of the students' future roles.

Michael Olneck and David Bills took issue with these hypotheses in a recently published article. Expressing some reservations about the data on which Bowles and Gintis base their conclusions, they tested those conclusions against a different data base, the Kalamazoo Brothers set. Their analysis suggests only a loose overlap between the kinds of personal characteristics rewarded by schools and those associated with high income or high-status occupations. Nor do controls for personality characteristics significantly reduce the influence of schooling per se upon later economic success. But the evidence that Olneck and Bills found does suggest that the characteristics rewarded in middle-class or white-collar students may differ somewhat from those rewarded in blue-collar pupils, in ways that are consistent with the correspondence theory.

When Kalamazoo Central High School homeroom teachers rated students as "above average" or "below average" in such characteristics as industriousness, cooperativeness, executive ability, and appearance, were they foreshadowing the occupational tracks along which their students would eventually move?

Olneck and Bills tested these ratings of personality against measures of school performance (sophomore English grades, test scores, highest grade completed) and adult success (the first full-time job, the job held in 1973–1974, and earnings in 1973–1974). These various measures make no claim to tap the full influence of personality differences on adult achievement, but they are clearly adequate to frame some of the central personality characteristics and status symbols that are popularly seen as marks of success.

Personality and school achievement

Grades. When Olneck and Bills correlated grades with measures of personality, intelligence, and family background, they did indeed turn up some significant relationships. Hard work (industriousness), for instance, was the characteristic most highly rewarded along the whole range of students, but had a particularly pronounced effect among children of blue-collar families. There are plausible explanations for this. Blue-collar children may have been in classes where rote learning, as in spelling tests, was more common than the kind of independent and flexible study program represented, say, by creative writing assignments. Or perhaps teachers held significantly lower expectations about the ability of blue-collar children to master scholastic material, while maintaining more rigorous standards for white-collar children. In either case, blue-collar children would be more likely to appreciate the rewards of appearing diligent and sticking closely to the routine of assignments, a consequence that is consistent with the correspondence theory.

Length of schooling. Once again the authors found that men from more advantaged backgrounds will acquire more schooling, all other things being equal. Personality traits evaluated in school go no further toward explaining these results than they do toward explaining grades; indeed, they do not go so far, when one remembers the strong effect of hard work on school performance.

The differences between the factors that determine grades and those governing length of schooling suggest that the correspondence theory is, at the least, in need of revision. When employers select men on the basis of greater schooling, they are not necessarily selecting them on the same grounds that have impelled students to perform well in school. Socioeconomic background, for instance, does not directly influence grades; it does influence how much schooling a man is likely to acquire. Teachers reward cooperative behavior, but boys in the Kalamazoo school district who were judged "uncooperative" nevertheless could and did persist in school.

Personality and occupational status

In examining the links between school and personality, the authors found results that at best entail modifications of the correspondence theory. When they attempted to link personality and work, the few unambiguous or pronounced effects they did find stood in direct contradiction to that theory. Neither a man's first job nor his later career appears to be significantly advanced by his earlier personality ratings, once family background or ability are taken into account. Indeed, among men of white-collar origin, a rating of "highly cooperative" in school bore a significantly negative relationship to occupational status.

It is hard to accept that employers deliberately select disruptive employees, particularly when men considered "in-

dustrious" appear to gain a small advantage in their work. It is more likely that obedience to authority, and the ability to wait for directions and to complete work in predetermined sequences without introducing idiosyncratic variations, are at a premium in many classrooms, but a distinct disadvantage in advancement to higher-status positions, where employers may value the ability to work independently. This finding about the effects of "cooperativeness" is consistent with Bowles and Gintis's observation that self-direction is important in the upper reaches of the work hierarchy, but it does not mesh well with their assertion that the same behaviors are rewarded in school and at work.

Once again, the effects of personality measures are dwarfed by the influences subsumed under "academic achievement." Length of schooling, as always, had a large and robust influence on the first job; when men with the same personality ratings were compared, the effect was very nearly as great as the effect of years of schooling among men in general.

Personality and earnings

Earlier, it was noted that the determinants of occupational achievement and of earnings do not necessarily coincide. This finding also holds true for the effects of personality. The only personality measure of those tested that appears significantly to affect earnings is "executive ability." Men ranked "above average" on executive ability would be expected to earn over one-third more than men ranked "below average."

Because "executive ability" is unrelated to grades and only meagerly related to length of schooling, it does not appear to measure academic motivation. More puzzling, it shows no significant effects if only men categorized as "managers" are selected. Its largest effect was among men classified as "salesmen"—insurance, real estate, manufacturing representatives. Olneck and Bills conclude that their measure may be a proxy for "persuasiveness." This does not mean, of course, that executive ability is unimportant to managers. Rather, it suggests that what teachers recognize as "executive ability" or "leadership" is very different from what corporations recognize as "executive ability." For example, in the classroom context "executive ability" may measure the eagerness of pupils to please their teachers by assisting in tasks rather than measuring the capacity of some students to lead others. Once again, the correspondence theory does not hold. Olneck and Bills summarize their results: "Our evidence suggests that schools may well assign scholastic rewards in ways similar to those Bowles and Gintis outline, but that they are not linked to economic structures and rewards in the precise ways depicted in *Schooling in Capitalist America*."

Does finishing high school pay?

One conclusion from Olneck's work stands out: different levels of the schooling system bear differing relationships to the labor market and confer different benefits. Examining the components rather than the system as a whole has proved fruitful. Clearly, certain components are more closely linked to adult success than others. Particularly disturbing is the evidence that Olneck has presented in *Who Gets Ahead?* an exploration by Christopher Jencks and his colleagues of the determinants of economic success in America. There is, it appears, some but not a large financial payoff to high school completion alone.

Synthesizing results from a number of national and several special-purpose samples, Olneck concluded that men aged 25 to 64 who completed high school did get better first jobs than men who dropped out, but that this was largely because they came from more advantaged homes and scored higher on ability tests. Olneck concludes: "If the same results hold for young men today, discouraging male high school students from dropping out of school would not greatly improve their occupational prospects unless they also went to college" (p. 166).

Completing high school accomplishes even less in the job market for nonwhites than it does for whites. College education is more valuable to nonwhites than whites primarily because the gains of nonwhites from elementary and secondary education are meager—in 1973, nonwhites gained only half the later advantages that whites enjoyed from completing high school.

Earnings most graphically demonstrate the value of college attendance. Among men who are otherwise similar, completing high school raises earnings by 15 to 20 percent. Completing four years of college raises them by as much as 40 percent. One may be tempted to say "of course," but it is not axiomatic that higher and higher levels of education carry with them greater and greater economic and social success; that consequence is very much a phenomenon of a particular time—the twentieth century—and a particular place—the United States. And even here, these advantages may be eroding, as Richard Freeman has pointed out in *The Overeducated American*. When younger cohorts of men are examined, rather than the full spectrum of men 25–64, the returns to a college education appear to be dropping. Perhaps the public perception that "schools aren't working the way they used to" has some validity.

The relationships between schooling and success that have been described here—they by no means exhaust the possible linkages—are complex and rather contradictory. The American educational system is not necessarily a mechanism for socializing individuals into preestablished roles in a stratified social hierarchy that is governed by the imperatives of capitalist production. But it is not clear

that ability, education, and success move smoothly together. Public expectations that expanding access to education is sufficient to achieve greater and greater equality of opportunity will, it appears, inevitably encounter frustration. ■

¹See A.J. Heidenheimer, "Social Policy Development in Europe and America," in *Income-Tested Transfer Programs: The Case For and Against*, ed. Irwin Garfinkel (New York: Academic Press, 1982). Ratios for strata of youth in universities from Table 5.2.

²Heidenheimer, quoting Christopher Jencks and David Riesman, *The Academic Revolution* (New York: Doubleday, 1968).

³Christopher Jencks et al., *Inequality: A Reassessment of the Effect of Family and Schooling in America* (New York: Basic Books, 1972), pp. 52-57, has a good brief discussion of this issue.

Selected papers

Michael R. Olneck and James Crouse, "The IQ Meritocracy Reconsidered." Institute for Research on Poverty Reprint no. 381.

Michael R. Olneck and David B. Bills, "What Makes Sammy Run? An Empirical Assessment of the Bowles-Gintis Correspondence Theory." Institute for Research on Poverty Reprint no. 433.

Related reading

Maureen Hallinan and Aage B. Sørensen, "The Dynamics of Learning: A Conceptual Model." Institute for Research on Poverty Discussion Paper no. 444-77.

Robert Mare, "Correlates of Achievement." Institute for Research on Poverty Reprint no. 393.

Robert Mare, "Social Background and School Continuation Decisions." Institute for Research on Poverty Reprint no. 408.

Robert Mare, "Sources of Educational Growth in America." *Focus*, Vol. 3, No. 2, 1978-79.

Michael R. Olneck, "The Effects of Education," in Christopher Jencks et al., *Who Gets Ahead? The Determinants of Economic Success in America*. New York: Basic Books, 1979.

Aage B. Sørensen, "Education, the Process of Attainment, and the Structure of Inequality." Institute for Research on Poverty Reprint no. 327.

Hispanic labor conference *continued from p. 7*

A Comparative Analysis of the Wages of Hispanic, Black and White American Men, by Cordelia Reimers, Princeton University.

Session 2: Unemployment

Ethnic Differentials in Unemployment among Hispanic Americans, by Gregory DeFreitas, Barnard College and Columbia University.

Labor Market Turnover and Joblessness for Hispanic American Youth, by Stanley Stephenson, Jr., Pennsylvania State University.

Session 3: Family and work

Fertility and Labor Supply among Hispanic American Women, by Frank Bean, Gray Swicegood, and Allan King, University of Texas at Austin.

Mexico-USA Indocumentado Migration as a Settlement Process and Its Implications for Work, by Harley Browning and Nestor Rodríguez, University of Texas at Austin.

Session 4: Education

Bilingual Education: Its Role and Effectiveness in the Education of Hispanic Americans, by Virgulino Durate, National Commission for Employment Policy.

The Causes of School Transitions for Hispanics, Whites, and Blacks, by Neil Fligstein, University of Arizona, and Roberto Fernandez, University of Chicago.

Session 5: Policy implications of Hispanic labor market research

¹Members are Robert Bach, State University of New York at Binghamton; George Borjas, University of California, Santa Barbara; Barry Chiswick, University of Illinois at Chicago Circle; Ron Oaxaca, University of Arizona; Alejandro Portes, Johns Hopkins University; Marta Tienda, University of Wisconsin-Madison.

²Poverty and income figures from *Statistical Abstract of the United States, 1980*; unemployment rates from unpublished figures of the Bureau of Labor Statistics as reported in the conference paper of Gregory DeFreitas.